The Determinants of ISO 9000 Certification: An exploratory study of SMEs in Aurangabad

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Abstract: This research paper have used original survey data on small and medium scale firms in Aurangabad to investigate the determinants of ISO (International Organization for Standardization) 9000 certification for the manufacturing units. Using an empirical approach, our findings reveal that the determinants of ISO 9000 certification are the features of the internal strategy of these firms (quality improvement, cost reduction and innovation). However, we have also obtained evidence that the characteristics of firms (firm size, corporate status and previous experience with similar standards) and features of their external strategy (Company image and customer satisfaction) play a significant role in the ISO 9000 certification. The results of this study could enable small firms to better formulate and effectively apply regulations affecting the business success of firms in manufacturing.

Keywords: Quality, ISO 9000, manufacturing sector, small scale firms

I INTRODUCTION

The term “quality” means different things to different people. For example, a quality automobile may be one, which has no defects and performs exactly as per our expectations. Such a definition matches with the oft-repeated definition given by J.M Juran (1988): "Quality is fitness for use." The concept of quality as "conformance to specifications" is often promoted by the manufacturing industry, presumably because the manufacturer cannot do anything to change the product design. Others promote wider views, which include that quality means that a product or a service fulfils or even exceeds the expectations of the customer. Going by this definition, quality is a judgment by the customers or users of a product or a service, which meets customer’s expectations and fulfills customer’s present needs as well as their unanticipated future aspirations. In a way, quality is meeting the customers stated as well as implied requirements.

The ISO 9000:2000 standards define quality as “degree to which a set of inherent characteristics fulfils requirements.” The requirements in this definition could be specified by the supplier, by the customer, or may also be legal. Looking from the customer’s perspective, this definition simply means that a product must have features, which meet customer’s needs and thereby provide customer satisfaction. Yet another simpler definition says; Quality means, satisfying/delighting customers on a continuous basis. Here onus has been put entirely on the supplier to keep on assessing the customer’s needs (which are dynamic) and make sure that products/services take care of such needs. Mere conformance to specifications may not match the customer needs and hence quality departments cannot relax by declaring that their products conform to the
specifications. The departments need to continuously look out and assess the varying needs or aspirations of the customers and incorporate them in the products.

II RESEARCH OBJECTIVES
The study is aimed to achieve the following objectives:
a) To explore the effect of implementation of Quality Management System in the selected manufacturing firms in Aurangabad.
b) To study the effectiveness of ISO implementation in the selected manufacturing firms.

III RESEARCH DESIGN
The research design for this study is descriptive research in nature. Descriptive research is one of the simplest kinds of research. It describes a situation and involves a fact-finding investigation with adequate interpretation. The major purpose of this research is to describe the state of affairs as it exists at present. A research design is the orderly arrangement of elements and conditions for the collection and analysis of data in a manner that aims to combine relevance to the research objective with economy in procedure. It is a map or blue print for the study. The methodology adopted for the study is analytical in nature. In analytical research, the researcher has to use facts or information already available and analyze these to make a critical evaluation of the problem.

IV SELECTION OF SAMPLE
Aurangabad is the largest city in the Marathwada. Aurangabad is a historic city with a remarkable presence of industries ranging from Automobiles to textile. Aurangabad is an important auto component manufacturing hub in the Maharashtra state. It had its lion share of business in this segment sometime back. Almost 80% of the auto component requirements of Bajaj Auto and other automobile companies are met by Aurangabad. But things started taking a negative path recently. Many industrial set up are not able to meet the competitive onslaught by the other location players and started losing the market share. This study focusing on the small and medium industries located in Aurangabad. There are around 250 such units operations here having ISO certification. These industries are having the basic quality systems in place like ISO 9001. This study focuses on Post ISO certification analysis of small and medium scale firms in Aurangabad. For the present study which is pilot in nature have considered 10 companies having ISO 9001 Certification.

This includes the representation from the small and medium scale companies in Aurangabad. The procedure adopted in the present study is purposeful sampling, which is also known as biased sampling. Under this sampling design, the items of the frame have been chosen by the researcher in this sample.

DATA SOURCES
Primary Data: Primary data is necessary for data collection. Primary data is collected from primary source that is; from the manufacturing companies through questionnaire. In this study, the primary data include discussions with the employees and Management Representatives of the company.

Secondary Data: Data which are originally collected and obtained from the published or unpublished source are known as secondary data. It is collected from annual reports, published articles and in-house documents, company websites, journal and magazines, etc.
V DATA COLLECTION AND ANALYSIS

Research is a systematic method of finding solutions to problems. It is essentially an investigation, a recording and an analysis of evidence for the purpose of gaining knowledge, redefining problem, formulating hypothesis or suggested solutions, collecting, organizing and evaluating data, reaching conclusions, testing conclusions to Research Methodology is a method to solve the research problem systematically. It involves gathering data, use of statistical techniques, interpretations and drawing conclusions about the research data. It is a blueprint, which is followed to complete the study. It is similar to builders blueprint for building a house.

For the present study the data has been collected through questionnaire. After data collection it was stored in computer database. The Excel utility is deployed for data analysis.

VI FINDINGS

ROI for ISO implementation

Most of the respondents were of the view that Return on Investment (ROI) for ISO implementation is very short. Sixty percent respondents expected the payback period for ROI in ISO implementation to be less than 01 year. Whereas forty percent respondents expected the payback period for ROI in ISO implementation to be from 01 year to 02 years.

Graph 01: ROI for ISO implementation

Necessity to upgrade the production processes

Most of the respondents were of the view that as part of the ISO implementation, it was necessary to upgrade their production process. Seventy percent respondents upgraded their production process for ISO implementation. Twenty percent respondents did not find it necessary to upgrade their production process. Whereas only ten percent respondents upgraded their production process after ISO implementation.

Graph 02: Necessity to upgrade the production processes

Difficulties faced in ISO implementation

The views of respondents pertaining to the difficulty in ISO implementation were mixed. Some of the respondents found preparation of manual and formats
to be difficult, while others found data capturing, monitoring and analyzing to be tough. Some of them found documentation and formation of standard operating procedure (SOP) to be difficult task.

**Number of Audits performed during the ISO implementation**

Ninety percent of the respondents’ required just 01 to 03 audits during ISO implementation and only 10 percent needed more than 03 audits.

![Graph 03: Number of Audits performed during the ISO implementation](image)

**Reasons for implementing ISO System**

From the research it was found that the main motive of implementing the ISO standards is to standardize the process by introducing Quality Management System (QMS). The second most sought after reason was to improve management control on business process.

![Graph 04: Reasons for implementing ISO System](image)

To improve resource utilization within the organization, increasing the firm’s flexibility and acceptability and adoptability to respond new market opportunities were the other main reasons for organizations to go for ISO implementation.

Most of the respondents were very satisfied with the ISO implementation. They were of the view that post ISO implementation there has been a positive employee interaction. It has also resulted in the Process optimization in the organization.

Most of the respondents also concluded that ISO resulted in Image building for the organization and it was also helpful in sharing of best practices.

The respondents from the organization felt the objectives set for ISO implementation were met. The level of customer satisfaction post ISO implementation has improved. The morale of employees increased the value chain system and the customer relationship management increased.

Harmony in working was noted post ISO implementation. Many challenges were met in ISO implementation.

**Trainings provided AFTER the ISO implementation**

Half of the respondents stated that only 01 to 03 trainings were required after the ISO implementation. Forty percent needed more than 04 and less than 10 trainings to adopt the system. Only ten percent respondents needed more than 10 trainings after implementing the system.
Sixty percent of the respondents adopted some other standards (like SUV/TUV, T.S) post ISO implementation.

VII CONCLUSION
Further research can help HR to keep the people together for a longer period. The study can be a breakthrough for both academics and practicing managers. The amount of information it contains will surely be of great support for both the spectrum of people.

To make ISO really work, everybody in the organization should work. This study reiterates our word. The era of quality, team work and customer focus is sure to stay here. And to make this happen a tremendous amount of policy change and a strong will to change the basic fundamental way of working from the Taylor’s principles to the ISO standards way. It involves high level of transformation at the level of Management, manufacturing working, the mind set of R & D, and the concepts of current HR needs to addressed and alter in order to make ISO a successful. If that is done then ISO will take care of the organization for quality and prosperity.

REFERENCES

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