

A PERFORMANCE ANALYSIS OF TQM AND ISO 9000 FOR AN ORGANIZATIONAL EXCELLENCE

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ABSTRACT:

There is a need for an appropriate culture to support the scope of Total Quality Management (TQM). Customer focus, systems approach, team work, involved management and continuous improvement are the aspects of TQM that facilitate improved organizational success, growth and competitiveness. Many companies are now complementing continuous improvement with innovation, which is seen as the successful exploitation of new ideas. There has been a major emphasis for manufacturing firms in Australia and New Zealand to seek certification to the International Quality Standards ISO 9000. These have been rapidly accepted as a standard for documenting processes and procedures. ISO 9000 is a process that typically shifts an organization's culture to allow successful Total Quality Management (TQM) implementation. Researchers found that companies that implement ISO9000 and TQM at the same time and in an integrated manner might expect to have advantages in product quality, delivery, productivity and customer satisfaction. ISO9000 certification is only the beginning of a continuous improvement process rather than the end and could be a useful stepping stone for TQM. ISO 9000 can be an excellent start to TQM, if it is interpreted in a way that encourages the company to start on the process of continual improvement by team work of all people working in the company.

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INTRODUCTION:

The principles of total quality management (TQM) are now a recognized characteristic of most of successful businesses world over. Customers changing demand, the awesome penetration of Japan (Asian Lion) and its pacific rim neighbors viz, South Korea, Taiwan, Singapore, and Hong Kong (called Asian Tigers) into the US and West Markets and the need for stringent cost management in fluctuating environment, make TQM a practice of paramount Importance for every enterprise, big or small. Gone are the days when customer considers price as a main reason for purchase a product or service. Quality and reliability are now the overriding factors, which customers favor in exercising choice. Meeting customer's specification dependability of service and speed of the delivery are the very distinguishing features of success. No other theory of business management these issues more fully than TQM.

International organization of standards (ISO), a global federation of 130 national standards bodies, seeks to promote standardization and the development of related activities worldwide in order to facilitate the international exchange of goods and services, and cooperation in the sphere of intellectual, scientific, technological and economic activities. The ISO 9000 standard series is now widely accepted as a minimum standard for a quality system for companies (Marquardt, 1992) the possession of a certification to ISO 9000 has become a decisive competitiveness factor in the international market.

Business relationships are increasingly influenced by the possession of an ISO 9000 certificate which proves to have an important advertising effect. Additionally the consequent application of a ISO 9000 system can have a significant cost reduction effect which results in performance improvement (Berry, 1991).

The number of companies with ISO 9000 certification has increased exponentially in the last ten years. However, the issue of what benefits the certified companies are able to derive from the certification is a general concern. As a quality assurance management model, ISO 9000 only prescribes the minimum requirements of certification. The company does not have to aim for excellence.

The objective of the paper is to make a critical review in order to:

- Identify the reasons for organizations to seek ISO 9000 certification
- Identify the benefits of ISO 9000 certification
- Identify the problems in the implementation of ISO9000
- To examine the factors for implementing TQM from ISO9000

The research is based on literature review involving books, journals, reports as well as interview with several quality personnel in companies.

ISO 9000 SERIES:

REGISTRATION AND CERTIFICATION PROCEDURE:

The organization/supplier can be a bank or anyone branch. If it is a branch, necessary approval from component authority should be obtained before going for registration. Therefore, the following procedure has to be followed:

1. The supplier must identify the products that are appropriate to their business and shall prepare documented procedures, consistent with requirements of the standard as per the quality manual and declare these, so as to avoid misleading assessors, reviewers.
2. Train and educate staffs in the working / operation of the system and test the procedures that have been developed. Take corrective action, if any, complete the appropriate documentation.
3. Arrange for a reassessment of the system to be carried out by a suitably qualified person.

4. Consult the list of accredited certification bodies and carry out a supplier audit of them. It is important to establish the scope of the certification body's approval powers and its fee structure. In India, at present there are two well recognized organizations. They are

- I. Bureau of Indian Standard (BIS)
- II. Indian Register Quality System (IRQS)
(Accredited by the Dutch Council for certification).

5. Apply to the chosen body. It will send an Information pack. Upon completion of the necessary forms, the certification body will provide a quotation and details of fees. After agreeing to a contract, the appropriate documentation (including the quality manual) is then sent to the certification body to check compliance against the standards. The body will see the proof whether the quality system has been in effective operation for six months.

6. If the documentation covers the standard adequately, the certification body will proceed to the on-site assessment for a preliminary review. At this stage, the supplier can make appropriate system modifications and establish corrective action.

7. The assessment is carried out by a team of independent assessors appointed by the certification body and under the supervision of a registered Lead Assessor. It involves an in-depth appraisal of the organization's procedures for compliance with the appropriate part of the standard. If the assessors find any deviation from the requirements or identify any non-compliance with the documented procedures, a discrepancy report is raised. This report should be fully complied with the applicant.

8 After the assessment, basing on the conformity, the assessors make recommendation to the certification body either for Unqualified Registration, Qualified Registration, or Non-Registration. Any non-compliance must be rectified before the approval is given. After approval, the certification will be awarded and conveyed to the applicant company/supplier.

9. Once registered, registration usually covers a fixed period of 3 years subject to the regular surveillance visits (twice a year) by the certification bodies. After completion of 3 years, quality system reassessment will be made and certificate will be renewed subject to the conformity of standards.

BONUS FEATURES OF ISO 9000 STANDARDS:

1. Many customers require their suppliers to be registered to the ISO 9000 series. It results in:

I) Improved service performance and customer's satisfaction.

II) Improved productivity, efficiency and cost reduction.

III) Improved market share.

2. The guidance provided through 20 elements of quality system and the Independent assessment surveillance certainly aids in developing and maintaining the procedures, controls and discipline require in Total Quality Management (TQM).

3. There will be a reduction in the number of audits and assessments, leading to a saving in resources needed for such activities.

Registration to the relevant part of ISO9000 Series (9004-2 for banks) should be treated as the minimum requirement and the objective should be to develop and improve the system. An organization does not achieve the status of superior performance merely by registration. The winners will be those with a dedicated commitment to never ending improvement.

Problems with ISO 9000:

Besides all the benefits, which can be gained by gaining an ISO certification, there are also some disadvantages, which results from ISO certification. Some disadvantages which can be

found in the literature are: extra costs for achieving ISO certification, increase in paper workload, no attention for development of personnel, little attention for the support functions in an organization.

Furthermore, ISO certification may discourage creative thinking in an organization, because employees are forced to work following well-described procedure and rules. Critics tend to say that ISO certification involves a lot of extra costs, and seems not to result in benefits. Jones et al. (1997) think that gaining an ISO certificate is a “hollow achievement”. Meegan and Taylor (1997) note that European companies are too much preoccupied with registration to ISO 9000; too often European companies see the registration not as a means but as an end in itself. They are of the opinion that ISO 9000 certification in isolation is of limited value (Meegan and Taylor, 1997). A question therefore arises if ISO certification really generates all the stated benefits, and results in an improvement of the performance of organizations.

Total Quality Management (TQM):

TQM can be defined as the agreed company-wide and plant-wide operating work structure, documented in effective, integrated technical and managerial procedures, for guiding the coordinated actions of the people, the machines, and the information of the company and plant in the best and most practical ways to assure customer quality satisfaction and economical costs of quality (Zairi, 1991). Thus, it can be concluded that TQM itself, is the desired culture of an organization committed to customer satisfaction through continuous improvement. Many organizations have already realized that their only way of surviving in today’s competitive global market is to become a successful “total quality organization” (Bohoris, 1995). Similarly, it is noted in the literature that there is significant association between TQM activities and organizational competitiveness. (Corbett and Rastrick, 2000; Najmi and Kehoe, 2000; Pool, 2000; Prabhu et al., 2000; Terziovski and Samson, 2000; Zairi and Whymark, 2000a; Zairi and Whymark, 2000b; Zairi et al., 1994) Since Total Quality Management calls for continuous improvement, it will be inevitable that new concepts for maintaining innovation and quality will emerge to lead organizations to the next century and beyond (Liu and Kleiner, 2001).

Research undertaken by Corbett and Rastrick (2000) suggests that most quality tools associated with TQM do not generally produce advantage, but certain tacit behavioral features such as open culture, employee empowerment, and executive commitment can produce advantage.

ISO 9000 and TQM:

Oakland and Mortiboys (1991) debate regarding ISO 9000's place in the quality improvement process and its position with regard to TQM, when they proposed that a quality assurance system was one of the three major components of TQM. Ho (1994) on the other hand, saw ISO 9000 more as a vehicle to help implement TQM. Binney (1992) disagreed, stating that ISO 9000 was not the way to begin a TQM program. Why was this debate causing such interest among academics and quality practitioners? The main reason was that in order to compete in world markets organizations had to go beyond ISO 9000 and implement TQM. ISO 9000 was not TQM. Therefore, that standard was considered by many to be stepping-stone towards TQM.

A problem came up was that for many companies achieving ISO 9000 was considered as having quality, which is definitely not the case. Sun's (1999) international survey of 600 companies from 20 countries found that implementing ISO 9000 alone did not contribute much to quality improvement, while a combination of ISO 9000 and TQM contributed the most. Gotzamani and Tsiotras[2001] had pointed out ISO 9000 as the first step to TQM for which there are no clear requirements and directions. On the other hand, companies focus mainly on quick and simple certification with no real commitment to quality. Over the years, some companies have made the transition from ISO9000, some did not make any attempt and many others tried and failed.

A survey of ISO 9000 certified organizations by Taylor (1995) found that 32 percent had also implemented TQM but 24 percent regarded ISO 9000 as the end of their quality journey. From a research study by Magd and Curry (2003), they have recognized that the emphasis on quality has led organizations to adopt TQM. Moreover, organizations and customers have

demanded external recognition of quality, which has in turn provided the impetus for the International Organization for Standards (ISO) development of the ISO series. ISO 9000 represents a trend in quality management, which cannot be ignored in today's business environment.

In fact, those companies wishing to remain competitive and improve their quality systems are recommended the use of ISO 9000 as a foundation for a much broader system of TQM. This is based on the fact that ISO 9000 is an important part of TQM, and the implementation of both approaches together will lead to organizational success and competitive advantage. It is clear that both approaches tend to complement each other. ISO 9000 can be implemented first to create stability and consistency in the organization's work, then the implementation of TQM can enhance employee motivation and operational efficiency, and achieve overall organizational success and performance.

Companies applying TQM together with the ISO9000 standards did not share positive results (Martinez-Lorento and Martinez-Costa, 2004). This fact leads to the consideration that, despite the beliefs about ISO9000 as a good first step in the way of implementing TQM, once implemented, some of the ISO9000 principles are contradictory with TQM philosophy. The study concludes that when ISO9000 and TQM is applied simultaneously, the resultant benefits to the company are not better than those experienced if either system were applied in isolation. Heras et. Al (2002), in another study concluded that, although the performance of certified companies was superior to that of non-certified ones, the authors found no evidence of improved performance after registration in the 400 firms studied. These findings lead them to believe that the superior performance of the certified firms is due to firms with superior performance having a greater propensity to pursue ISO 9000 registration. This evidence cast doubt on the inference drawn in some of the literature that suggests ISO900 accreditation leads to business performance improvement. The evidence indicates that the direction of causality is that firms with superior performance are more likely to have certification, not that certified firms are more likely to have superior performance.

The development of a strong quality culture should precede ISO certification. Yet results also show that ISO certification can promote this culture. Motivation for seeking certification would determine which comes first; the quality culture or ISO9000 certification. ISO9000 certification can deliver significant business benefits if it is implemented as part of a continuous improvement strategy (Terziovski and Power, 2007). ISO9000 standards are partially related to the implementation of TQM and the improvement of business performance. The recommendation is that ISO9000 should be incorporated with the philosophy and methods of TQM (Sun, 2000).

Case study experience of KAIZEN vs. BREAKTHROUGH:

Engineers in Japanese companies are never satisfied with a product or a process. They are looking for small improvements on a continuous basis. They will take out a worker on a line move a conveyor or sometimes slow a machine down. This is not blind tinkering, but controlled experimentation with the variables in a process to seek out what may be a minute improvement in flow or efficiency. Such small step improvements, or kaizen, are a key ingredient in the superiority of Japanese reliability, both of the end products and the processes which produced them. Small steps taken in a planned way don't destabilize the process and they don't take it out of control. In fact, they enable the variables to be tightened that little bit more.

In the seventies, this approach to show through and a culture difference was noted. In general, the Western tendency was to leave alone dour as long as possible and then make great leaps forward - big new technology, whole systems replaced (often with non-compatible software), and next generation solutions. Bigbang...with years of fun trying to master the disruptions. General Motors' crash course in automation is probably the ultimate example. Threatened in its homeland both from imports and leaner domestic rivals, GM hit tee spend button. During the 1980s, GM spent \$77 billion on new equipment and plant. To put this in context, \$77 billion is much more problems. Even GM could not handle that order of spending and many of the robots remain unused. This technological solution simply could not work without the training, the organization, the philosophy to support it. GM in North America ended the decade still lagging Ford by a reputed 40 % in basic productivity comparisons. GM finds it

has no choice but to a lower competitive base, with plans developed to cut 20 or more plants through the nineties.

During the eighties, it became more and more apparent to the West Japanese automation hadn't mysteriously appeared overnight but had evolved over many years of continuous improvement. Far from putting in robots where ever they could be fitted, Japanese engineers often prefer low technology, installing hand rollers rather than power conveyors for example, looking for flexibility rather than speed. Far from trying to rid the operation of people altogether, as GM had seemed determined to do, Japanese engineers used technology to complement and support the skills and versatility of their workers. Ironically, GM Europe, one of the West's most improved car manufacturers in recent years, learned this lesson earlier than most and has pursued a totally different path from its parent. Former president Louis Hughes was in doubt that what they are involved in is a revolution. He drew together a team who had direct experience of joint venture working with Japanese practice such as at NUMMI or CAMI (GM and Suzuki) or with Toyoto in the US. We call them advisors but, in another since, they are more like missionaries - and we are in need of conversion. It is close to religion, it is a life philosophy, and it is that different '. Coming from the most successful part of the world's largest industrial company, this was revolutionary talk indeed.

Today, as Western and Eastern disciplines are blending together with world best practice, both kaizen and breakthrough are sought by Japanese, European and US companies. The rate of change in the market demands it. But the part which reminds hardest for Western minds is the step by step. It is particularly hard for managers, especially well educated ones, who are seeking more complex issues than this methodical approach offers. There is a widespread feeling that the simple tools and procedures of kaizen are the work force. They are, but they are for managers too. Such managers may not be aware that Japanese engineers and manager's account for the vast majority of improvements made each year-not the millions of quality circles and employee suggestions, important through these also are.

The following observations were made after the interview and discussion with the companies:

- There are more and more companies in Australia seeking for the certification to ISO 9000 in order to survive.
- Conformance to the requirements only should improve the ability of the company to manage its activities.
- In order to get the maximum benefits of the certification, further steps must be taken. TQM is one of the most useful steps found.
- More training and explanation were required to implement the ISO together with TQM. It takes time to implement ISO 9000 with TQM. It involves a change of management attitude over many months.
- The success of a quality system is directly related to the consistency and intensity of top management commitment.
- Commitment to quality must be earned and it will only happen when the workforce witnesses management setting the example,
- Employees should be rewarded on accomplishments rather than seniority, longevity or a subjective standard.
- To ensure continued business success, every company should have processes in place to constantly monitor and update its knowledge of its customer wants, needs and level of satisfaction.
- ISO 9000 could be a useful stepping stone for TQM. It does create a path with requirements, processes, procedures and communication with potential of continuous improvement.
- ISO 9000 only provides short-term advantage while TQM has a longer-term effect on quality management
- ISO 9000 is the launching pad and is an essential feature for a majority of firms implementing TQM.
- ISO certification is not the end; it is only the start of the company's quality journey.

Conclusions:

It has been recognized that the emphasis on quality has led organizations to adopt TQM. Moreover, organizations and customers have demanded external recognition of quality, which has in turn provided the momentum for the International Organization for Standardization (ISO) development of the ISO 9000 series. ISO 9000 represents a trend in quality management, which cannot be ignored in today's business environment.

In fact, those companies wishing to remain competitive and improve their quality systems are recommended the use of ISO 9000 as a foundation for a much broader system of TQM. This is based on the fact that ISO 9000 is an important part of TQM, and the implementation of both approaches together will lead to organizational success and competitive advantage. It is clear that both approaches tend to complement each other. ISO 9000 can be implemented first to create stability and consistency in the organization's work, then the implementation of TQM can enhance employee motivation and operational efficiency, and achieve overall organizational success and performance.

On the other hand, it appears that some managers have misunderstood the role of ISO9000 certification. One possible explanation for this misunderstanding is that managers fail to distinguish between conformance and performance specification. These organizations seek certification because of pressure from their customers and government policy. The quality of their products and services may improve in the short term, however, they are unlikely to improve and sustain their organizational performance. In these cases, ISO 9000 certification is a hollow achievement in the long run.

Researchers found that companies that implement ISO9000 and TQM at the same time and in an integrated manner might expect to have advantages in product quality, delivery, productivity and customer satisfaction. ISO9000 certification is only the beginning of a continuous improvement process rather than the end and could be a useful stepping stone for TQM. ISO 9000 can be an excellent start to TQM, if it is interpreted in a way that encourages the company to start on the process of continual improvement by team work of all people working in the company.

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