
The Evolution, progression and Impact of ISO 9000 in the manufacturing organizations around the world and India: An Analysis

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Abstract: In order to survive in the combative market, the companies have to develop a kind of mechanism in order to be in the preferred positions from their competitors. They should identify mechanism to make sure about their superiority from their competitors. Superiority from others can be achieved through many factors. Quality Certification and Assurance has become an unprecedented way to differentiate from the lots. Quality Certification has also emerged as a demand of Customers. The meaning of Quality has perplexity but no one can deny its importance in creation of differentiation status for the companies. Quality has been undisputed factor of preference for customer satisfaction. This paper is a deliberate attempt to understand the evolution, reasons and benefits derived by implementing ISO 9000 in their organization.

Keywords: ISO 9000, Quality Development, Customer Satisfaction, Quality Management System

INTRODUCTION

Background of Quality, QMS and ISO 9000:2015

Technological innovations adoptions according to time have broken the country boundaries and it has resulted in more learned customers with higher expectations from the organization. Peer pressure, Business environment, and increased expectation of customers led the companies to improve efficiency while decreasing the cost of production and maintaining the Quality.

Quality is a very vulnerable concept and changed over a period of time, however the objective in all times has been same to conform to the standards of customer delight. The maintenance of quality in the functional area has been an uphill task since the management functions were getting more complex.

The International Organization of Standardization with American National Standard Institute (ANSI) worked as a technical committee (TC 176) to build up conventional overall norm to generic application in the year 1979.

The primarily focus of ISO 9000 has always been to promote the customer relations. For the effective implementing of the ISO 9000 in an organization in all the functional department have to work together in integration.

The primary version in the standard of ISO 9000 came into light in the year 1987, and then further there were revisions and Updation continued in the year 1994, 2000, 2008 and 2015. Since the beginning of year 2004, all organizations had to follow ISO 9001:2000 for the goal of certification.

Presently, the Standard of ISO 9000 is supported by the national standards bodies from more than 165 countries. This support makes ISO 9000, a sensible choice for any organization that does international business or serves the customers who demand an International standard of quality.

American Society for Quality (ASQ) has characterized "ISO 9000 as a bunch of worldwide principles on quality administration and quality confirmation created to assist organizations with recording the quality framework components expected to keep a productive framework of Quality. They are not explicit to any one industry and can be applied to associations of any size."

By the research conducted by the author on the literature of ISO 9000 series and in samples of 100 papers, it came out that 70% of the samples are surveys, 17.5% were financial ratio analysis, 7% were the case studies and only 5.5% were either face to face interaction documented along with review of literature or Statistical data analysis.

In the past there have been numerous examinations to comprehend the effect of execution of Quality Management System. As per Maguad (2006), the selection of QMS is basically subject to existing design and goals of the association. Dale (1994) in his book has written that the models of Quality Management provide the suggested guidelines or base that how an organization can work towards achievement of Quality. He additionally characterized how bit by bit little gradual changes can bring about perspective change from old management framework to new Quality Management framework.

1.2 Quality Management principles

The ISO 9000 documentation is based on seven quality management principles, they are:

QMP 1 – Customer focus

QMP 2 – Leadership

QMP 3 – Engagement of people

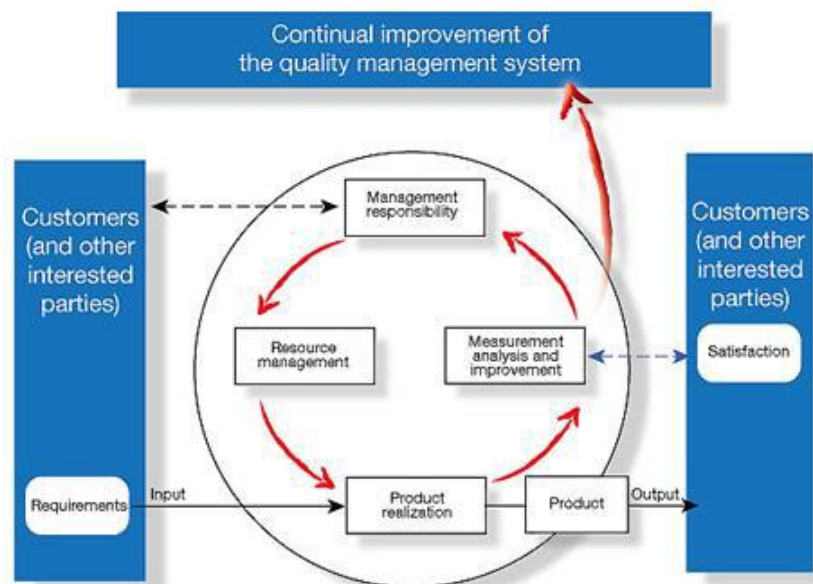
QMP 4 – Process approach

QMP 5 – Improvement

QMP 6 – Evidence-based decision making

QMP 7 – Relationship management

1.3 ISO 9000 Process Approach



The ISO 9000 process approach (source: www.iso.org)

The above model lays emphasis upon the significance of recognizable proof and comprehension of customer needs. The measurement of consumer satisfaction are subsequently utilized as criticism to assess and approve whether customer requirement have been accomplished or not. The management review will at that point give governance to strategic level management to alter the approval and advancement chances. (IS / ISO 9001: 2008).

1.4 Need for Research

- It will assist with understanding the advantages and constraints of the Implementation of ISO 9000 worldwide as well as India.
- There is lack of published ISO 9000 literature availability in Indian Context.

2. The objective of the Research

- To study and appreciate the connectivity of QMS with ISO 9000.
- To study effects, benefits of ISO 9000 on the organization in World and India.
- Issues and challenges faced by organizations for the implementation of ISO 9000.

3. LITERATURE REVIEW

3.1 ISO 9000 and QM practices Connection

From the Survey by (Brown et al 1998) which happened in the year 1997 on Australia based ISO 9000 confirmed Small and medium enterprises revealed that ISO 9000 confirmation should be done like strategies for inside reasons, for instance, to improvement in customer help and enhance capability in spite of outside reasons to oversee more benefits .

Deepa 2014 quotes that ISO 9000 can act as a route to TQM, and at the same time they are complementary to one another. For the companies who are implementing TQM, installing ISO 9000 will be relatively straightforward. As indicated by the Kumar et al 2018 a definitive purpose of any association is to accomplish an “Innovation , Sustenance and Improvement ” in each framework and processes so the ultimate objectives can be accomplished.

3.2 Effects experienced by Companies due to ISO certification

Since the advancement of ISO 9000 arrangement by the ISO, their norms are generally acknowledged by an enormous number of association across every enterprises non-related to their products and sizes. He further communicated that associations in agricultural nations are endeavouring to execute ISO 9000 to arrive at the international market.

ISO 9000 can't be seen as a TQM, anyway the suggestion was made that the version of ISO 9001:2015 is near to TQM considering the way that it relies upon the seven guidelines of QM that are more consolidated, as opposed to the eight norms of the past structure (2008).

Padma et al. (2008) in the investigation of Indian manufacturing firms have expressed that public firms show better market execution and inward execution than worldwide firms and conclude that accreditation adversely. Sometimes the expense of execution and upkeep is expensive than the potential advantages.

There have been many surveys conducted by various researchers during the past year to understand the motives behind ISO certifications by the companies. McTeer and Dale 1994 have opinion that the firms go for certifications to gain marketing benefits which is an external factor. Douglas et al 2003 cited that in order to anticipate future customer requirement the organizations do the ISO implementation. He further stated that to be a consideration for tenders , the company have ISO implementation.

Brown et al 1998 propounded that the reasons of ISO Certification and execution vary among large and small sized organizations. Since in small scale organizations there is no inside pressure from the administration to keep quality guidelines, for them time and cost associated with the certification turns out to be more significant. Terziovski et al, 2003, McTeer and Dale, 1994 concocted the primary justification execution as client request which is an outside factor. Basically there has been two thought processes in ISO 9000 execution, inside and outer Douglas et al. 2003 has likewise concocted a basic intention - ISO 9000 confirmation offers the chance to the organizations to open to new business sectors or get organizations they probably won't accomplish with its absence.

Since there is involvement of cost in the execution process , organizations try to decrease cost of production, efficiency and furthermore showcasing benefits (Douglas et al, 2003, Martinez-Costa et al, 2008.) There is an inescapable reasoning that the certification results might be immaterial. All things considered, ISO certificate set norms underway techniques with this there is decrease in inefficiencies. Whithers and Ebrahimpour (2000) have the discoveries that the assumptions for profitability and improvement are basically one of the best two purposes behind ISO 9000 execution. 66% of the organizations in their overview consented to similar. They additionally come further that pressure from competitors is also the motive apart from productivity improvement expectation. Till now, generally major findings designate that there is constructive and connection between motives and benefits accomplished from the ISO 9000 implementation.

3.3 Virtues of ISO 9000 Implementation

As indicated above an organization is internally motivated to implement ISO 9000, it can reap maximum benefits. However various researchers have segregated the positives of ISO 9000 implementation into dual aspects: Internal and External. Under the Internal benefits, it is achieved by internal stakeholders and environment while external benefits are related with external stakeholders including customers and suppliers.

Terziovski et al, 2003 have opinion that ISO certification can lead to production efficiency while McTeer and Dale 1994 concluded that it can lead to Quality awareness. They stated that the benefits of ISO implementation are reaped in years after certification but not immediately. Moreover firms need to understand that the certification requires money, time, energy and commitment and it is not a single day task.

Whithers and Ebrahimpour 2000 took samples from different European countries and came up with the results that with ISO 9000 implementation, the quality does improve. Terziovski et al 2003 opined that certification lead to error rates reduction.

According to the directions of the ISO standards, a company follow the procedures and can rectify the past mistakes. The employees will follow the directions provided will definitely lead towards the Quality improvement. Their discoveries are pointing that ISO 9000 arrangement's effect is more clear on net revenue rather than sales, cost reduction and easier training of new employees. These are the various internal benefits experienced by the companies due to ISO 9000 implementation. McTeer and Dale 1994 found considerable reduction in cost by small companies.

According to Brown et al 1998, the firm can have overseas market access due to certification. Increased sales and Marketing are external benefits which a company can experience. McTeer and Dale 1994. Terziovski et al 2003 stated the market share of the company is increased due to implementation. McTeer and Dale 1994 in his research found that the 75% of the surveyed companies confirmed the increase in marketing opportunities however the actual measurement was missing. It express that numerous organizations expanded their positives after accreditation. Since then, there is still an element of doubt that the profitability has increased due to certification or any other factor. There is a consideration that ISO 9000 series is beneficial in manufacturing industry and certainly there is more literature availability on manufacturing industries.

Srivastav (2010) expressed that execution of ISO 9000 can't yield interior advantages for the association, except if there has been an inner inspiration for execution. He likewise expressed that ISO 9000 execution speed up organization advancement by improving the capacity of environment, and adapting technique which improves the human prosperity in the association. They furthermore coordinated an assessment which mirrors the positive association between ISO 9000 quality affirmation. The outcomes uncovered two solid and substantial builds: quality outcomes and operative outcomes.

3.4 Insights of Implementation of ISO 9000 in Indian context

According of ISO reports 2018 in the year 2018 India is on the fifth number on the ISO 9000 certifications with the figure of 31795 Certificates. Roughly 46% is the manufacturing industries have got the certifications.

In the same year, Out of the total 776608 ISO certification were issued to 161 countries.(ISO 2005 survey) However the latest survey of ISO in the year 2018 states that from the totality of 878664 certification of ISO 9000 issued, India had 31795 certifications in various industries. Apart from ISO 9000 there is another widely accepted ISO 14000 standard. The series 9000 refers to Quality Management and ISO 14000 refers to Environment Management. In current scenario, the two series seem to protrude each other.

Sachdeva et al 2007 quoted that attaining ISO authorization in today's competitive and excellence aware market has become elementary aspect for organization's presence in contrast with their global competitors. Very few researches in the past year have focused on empirically examining the influence of ISO 9000 certificate on Quality administration trainings. B Sarkar 1990, led the overview on Indian businesses to comprehend the situation with Quality control in India.

He recognizes that organization approaches with respect to Quality are controlled from accomplishment in objectives as mentioned below:

- (1) Customer anticipation
- (2) Company status
- (3) Profitability
- (4) Market share

The research directed by Whithers and Ebrahimpour (2000) proposed the significant variances between four aspects (viz. management of technology, reasons for low quality, Cooperation in the quality projects and control of quality strategies utilized) of non-ISO and ISO affirmed associations in India.

Ray and Acharya (2000) conducted a comprehensive 1200 firm survey and come up with the analysis that exposed the benefit of ISO 9000 in comprehending the process well, responsibilities /authorities as well as linkage across the organization. They said that ISO 9000 accreditation facilitated the organizations in slightly refining the quality of their product. They further identified the critical success factors for implementation of QMS.

Dhar and Barua (2004) recognized that refining inward effectiveness and quality to expand service provided to customer is the foremost goal for ISO certificate through production and service providers in Indian province of Assam.

Bhat and Jagadeesh (2006) did a research in Karnataka and concluded that ISO 9000 confirmed organizations can accomplish the core advantages like better documentation and effectiveness in quality frameworks. In 2007, Sachdeva et al distinguished four significant aspects of estimating performance of the companies (excellence and cost of value, outer worth, time execution and buying) and was seen that associations have had the option to progress their exhibition on the whole the four aspects of study with level of progress changing from minimal to huge.

Bewoor et al (2010) conducted a survey on 220 companies to understand the associations between predictable and apparent profits through factual study. The concern of the organizations were for core motives as in refining procedures/efficiency or items/administrations. The peripheral reasons like pressure from clients or fake rivals

were given lesser significance. In the study conducted on quality practices which come up with the conclusion that their customers are asking for QMS Certifications.

Impacts on Firms performance

Well there are many contradictory views on firm profitability being improved through certification. There are studies that says there exist no undeniable connection of ISO 9000 certificate and advance in the sales or complete execution of the organization. Quazi and Padibjo in (1998) conducted survey on Singaporean firms came up that along with marketing gains, improvement in product quality was also experienced. They conducted an analysis on ISO 9000 enlistment influenced deals and benefit and came up with finding that no evidence proves the enhanced performance of the certified organization after enlistment in the 400 certified companies studied. Douglas et al, 2003 anticipated the sturdy association among the thought process behind the execution result and monetary enhancement for organization's execution. However on the contrary, (in 2003, Terziovski et al) 1000 firm's empirical study in New Zealand and Australia proposed the insignificance of optimistic association with companies performance. He analysed the ROI (return on Investment) between the year 1989 to 1995 and didn't found any significant improvement after the ISO 9000 certification. The organization use its ISO 9000 certification as the advertisement tool. This kind of attitude fail the purpose of implementation success and paperwork involved in the process. From the year 1990 to 1998, Wayhan et al.'s (2001) analysed the monetary after effects of 96 USA companies. It is found that there was no increase in the firm's sales revenue, but due to the reduction in internal cost has led to increased profitability. He also showed the partial effect of ISO 9000 accreditation on monetary execution, estimated with respect to return on resources, well this impact vanish rapidly over the long run.

It was proposed by Sachdeva et al 2007 that there are three scopes of monetary execution: working effectiveness – estimated with net revenue, sales advancement, and inclusive monetary execution estimated by income per share. The discoveries are more effective on net revenue than deals.

Martinez Costa et al 2008, researched in Spain to understand performance enhancement. He comprehend this scenario to be relatively pied along with substantial positive coordination among accreditation and commercial performance is not always affirmed. Also it had concluded solid evidence in association of ISO 9000 operation and enhancements in complete monetary operations such as quality responsiveness, efficiency, improved organizational performance, market share, client approval, and support of sales income.

To conclude the performance discussion, many researchers have proposed that the certainty lies in between. For the interpretation of the result with accuracy, one has to dig deeper. Few metrics are unquestionable like: reduced production cost, reduced errors, reduction in customer complaints and increase in sales. However insignificant variances were experienced in organizations rank.

Indecisions /Doubts

Till now a lot of discussion of effect and positives of ISO 9000 certification on the organizations is discussed. However few researchers also brought light to the doubts and negatives of the ISO 9000 implementation. Carr et al and Terziovski 2003 offered the rejection of the theory of improved financial performance. In the literature reviewed for this paper, two commonly cited disadvantages are : Cost involved in the process (Terziovski 2003) and large amount of paperwork involved in the process. Other factors that were also considered as disadvantages were time pressure(Whithers and Ebrahimpour 2000). Lack of knowledge from consultants and discouragement of thinking from employees point of view (McTeer and Dale 1994).

Cost is the most commonly cited disadvantage of ISO 9000 implementation by the small firms Terziovski et al 2003. It is likewise hard to precisely estimate the expense caused for implementation since it carries related cost also. Stevens and Barnes 2001 segregated the four foremost aspects including: time required by the processes, employees training which included lost man-hours, consultant payment and registration fees. Out of all these factors time needed and training hours are intangible but the consultant payment and registration fees can be specific in terms of money.

The need of numerous documents is stated as required for ISO 9000 certification. This is required for implementation and after too. Generally this is not an issue for the larger firm since they are carrying it in some way or other. Brown et al 1998 have brought into light that, large amount of documentation is needed in the audits. For elimination of errors and stabilization of procedures there is need of keeping the records.

When the paperwork is taken for granted the firm can face the disappointments mentioned in the literature. ISO 9000 serves as the advertisement and a powerful marketing tool for the companies.

Inferences and Scope for further research

The mapping of ISO 9000 Quality management System background, principles, process is conversed in this paper. The association of ISO 9000 and QM practices is studied. The effect, benefits of ISO 9000 on organizations is analysed. Also the doubts and disadvantages presented by various researchers are discussed. The insights about ISO 9000 in Indian context are taken. The current state of literature on the ISO 9000 QMS is

more concentrated on Asia and Europe whereas the developing countries like Latin America, Africa and India have very few studies conducted. Manufacturing sector was more focused in comparison to other sectors. Questionnaire is the most commonly used tool. The recurrent measurement method if found out to be Likert Scale along with the universal basis of information to be each respondent's perception.

Further, the future examination studies ought to sufficiently cover developed as well as developing economies in all continents and the types of organizations (manufacturing and service). Additionally the Quality Management frameworks being trailed by the associations (either independently or together) ought to be explored, with the goal that the research results are more complete and more perceptions can be inferred whether these scopes affect the research consequences.

The study to be led should depend on empirical information with longitudinal plan to comprehend the factual association among QMS and firm certification.

Research Limitations

The ISO 9000 QMS is taken in a generalized construct; other organizations which have implemented different QMS like TQM are not studied. Also there has not been clear cut differentiation for small scale industries and large industries. The environment to implement the ISO 9000 is not supposedly same for countries in Europe or Asia but no such consideration has been paid to the matter.

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