

IDENTIFICATION OF FACTORS FOR IMPLEMENTATION OF ISO 9000

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ABSTRACT

ISO 9000 is increasingly implemented by many organizations to improve their equipment efficiency and to obtain the competitive advantage in the global market in terms of cost and quality. ISO 9000 certification is one of the most common and recognized approaches for the benefits of the companies. But, implementation of ISO 9000 is not an easy task as it is always surrounded by numerous barriers. Besides the barriers, there are certain factors, which help in the implementation of ISO 9000. The main objective of this paper is to examine the literature that deals with the factors which affect the implementation of ISO 9000 in any organization. This literature review is done so that industries which wish to implement ISO 9000 can consider these factors before going for certification.

Keywords: ISO 9000, Factors, Identification, Implementation

I. INTRODUCTION

International organization of standardization (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 [1]. 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 an ISO 9000 system can have a significant cost reduction which in turn results in performance improvement [2]. Although the number of firms that want to implement ISO 9000 quality management system is increasing day by day, many of them increasingly started questioning the link between ISO 9000 and firm performance. In addition, despite the increasing amount of research on ISO 9000 quality management system, most of it is not empirical and mostly case studies, which are merely descriptive or prescriptive [3]. In general, studies investigating the effects of ISO 9000 on performance have shown mixed results. Some studies showed a positive effect, while others did not. However, recent longitudinal studies found strong evidence that ISO 9000 does lead to improvements in performance [4]. In general there are two approaches to management the quality of a product or a service. Product quality deals with the quality of the final product, while process quality deals with the quality of the processes required to producing goods and/or services. Quality has become so important that the world is uniting around a single quality standard which is the ISO 9000 [5]. ISO 9000 is defined as a family of standards which relate to QMS and are designed to assist organizations in meeting their customers' and stakeholders' needs. ISO 9000 has evolved and is being updated

continuously to provide necessary conceptual and structural input to the development of such a system. As a consequence, customers demand ISO 9000 certification from their suppliers. Implementation of ISO 9000 standards requires the establishment and development of a documented system, and the involvement of all the employees in adhering to it. This paper gives details of how a textile mill, with the help of a reputed consultancy organization, implemented ISO 9000 within 12 months and thereby achieved better quality products and also obtained the ISO 9000 certificate. The trend of implementing the ISO 9000 quality system has grown quickly throughout the world, including in developed countries like US, UK as well as developing countries in south-east Asia. The purpose of these ISO standards is to provide a guideline to quality system to the organizations and to improve their performances so that they can provide better and more consistent quality products and services to their customers. The ISO 9000 requirements focus on process control, reduced wastage, improved efficiency and productivity and more cost effectiveness in their business operation. To make the implementation of the quality management system simpler and consequently scheduling the accreditation and certification process for ISO 9000 within a reasonable timeframe for every agency involved, the circular came attached with a precise and detailed implementation guideline. The implementation of the ISO 9000 also complements and completes the efforts to upgrade quality which have been and are currently undertaken by government agencies, where, through the advent of ISO 9000, quality management has become even more prominent via the pursuit of Total Quality Management (TQM) programmes for organizations to improve competitiveness [6]. The ISO 9000 standards establish requirements for the quality system of companies. They do not refer to the technical specifications of products but instead to the system that produce the products, providing confidence that the products consistently meet the specifications [1]. This concise description of the ISO 9000 quality system simplistically highlights the implications of adopting this standard. Nothing stated here indicates any guarantee of improvement to quality or of the benefits to the manufacturer. US companies have supported the dominance of internally driven factors to motivate companies to pursue ISO 9000 registration. The reasons for ISO 9000 registration are categorized as follows: [7].

- **Developmental Reasons:** Desire to improve the company's internal processes; desire to enhance the overall competitive performance of the company.
- **Non-Developmental Reasons:** Requirement of major customer(s), desire not to be locked out of future tendering processes or markets, realization that is progressively becoming a requirement of doing business, marketing and public relations tool.
- **Mixed reasons:** Constitutes the combination of development and non-developmental reasons.

II. DIFFERENT ISO STANDARDS

Standard/ Document	Title	Edition
ISO 9000:2005	Quality management systems- Fundamentals and vocabulary.	Third
ISO 9001:2008	Quality management systems- Requirements.	Fourth
ISO 9004:2000	Quality management systems- Guidelines for performance improvements.	Second
ISO 10001:2007	Quality management- Customer satisfaction- Guidelines for codes of conduct for organizations.	First
ISO 10002:2004	Quality management- Customer satisfaction- Guidelines for complaints handling in organization.	First

ISO 10003:2007	Quality management- Customer satisfaction- Guidelines for dispute resolution external to the organization.	First
ISO 10005:2005	Quality management- Guidelines for quality plans.	Second
ISO 10006:2003	Quality management- Guidelines for quality management in projects.	Second
ISO 10007:2003	Quality management- Guidelines for configuration management.	Second
ISO 10012:2003	Measurement management system- Requirement for measurement processes and measuring equipments.	Second
ISO/TR 10013:2001	Guidelines for quality management system documentation.	First
ISO 10014:2006	Quality management- Guidelines for realizing financial and economic benefits.	First
ISO 10015:1999	Quality management- Guidelines for training.	First
ISO/TR 10017:2003	Guidance on statistical technique for ISO 9001:2000.	Second
ISO 10019:2005	Guidelines for the selection of quality management system and use of their services.	First
ISO/TS 16949:2002	Quality management system- Particular requirement for the application of ISO 9001:2000 for automotive production and relevant service part organization.	Second

Source: <http://www.iso.org>

III. BENEFITS OF ISO 9000

There are many benefits from ISO 9000 implementation; some of those benefits are as follows: [8]

- Increase in company quality awareness;
- Increase in product quality awareness;
- Improvement in management;
- Improvement of customer relations;
- Improvements in the products and services offered;
- Improved relationships within the organization;
- Greater customer satisfaction; and
- Increased respect from competitors.

From the literature review it has been found that though ISO 9000 implementation improves the quality of product and services for an organization but for an organization it is not always very easy to implement this certification.

IV. IDENTIFICATION OF FACTORS

From extensive literature analysis, 15 factors have been identified which help in successful implementation of ISO 9000 in any organization. These factors are as follows:

- **Organization Culture:** It is known to all that every organization has its own culture of working. The assumptions, values and behaviors that an organization exhibits can be described as its culture, which is highly dependent upon the nature of business. Many researchers have showed from their work that culture

of the organization should be such that it can accommodate the values of QMS system. Culture of the organization must be capable of adapting the changes due to the implementation of ISO 9000.

- **Top Management Commitment:** Top management commitment is considered as the one of the most influential factors by many researchers that affects the successful implementation of ISO 9000 in different kind of organizations. It was obtained from the 83.33% of the respondents interviewed stated that the success and sustainability of ISO 9000 is influenced by top management [9].
- **Education & Training:** Different study determined that training is also one of the critical factors that assure the sustainability of ISO 9000 in organizations. This is also justified by the interviews results which highlighted the lack of training or induction to the new officers affects as a barrier. Researchers also found that the training provision should be continuous and comprehensive [10].
- **Team Work:** In implementing ISO 9000 in any organization, all the departments must come together for this QMS program. Any single department cannot work towards the attainment of goal. There must be a spirit of team work in the organization [11].
- **Adequate Financial Resources:** Information and technological system require more funds because without these, implementation of ISO 9000 is not possible in the present environment. The training of personnel related to the ISO 9000 is also very important for efficiently managing and eventually making the ISO 9000 profitable. However, all these require financial support. Lack of financial support affects the certification programs also. ISO 9000 improves operational efficiency, customer service, provides an ability to focus on core business objectives and provides greater flexibility [12]. After conducting a survey in England SMEs regarding maintenance strategy development for SMEs, founded that, majority of responses (80 %) claimed that the adoption of a new maintenance initiative is usually constrained by the lack of finances [13]. For a good and effective QMS an organization must have abundant financial resources [14].
- **Employee Involvement:** Factor regarding employee involvement, cooperation and commitment can be regarded as a consequent issue that occurs due to positive perception or attitude towards quality among employees as well as employees' culture toward quality. This is because these will create positive action and encouragement among the employees to be fully involved in the ISO implementation process within their respective organizations. When these employees possess adverse perception or attitude, those who are involved in ISO implementation will adopt a lackadaisical mindset and this in turn will cause their level of participation to become restricted leading to reluctance in terms of cooperation as well as lack of full undivided commitment [15].
- **Motivation:** Motivation changes the behavior of an employee towards work from negative to positive. Since, the workforce is regarded as a valuable asset; to maintain and develop it becomes important. Morale, which is a group motivation concept, is an automatic outcome of management's supporting and stimulating attitude towards employee's needs. Good working conditions, job security, a fair and free work environment provide job satisfaction to an employee. Absence of these may also act as demotivator. Many researchers have assigned motivation as an important reason for ISO9000 success if motivation exists in any organization [16] [17] [18] [19].
- **Strategic Planning:** Many organizations have discovered that the key to customer satisfaction and competitive success lies in emphasizing and achieving product and service quality as a strategic weapon in performing business [20]. It is clear that quality has emerged as a strategic competitive tool for organization success in the manufacturing, service and government areas [21]. In today's business environment,

organizations cannot afford to ignore the strategic implications of quality for their competitive position. [22] Lee analyzed the implementation and performance outcomes of ISO 9000 in service organizations and showed that managers in organizations should realize that ISO 9000 is capable of generating a competitive advantage only if top management is fully committed to the program implementation from a strategic perspective.

- **Proper allocation of Responsibilities & Authorities:** Many researchers have illustrated the difficulty in allocation of responsibilities and authority as an important barrier in the implementation of ISO 9000. The organization deciding to implement the ISO 9000 must decide the role and responsibility for the management and then must allocate the responsibilities for the employees. The management responsibility element comprises the requirements for developing and improving the quality, system, listening to customers, formulating quality policy and planning, and defining responsibilities, authorities and communication processes to facilitate effective quality management [23]. It is clear from literature that for a successful implementation of ISO 9000 programs it is important for any organization to allocate the responsibilities and authorities to proper workforce.
- **Proper Communication:** The researchers observed that where there was clear ‘communication and awareness’ backed by active top management then the implementation of ISO 9000 was successful. Various factors were observed by the researchers that were affected in a great extent by proper communication within and outside the organization.
- **Flexibility in the System:** Flexibility in the system leads to satisfactory performance of the ISO 9000 programs. It may be in the form of changing methods and implementation etc. Flexibility is the ability of a manufacturing system to cope with changes in the nature, mix, volume or timing of its activities. Flexibility is superior to leanness, but it may add more to costs than to revenue [24].
- **Internal Auditing:** Quality auditors who perform internal auditing are in a powerful position to increase the ability to unveil conformity and thus increase the value of certifications. The main reason for conducting audits is to obtain factual input for management decisions, but a vast majority of audits only produce data for use in granting a certificate, for improving documentation or for enforcing conformity. Most auditors have been exposed to conformity auditing where the sole objective is to establish if a specific requirement has been met [25].
- **Continuous Improvement:** Continuous improvement & quality control is an important factor that accelerates the successful implementation of ISO 9000 [14]. The ISO 9000 has formalized an effective system for evaluating the ability of any firm to consistently design, produce, and deliver quality products/services. Moreover, ISO 9000 provides guidelines for organizations to establish their quality system by focusing on procedures, control, and documentation [26].
- **Customer Satisfaction Focus:** Customer pressure is one of major motivations to achieve ISO 9000 certification mentioned by companies [27]. When firms simply react to external pressures for satisfying the customers by getting certified, they may consider ISO 9000 certification as a prime goal in itself.
- **Knowledge & Understanding of ISO 9000:** If any organization is going for ISO 9000 certification, then utmost priority of any organization should be that they have proper understanding of ISO 9000 concepts and that knowledge must be imparted to all the workers. In a nutshell workforce must be fully familiar with all the concepts and documentation of ISO 9000 [28].

V. CONCLUSION

The main objective of this paper is to highlight the main factors that help in the implementation of ISO 9000 in industry. The organization willing to implement ISO 9000 system in their organization may have a look over these factors. It will also be helpful in academic as well. From this paper, it is seen that ISO 9000 is an important tool to enhance the quality of product/services. This system satisfies both organization and customer. ISO 9000 system is like a license, if a company is ISO 9000 certified it means that product contains quality and the product will be accepted globally. In spite of having so many advantages there are many problems with the implementation of ISO 9000.

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