CHAPTER 3

ISO 9000: PRE- AND POST- IMPLEMENTATION EXPERIENCES IN INDIA

3.1 INTRODUCTION

For the majority of countries including India, economic growth depends on their international trade in materials, products, commodities or services. The two critical success factors for economic growth are willingness of potential customers to purchase those goods and services, and the ability of the manufacturers and suppliers to compete effectively with others to serve the same market. For manufacturers and suppliers, the challenge therefore, is to meet or exceed the customer’s expectations in a global market where price, choice and quality are the dominant features. Meeting such challenges often demands a fresh look at a company’s overall strategy and a new approach to the way it plans and manages its business.

Companies worldwide are discovering that attention to quality is one of the key elements of that new approach, and that the development of a quality culture reaps rich rewards in terms of enhanced reputation and higher returns on investment. Throughout the world, companies responding to or anticipating market forces are choosing voluntarily to adopt TQM and/or to implement ISO 9000 (Dungtan, 1996). It is clear that the quality concepts are gaining ground among the more advanced companies in India. Indeed, there has been a
significant change over the past few years which show that growing awareness of the importance of quality in relation to international trade.

The establishment of an open and transparent certification process is necessary not only to assist companies to ensure that their quality systems are indeed well founded and are operating according to widely agreed international standards, but also to enable the companies, their products and their services gain the confidence of the international market, international credibility and acceptance. On 25\(^{th}\) February 1993, the Indian Register of Quality Systems (IRQS) became the first certification body in Asia, including Japan and South Korea, for assessing and certifying Quality Management System for ISO 9000. It received its accreditation from “Raad Voor se certificate” and issued its first certificate to Kirloskar Pneumatic Limited while Kirloskar Oil Engines is the second one to get the certificate. As on date, more than 6000 companies have been certified as conforming to ISO 9000 standards.

3.2 ISSUES INVOLVED IN EFFECTIVE IMPLEMENTATION OF ISO 9000 IN THE INDIAN CONTEXT

ISO 9000 quality system is based on the philosophy that only an integrated, systematic and planned approach can ensure quality. At the earlier stage the main problems of the Indian industries have been the Indian work culture and the inadequate preparation of the industries. It is the customer-driven pressure for quality, which alone has led the Indian industry to seriously consider the implementation of ISO 9000. The concept of ISO 9000 originated in the Western Countries. Since cultural, economic, political and social differences between the Western Countries and India are significant, there arises the need to make the Western model relevant to the Indian context. For
this purpose suitable modifications are required. In India, the adoption of ISO 9000 is not spontaneous. For effective implementation of ISO 9000 in the Indian context, a clear understanding of the basics of ISO 9000 requirements is imperative. Adaptability in Indian organizations to these requirements mainly depends on the inherent strengths and weaknesses. The standards prescribe both management and operational criteria for establishing Quality Management System. The major advantage is that the standards stipulate implementing a Quality Management System using the self-start approach.

3.2.1 Shortcomings of ISO 9000

It has to be clearly appreciated that the ISO standards have been created primarily to provide guidance for companies which are ignorant about the implementation of an effective quality management system. However, the mandatory standards themselves have many shortcomings. According to Agrawal and Prem Vrat (1996), some of the shortcomings of the ISO 9000 are:

- It does not extend to all functions of the company.
- It does not explicitly emphasize quality improvement.
- It does not extend to the area of technology transfer.
- Many operational requirements are not explicitly stated and have to be interpreted from the standard for industry specific situations.
- It is silent about quality cost. In fact, the biggest motivating force and justification for improving quality is increased profits associated with reduced quality costs.
- It does not specify the requirement to ensure consistency in assessment by accrediting agencies.
• The accrediting agencies can only take a sample of a Quality Management System and assessment cannot be very extensive to establish the non-compliance in totality.

• There is no system to ensure the effectiveness of the accrediting agencies.

• It is not a set of product specifications and it is not specific to any one industry.

3.2.2 SWOT Analytic Frame Work

Over and above the inherent problems of the quality system standards, the Indian industry itself has many other problems. Agrawal (1993) has carried out a study in a SWOT analytic framework to identify the issues facing the industry. A summary of the findings is given below.

3.2.2.1 Strengths of Indian industry

India has a long tradition of excellence. The Taj Mahal and Temple of Tanjore are living examples of engineering marvel. The engineering excellence achieved by the Indian industry is the result of certain positive attributes. The attributes which came out as strengths of Indian industry as a result of the study are enumerated below:

• Cultural adaptability in the right environment
• Financial participation by foreign agency
• Customer driven pressure for quality
• Large industrial base and manpower
• Technical support by collaborators
• Incentive from European Countries
• Indian culture and value system
• Increased awareness of quality
• Indian tradition of resources
• Large domestic market
• Vast employment opportunities
• Cohesiveness and
• Cheap labor

3.2.2.2 Weaknesses of Indian industry

Due to the protected business environment, many positive attributes in the Indian Industry have lost their glitter and have become weaknesses. The weaknesses are negating the efforts being made by Indian industry to improve and upgrade the quality levels of its products. Some of the weaknesses that surfaced, as a result of the study, are indicated below.

• Lack of trust and creditability in the system
• Lack of clarity/soundness for achieving target
• Lack of precise observance of rules and norms
• Lack of knowledge regarding SPC techniques, low quality of bought out items / components
• Lack of consciousness of time and money
• Management view of short term benefits, politicization of labour
• Lack of accountability for actions, “self before organization” attitude
• Lack of top management commitment
• Lack of National Quality Policy
• Inadequate economic resources
• Lack of indigenous technology
• Lack of concern for details
• Inadequate infrastructure, Quantity before Quality
• Lack of team spirit
• Lack of planning
• Lack of knowledge of statistical methods and
• Cartel formation and sellers market.

3.2.2.2 Opportunity for Indian industry

All the weaknesses of Indian industry can be viewed as possible opportunities for improvement. The industry has innumerable opportunities, which it cannot afford to miss. We have to develop an emergency action plan for the step-by-step removal of the weaknesses of Indian industry. The opportunities thrown open to the Indian industry as an outcome of the study are as follows:

• Upgradation of manufacturing and test facilities
• Improvement in quality of supply chain
• Upgradation of quality standards
• Computerization and automation
• Large manufacturing capacity
• Weakness of opportunities
• System and procedure change
• Better vendor development
• Present government policy
3.2.2.3 Threats to Indian industry

The major obstacle to the implementation of ISO 9000 in India is to bring about a change in the attitude of the workforce and the management. In order to make ISO 9000 implementation effective and successful, the concept has to be sold and this requires a missionary approach by dedicated quality professionals. The other problems faced by them are enumerated below (Agrawal, 1993).

- Maintenance of accreditation after certification
- Complicated Government regulations and procedures
- Passive attitude of industry towards quality
- Lack of stable political and cultural ethos
- Neglect of application research
- Neglect of industrial training
- Privatization of auditing agencies
- Lack of professional attitude
- Inadequate auditing agencies
- Recession in global economy
- Indian cultural factors
- Resistance to change
- Lack of preparedness and
- Globalization.
3.3 ISO 9000: PERCEPTION OF INDIAN INDUSTRIES

A well designed, well implemented and carefully managed ISO 9000 quality system provides confidence that the output of the process will meet the customer’s expectation and requirement. It is aimed at providing confidence in three types of audiences:

• Direct customers
• Indirect customers
• Company management and staff

Malliga and Jayabalan (1998) during their initial study have conducted a survey among ISO certified Indian industries to find out the experiences of industries before and after implementation of ISO 9000 quality standards. The objective of this study has been to determine the experiences of the organizations that have already obtained ISO 9000 certification. The objective is met through the following steps:

• Getting a general idea of why industries go in for certification
• Resources (time and money) spent and justification
• Reaction within the organization and the adaptation procedure
• Influence on the attitude of vendors and customers
• To determine the effect on the other process parameters that are not directly connected with ISO 9000
• Opinions of the industries which have obtained ISO 9000 on some expert comments
• Future trends in ISO 9000
3.4 ANALYSIS OF THE INITIAL STUDY

The initial study has been undertaken by survey method using a questionnaire to get the general feedback from 250 organizations. From the 100 responses, the collected data have been consolidated to facilitate analysis. The analysis has been done in two phases, namely quantitative analysis and qualitative analysis depending upon the nature of the information.

3.4.1 Qualitative analysis

Depending upon the existing quality system in the organization, the concept of ISO 9000 may be entirely new or very similar to the existing practices. The qualitative analysis has been carried out based on the information obtained where quantification could not be done.

i) Reasons for going in for certification

- Improvement of Quality System and meeting International Standards
- Export business and European Market requirement
- As a step towards Total Quality Management
- To be a product leader

ii) Methods adopted to convince employee union

- Organizing seminars and workshops
- Conducting training programmes
- Projecting the benefits of the certification
- Conducting meetings and interactive programmes with unions
From the responses, it is found that prior to certification the organizations have not used any formal method for selection and evaluation of their vendors. However, after certification, the organizations have started to set up systematic methods of selecting and evaluating their vendors. After certification, the following methods have been adopted by the organizations.

- **Vendor assessment**
  A surveillance report is prepared to keep a check on the material and components supplied by vendors and hence vendor assessment is done.

- **Vendor Rating**
  Based on parametric scale, vendors are rated according to their product standards.

- **Process capability**
  Before entering into a contract with new vendors their capability is verified.

### iv) Customer feedback system

The changes in customer feedback system after certification are as follows:

- Proper records are kept.
- Quality problems are analyzed after getting the feedback and proper corrective and preventive actions are taken.
- If the firm is selling its product through distributors, they consider the distributors as the right persons to assess the customer's
satisfaction and so, the industries insist on getting feedback from the distributors.

- Considering the customer complaint and the action procedures in a structured format.

v) Customer satisfaction

The organizations insist on measurement of customer satisfaction before certification. But it is only after acquiring certification, that the methodology becomes more valuable and efficient.

Before ISO certification:

- Firms maintain complaint registers.
- Firms assume that the customers are satisfied if the delivery is done on time.
- After the certification:
  - Customer care desks are formed.
  - Customer satisfaction attributes such as quality, schedule and price are rated on a scale.
  - Sending final inspection reports as per customer requirements and specifications.
  - Regular feedback system (through customer survey)

vi) Calibration and gauging techniques

Previously calibration has been done only for specific instruments, but after certification every critical instrument affecting the quality has been calibrated. After ISO 9000 certification

- Frequency of calibration and gauging has increased.
- Calibration is done by certified agencies, making the inspection process more accurate.
- Special process instructions are imparted so that even a new instructor / inspector can follow them independently.
- The approach has become more systematic and objective.
- New software and better-equipped standard room are available now.

3.4.2 Quantitative Analysis

When ISO 9000 was formulated, the main objective was to offer customer satisfaction through quality. But, when the concept reached India, organizations felt that the certification would serve as a marketing tool and a key to the global market. This by itself constituted a driving force for the companies to get ISO certified. In the quantitative analysis, the results of the survey indicate the following parameters:

i) ISO certification as a marketing tool

With 85% of the respondents affirming that the certification will serve as a marketing tool, the Indian industries are justified in considering ISO 9000 as a key to the European market. 23% of the respondents strongly agreed that the ISO 9000 certification enabled them to get more export orders and a significantly increased number of domestic orders.

ii) Time spent for the implementation process

About 8% of the respondents have reported that ISO 9000 could be implemented within six months. The time frame for implementation of ISO
varies from six months to one year (31% of the respondents) and 46% have reported it as one to one and a half years. The time frame for the implementation process mainly depends on the type and level of the quality system that had been followed by the firm before ISO 9000 certification.

iii) Cost of conversion process

An analysis of the responses indicates that 15% of the organizations feel that the conversion cost as percentage of their turnover is negligible. Further analysis in this aspect shows that this is true in the case of large organizations. About 30% of the respondents (mostly medium scale) have indicated a conversion cost of less than 0.5% of the turnover. There are about 15% of the respondents who incurred a cost between 0.5% and 1% of their turnover. The conversion cost rarely exceeds 1% of the turnover and the cost factor does not play a major role for the firms to get ISO 9000 certification.

iv) Time frame to realize results of ISO certification

About 46% have started realizing the benefits of certification within one year and 42% have realized it in 1 to 2 years. If the industries follow the quality system of ISO 9000 sincerely, it is expected that the stated benefits could be achieved within two years.

v) Productivity related parameters

The organization can expect tangible benefits in the direction of inventory, productivity and cycle time, though these are not directly related to ISO 9000 and the certification does not assure benefits in these areas. The
study reveals that 72% of the respondents have stated that the certification has contributed significantly to enhance the productivity of their organizations. About 28% of the respondents realized a decrease in cycle time, and about 64% of the respondents felt that there has been considerable reduction in the inventory level after certification. Reduction in cycle time and inventory level also have significant effects on the improvement of productivity.

vi) Cost of non-conformities

81% of the respondents have accepted that the implementation of ISO 9000 will lead to a reduction in non-conformities. Though they are not in a position to show the evidence for such reduction due to the absence of relevant data, in course of time it would be possible for them to collect the data regarding the non-conformities for analysis.

3.5 GENERAL OBSERVATIONS ON INDIAN ORGANIZATIONS

The organization must first realize the necessity of opting for certification and the benefits accruing therein. Only then it is easier for the organization’s top management to convince the middle management and the employees accept the certification process. In this section, the general perceptions about ISO certification in Indian organizations are reported. It is felt that ISO 9000 serves not only as a system for control but also for continuous improvement. ISO 9000 does not help companies that have a quality system in place or have implemented TQM simply because it standardizes the system. About two thirds of the respondents felt that ISO 9000 not only lays down a system but also indicates the steps for its implementation.
Even though ISO 9000 does not talk about the human element in its quality system, after implementation it is seen that all the employees are well taken care off. Obtaining ISO 9000 certification cannot be the final step in a quality journey, at best it can be a launching pad for TQM. Most of the organizations felt that ISO 9000 certification is not a must for their vendors. When the question of having a single certifying agency, there have been mixed responses. About 65% of the respondents agree with the concept of having a single certifying agency as they felt that uniformity could be maintained.

3.6 CONCLUSION

More than 6000 organizations have been certified ISO 9000 till December 2000. With this the journey towards quality, upgradation has started. This task has to be achieved in the shortest possible time. Organizations that wish to achieve excellence through ISO 9000 accreditation require a large number of changes to be initiated in the policies, structure, management style and administrative practices by taking into account their people and their cognitive limitations.

The action plan for effective implementation of ISO 9000 and quality system change should take into consideration the existing weaknesses of Indian industry and convert them into future opportunities. When it comes to the implementation stage of ISO certification process, almost all the companies evince greater interest in the introduction of ISO 9000 standards inspite of the difficulties they face. The effects of implementation of ISO assume greater importance owing to the money and the time spent towards the implementation of these standards.
One of the major findings of this initial study is that there has been considerable improvement of productivity after ISO 9000 certification. Reduction in cycle time, scrap and rework, inventory levels, etc are the main influencing factors for the productivity enhancement. No research study has been reported till date to assess the effects of ISO 9000 on productivity. It is indeed necessary that the study, in this context, would be more beneficial to the industries that plan to get ISO 9000 certification and to the researchers who intend to pursue their research in this field.