

Quality Management System in Operations of Companies: A Case Study of North Bengal

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ABSTRACT: *The study was exploratory in nature and was conducted on the companies with ISO 9001 standard certification, situated at different parts of North Bengal (northern part of West Bengal, India). The study is aimed to assess ISO 9001 Quality Management System's (QMS) awareness level, types of companies opting it, causes for seeking certification, understanding the roles and responsibilities of the management of the companies, certifying bodies, consultants, employees of the companies, customers requirements, recognize difficulties, challenges and issues in implementation, advantages received and future prospects. The study illustrates that ISO 9001 Quality Management System is helpful in enhancing organizational performance. The companies experience benefits after its implementation. It helps in improvement of customer needs, satisfaction and demands, better documentation and improvement in the efficiency of the quality system. The study further shows that the effective implementation of QMS is facing difficulties due to some barriers like no serious involvement of top management in the process, lack of participant's positive perception and lack of skilled personnel. It also appears from the study that significance of QMS is diminishing slowly due to its paper-obsessed practice.*

Key Words: *Quality, Product, Services, Quality Management Systems (QMS); ISO 9001; Total Quality Management (TQM); Certifying bodies, Consultants, Organizational performance, Continuous improvement,*

I. INTRODUCTION

In today's world, the traditional and modern business organizations are indispensable parts of the commercial practice. The business organizations have mechanisms for measurement and evaluation of its activities so that it can guarantee the quality of the services offered and the satisfaction of its users. The business organizations mainly face the challenges of examining and giving decision in relation to the most suitable mechanism to improve and guarantee the quality of their product/services. One can define quality as fitness for purpose and in context to business, engineering and manufacturing quality has a reasonable justification as superiority of something.

As quality is perceptual, unconfirmed, and somewhat subjective in nature and that's why, understanding about quality varies from person to person. The users establish the quality of a commodity with the existing options produced by the competitors in the market and the producers try to quantify quality by assessing degree to which the commodity was produced correctly. An item that has quality has the capability to perform satisfactorily and is fit for its intended purpose. In business perspective there are five characteristics of quality:

- Producing – providing something
- Checking – confirming that something has been done correctly
- Quality Control – controlling a process to ensure that the outcomes are predictable
- Quality Management – directing an organization so that it optimizes its performance through analysis and improvement
- Quality Assurance – obtaining confidence that a product or service will be satisfactory, normally performed by a purchaser

Most of the companies have their own quality management system and a process of tackling quality issues that varies in accordance to the business sector, the environment in which it carries out the operations and the strategies of the organization. The companies organize their internal system using their own strategies and try to be competent and efficient in overall operations and makes sure that nothing remains unattended and roles/responsibilities are clear to all the stakeholders of the organization. It is a known fact that quality work is

possible only by teamwork and to operate the overall Quality Management System of an organization it needs involvement of all the stake holders. The Quality Management System requirements can be effectively communicated by writing down the system requirements and by forwarding its significance to all the stake holders involved in the various levels of operational activity, so that, they know what, why, when and how the things are done. Quality management has four components: quality planning, quality control, quality assurance and quality improvement.

The world has become a global village and it has enhanced the business opportunities globally. The business houses felt the need to develop quality of product and services internally and externally to grab the opportunities countrywide and in foreign markets. To win the confidence of investors, take hold of a chance of fair competition, win the confidence of customers; maintain a common and acceptable standard of product and services worldwide, the business fraternity worldwide felt the need to adopt a system that is similar or iso worldwide. In 1947, a non-governmental organization was established in Geneva, Switzerland, a global federation of National Standard Bodies that comprises about 162 countries,^[1] one from each country and the federation was termed as International Organization for Standardization (ISO). India is also a member of the federation. The need for worldwide facilitation of international exchange of goods and services initiated the concept of ISO. Its responsibility is to encourage the development of standardization and related activities globally.

In India, ISO 9001 is implemented by Bureau of Indian Standards on the suggestion of the MSD 2 Quality Management Sectional Committee^[2] after approval of the Management and Systems Division Council. ISO 9001 has been adopted to make the "Indian Standard" identical with "International Standard". The ISO 9001:2008 standard deals with the following areas:

- **Quality Management System (Clause-4):** The clause states about the requirements to identify, plan, document, operate and control QMS processes and to continually improve QMS effectiveness.
- **Management Responsibility (Clause-5):** The clause handles the requirements for top management to demonstrate its leadership and commitment to develop implement and continually improve the QMS.
- **Resource Management (Clause-6):** The clause deals with requirements to determine provide and control the various resources needed to operate and manage QMS processes; to continually improve QMS effectiveness; and to enhance customer satisfaction by meeting customer requirements.
- **Product Realization (Clause-7):** The clause sets requirements to plan, operate and control the specific QMS processes that determine, design, produce and deliver an organization's product and services.
- **Measurement, Analysis and Improvement (Clause-8):** The clause identifies requirements to plan, measure, analyze and improve processes that demonstrate product and QMS conformity and continually improve QMS effectiveness.

II. NEED OF THE STUDY

The study will address the organizations of North Bengal that have achieved ISO 9001 certification for their quality management system (QMS). The study is intending to scrutinize the past, evaluate the present and plan the future of ISO 9001 in North Bengal. The management of the companies, certifying bodies, QMS consultants, employees of the companies and customers need scholarly attention both for practical and academic reasons. Practically, the study like the present one, could be able to formulate a course of action for everybody who is directly or indirectly involved with the issue. At the academic level, a study focusing on the issues is not recorded yet, most probably.

Most of the companies in present era are looking for consolidation of their quality management system in order to be able to respond in a clear and flexible way to the demands of business evaluation. At this stage, the study may attract the interest to organizations that have already taken up the standard as well as to those that have not yet determined which quality management system they should adopt. In fact, here lies the significance of the present study, which will attempt to critically evaluate the pros and cons of the quality management system.

III. REVIEW OF LITERATURE

ISO 9001 is one of the most popular standards in the family of ISO 9000 and that is certifiable. However, scholarly works on this subject remains limited. It is quite evident from the study of some researchers that ISO 9001 is passing on positive impact on satisfaction level of customer needs and their demands, helping companies in attracting customer and wins their faith. The impact of ISO 9001 is observed in the economies of various countries like China, India, UK, Japan, USA, Australia and others.

The research of Franka Piskar titled, "*The Impact of the Quality Management System ISO 9000 on Customer Satisfaction of Slovenian Companies*"^[3] states that the Slovenian companies authenticate the ISO 9000 quality standard's impact on improved customer needs, satisfaction and demands, but no direct impact on success in business has been noticed. The research work is a useful source of solutions and information for managers and researchers in the field of quality systems and customer satisfaction.

The article of Sime Curkovic and Mark Pagell namely, "*A critical examination of the ability of ISO 9000 certification to lead to a competitive advantage*"^[4] discusses about the system that evaluates ability of the companies to consistently design, produce and deliver quality products and services. This has been further formalized by the ISO 9000 series of standards. In the article it is also specified that ISO 9001 is considered as either a variant of Total Quality Management (TQM) or a paper-driven process of limited value. It is also discussing about the competing views of the standard in an effort to show that ISO 9000 certification can be leveraged into a competitive advantage.

K. D. Gotzamani, Y. D. Theodorakioglou and G. D. Tsiotrasin their work namely, "*A longitudinal study of the ISO 9000 (1994) series' contribution towards TQM in Greek industry*"^[5] tried to identify the effect of time on ISO 9000's contribution to total quality management and performance improvement. The survey verified that ISO 9000 certification can serve as a good first step towards TQM. The results prove that although the standard's implementation helps companies to achieve an initial improvement in their quality performance, it cannot guarantee that this improvement will continue after certification.

Paulo Sampaio, Pedro Saraiva and Antonio Guimaraes Rodrigues in their study, "*ISO 9001 certification forecasting models*"^[6] stated that ISO 9001 is considered as one of the most effective tools that can be adopted for guiding the management of Quality Systems. The current growth observed by the standard worldwide confirms a strong polarization of enterprises' interest in this practice. Due to the extensive occurrence of this incidence, a deep investigation of ISO 9001 diffusion over time is of mandatory importance. The study covers the development of statistical models in order to characterize the ISO 9001 certification evolution on a country basis, as well as worldwide. The study allows us to analyze the worldwide evolution of ISO 9001 certification and suggest new prediction models for the diffusion of quality management systems certification at different geographical realities.

W. M. To, Peter K. C. Lee and Billy T. W. Yu in their study, "*ISO 9001:2000 implementation in the public sector: A survey in Macao SAR, the People's Republic of China*"^[7] stated that the study covers the implementation of ISO 9001:2000 in the public sector, using data obtained from a small-scale and service-oriented economy *i.e.* Macao SAR, the People's Republic of China. The results show that ISO 9001:2000 is useful in enhancing organizational performance in public organizations.

Dong-Young Kim, Vinod Kumar and Uma Kumarin their paper "*A performance realization framework for implementing ISO 9000*"^[8] proposed a performance realization framework based on key factors of ISO 9000 implementation. This study identifies five motivation factors (quality-related; operations-related; competitiveness-related; external pressure-related; organizational image-related factors) and ten critical success factors (leadership; training; involvement of everyone; organizational resource; quality-oriented culture; customer-based approach; process-centered approach; communication and teamwork; customizing the ISO requirements; quality audit). This study also develops a performance realization framework composed of three parts: conversion; enhancement; and competitive priority stages.

Daniel I. Prajogoin his study, "*The roles of firms' motives in affecting the outcomes of ISO 9000 adoption*"^[9] stated that organizations motives in adopting ISO 9000 have been considered as one of the primary factors in determining benefits of the implementation of the standard. Literature commonly categorized motives for adopting ISO 9000 into two types, internal and external. The purpose of this paper is to examine three major strategic roles which these two types of motives play in affecting the result of the ISO 9000 adoption, namely goal, driver, and context. As a goal, motives reflect the firms' strategic outcomes in adopting ISO 9000. As a driver, motives determine the way firms implement the standard, and as a context, motives moderate the effect of implementation on firms' performance as the outcomes of ISO 9000 adoption. Consistent with predictions, internal motives had a positive relationship with operational performance and implementation. Furthermore, from a strategic fit perspective, internal motives strengthened the relationship between implementation and performance. In contrast, external motives had no statistically significant relationship with performance and weakened the relationship between implementation and performance. The results provide key insights for managers to appropriately evaluate their ISO 9000 certification motives and to give attention to the implementation of ISO 9000 standards. Firms can thus gain a better understanding of how performance is shaped from both the motives for and the implementation process of ISO 9000. The study articulates the

multiple roles of organizations motives for adopting the ISO 9000 standard and examines their effects on their performance.

This article of Paulo Sampaio, Pedro Saraiva and Antonio Guimaraes Rodriguestitled, "*A classification model for prediction of certification motivations from the contents of ISO 9001 audit reports*"^[10] states that ISO 9001 certification motivations can be classified into two main categories. The first one is internal motivations and second external motivations. Internal motivations are related with genuine organizational improvement goals viz. productivity, internal communication, process performance and others, whereas, external motivations are mainly related to promotional and marketing issues viz. customer and market pressures, market share and so on. Some companies that become certified mostly upon the basis of external motivations define their main goal as 'obtaining registration', and thus usually adopt a limited view over the scope of quality management systems implementation and certification.

Borut Rusjan and Milena Alicin their study, "*Capitalizing on ISO 9001 benefits for strategic results*"^[11] stated that the purpose of this study is to identify and classify potential and verified benefits of implementing quality management systems (QMSs) according to ISO 9000 standards. The research was based on a comprehensive review of the relevant literature, mostly articles relating to implementation of the ISO 9000 QMS and its impact on customer satisfaction and business performance. It was observed that the literature talks about possible benefits of the effective implementation of the ISO 9000 QMS and searches for related support in published empirical research. The study classifies the major identified and empirically verified benefits into four groups in relation to the balanced scorecard (BSC) approach to categorizing company objectives. It also relates the potential benefits to specific standard requirements and the pre-conditions that must be met in the implementation stage of the ISO 9001 in order to attain these benefits. The study of the benefits has not focused on the standard releases, so the benefits are not emphasized separately for each release. Moreover, there is less research on the releases (from 2000 and 2008) and that's why their benefits are not recognized properly.

IV. RESEARCH GAP

There is hardly any research work done on the subject of adoption of ISO 9001 certification by the companies operating in North Bengal. The author wants to examine the reasons of the companies looking for certification, try to identify their difficulties, challenges and issues during implementation^[12] and the advantages received. The issues, like: role of certifying bodies; the role of customers; the role of management of the organizations; and the role of employees of the company in relation to adoption of ISO 9001 and certification thereon; require a thorough study by looking at the interest of the customers, employees and, above all, the management who at many a times contributes substantial financial resource and time in getting the certificate without any value addition to the organization. In fact, these issues are left untouched. The author adopted the area as per scope of research on account of their similarity in culture, attitude and interdependency in business.

V. OBJECTIVES OF THE STUDY

The study revolves around the business organizations that have received ISO 9001 certification for their quality management systems. The specific objectives of the study are as under:

- To identify the type of companies opting for ISO 9001.
- To assess the awareness level of ISO 9001 among the top management, middle management, lower management, workers and other stake holders of the company.
- To inspect the cause for seeking certification, recognize difficulties, challenges and issues in the implementation and the advantages received while applying ISO 9001 standard in the companies.
- To investigate whether ISO 9001 has properly been implemented by the companies for development of the quality of their products and services or it is used as just another marketing tool.
- To consider the future prospects of ISO 9001 in companies operating in North Bengal, in particular.
- To integrate the above findings and recommend managerial implication.

VI. RESEARCH QUESTIONS

The progress of globalization has raised the level of businesses and made them more competitive and this competition will grow with time. Most of the businesses are bound to employ some sort of initiatives to make them competitive in order to survive the tough competition and these initiatives may be considered as their certification motivations^[13]. In this study, the author will try to understand the need of ISO 9001 standard for a company and how the standard is helping them in facing the harsh competition. The questions to be addressed in this research are as under:

- Are the staff and management of the company aware of ISO 9001 standard?
- Why ISO 9001 standard was implemented in the company? What difficulties the company faced during implementation of the standard?
- What were the certification motivations of the organization - internal (productivity, internal communication, process performance) or external (customer and market pressures, market share)?
- What is Quality's contribution to the bottom line? Does quality contribute to provide a positive financial return or costs are more than the related return?
- What are the advantages received after ISO 9001 standard implementation?
- What could be the future of the ISO 9001 standard?

VII. SCOPE OF THE STUDY

The present study is exclusively focused on companies in the North Bengal in order to draw information about the revised ISO 9001:2008 standard. The area of research for the present study is ISO 9001 Quality Management System, its awareness and perception among the companies in North Bengal *i.e.* northern part of West Bengal consisting of seven districts. It is a general perception among the business fraternity of North Bengal that ISO 9001 Quality Management System is a promotional and marketing tool only, used to attract potential customers. Top management aligns its recourses for ISO 9001 Certification due to some factors like tenders; funds from various funding bodies; market expansion and sometimes out of emotional procurement and so on. During the study, no attempt will be made to verify any relationships between variables. The main interest in this work will be purely explorative.

VIII. LIMITATION OF THE STUDY

The study is based on only one dimension of operations management that is Quality Management. Also the study will focus on North Bengal. The study evaluates the motivational factors, effort given, difficulties faced and benefits received by the organizations before and after implementation of ISO 9001 QMS. Some elements and findings may be beneficial and fit in various activities of the organization but the study cannot be considered as a blueprint for improving inferior performance of a certified company. There may be some more companies with ISO 9001 certification which the author could not get in touch with, so, the list of companies in this study is not comprehensive. This may also be noted that the analysis of collected information will be based on the personal experience of author. Moreover, as the study is exploratory, it relies on subsequent studies to confirm and it points out a generalized situation and not any particular company or organization.

IX. RESEARCH METHODOLOGY AND DATA

The research here is of the type of exploratory in nature. The proposed work and its outline make it clear that the study will depend primarily on field-based data. Still, secondary data will have their significance and will also be consulted and referred to, whenever necessary. The proposed study would utilize several methodological tools, like, informal interview on the basis of both structured and unstructured interview schedule. Utmost stress would be given to observation. The questions to be asked would be structured as close and open ended so as to get the respondents involved in conversation. However, for interviewing, sampling method may be employed.

In-field, personal interview has been conducted in different languages, such as, Bengali, English, Hindi, and Nepali. An interview schedule will be prepared to collect primary data from the companies. Pre-testing of the interview schedule was done to identify the problems in the interview schedule before preparing the final schedule. Interview schedule has been divided in three parts, having questions of both closed and open ended types. Part –I will be designed to collect information of the company. The important information in Part-I will be related to name, area of activity, location, type of company, turnover, and others. Part-II will be related to personal information of the interviewer like position and others. Part-III will be related to ISO 9001 QMS certification body; certification year; time taken to certification; expenses incurred in certification; management representative; quality manager; employee's perception about ISO 9001 QMS; internal audits; ISO 9001 QMS clauses for companies; possible positive and negative outcomes of ISO 9001 QMS; and turnover. The information regarding location or whereabouts of the ISO 9001 QMS certified companies will be collected through telephone directories, search engine like Google, newspapers, quality management consultants, certification bodies, trade organizations, CII, Chamber of Commerce, and individual visit to the companies. The study would cover the seven districts of North Bengal, namely, Malda, South Dinajpur, North Dinajpur, Darjeeling, Jalpaiguri, Alipurduar and Coochbehar.

The information gathered has been converted into desirable data and it will be analyzed using descriptive statistics and other suitable techniques.

X. ANALYSIS OF DATA

As per survey on ISO 9001 certified companies, the information gathered was processed category wise and a sampling frame was created which is as follows:

SAMPLING FRAME:

Category	No. of Respondents
Manufacturing	24
Hospital / Health Care	12
Schools and Coaching Classes	11
Hotels and Hospitality	8
Logistic	7
Transporters	5
Trading and warehousing	4
Export & import houses	3
Real-estate	3
Money Marketing	3

The data collected after the survey was converted into desirable data that was analyzed using descriptive statistics. The results were prepared in the form of tables, colored pie charts, bar graphs and others. The overall tasks of data compilation, processing and the final drafting has been done using computer.

XI. CONCLUSION &RECOMMENDATION

The study helped in getting a transparent picture regarding the organizations motive in relation to the implementation of ISO standards and in identification of ways of measuring the economic impact of quality improvements in the companies of North Bengal. The study led us to some concluding point's viz. ISO 9001 Quality Management System can be considered first step in the quality journey towards a broader quality management approach and is helpful in enhancing organizational performance. The organizations received benefits of ISO 9001 Quality Management System's implementation. It helps in improvement of customer needs, satisfaction and demands, better documentation and improvement in the efficiency of the quality system and in other words enhancement in business.

The study reveals that though QMS is effective in continuous growth of business organizations, it is facing difficulties too due to some barriers like lack of involvement of top management in the process, lack of participant's positive perception and lack of skilled personnel. The process involves high cost of implementation, less acceptance by staff and reduced effectiveness over time. Some effort needs to be taken from the government's end (both state and central) like improvement of the legal framework, enforcement schemes to strengthen supervision and control of effective auditing of ISO 9001 standards for smooth implementation of QMS in different business organizations.

The study will open opportunities for further research in many other areas of management systems viz. ISO 14001 (Environmental Management System), ISO 22000 (Food Safety Management System), OHSAS 18000 (Occupational Health and Safety Management Systems), NABH (National Accreditation Board for Hospitals & Healthcare Providers), NABL (National Accreditation Board for Testing and Calibration Laboratories) and so on. The findings in this research can be further extended and modified to accomplish the ultimate goal of promoting and improving sustainable practices in business management and operations. This area of research can be expanded to investigate in other places of India and abroad, with the opportunity to draw some interesting national and international comparisons.

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