QUALITY IMPROVEMENT STRATEGY TO COUNTER THE QUALITY CHALLENGES FACED BY A DEVELOPING COUNTRY

Nawar Khan*

ABSTRACT

This paper is about the strategic measures for overcoming the quality challenges faced by the developing countries of the world. ‘Global Village’ concept for the open trade is a great challenge to the government policy of protectionism, different tariff rules and quota system of these countries. Firstly, competitive survival and then gaining advantages demand a strategy for quality improvement of its goods produced and services provided.

The state of quality, its management and improvement process in the industry of the developing countries can be judged from the challenges it is facing for promotion and modernisation. Amongst the most significant challenges are poor business management, unguided research and development, poor Quality Management and Quality Assurance System, limited financial resources, Low education and training, a lack of quality awareness and corporate quality culture and obsolete technology and equipment. These quality challenges and many more are having their root causes embedded in the society of these developing countries that prevent the quality improvement of their products and services and industries modernisation.

ISO 9000 Quality Management System (QMS) certification can provide sound quality base upon which Continuous Quality Improvement (CQI) process of Total Quality Management (TQM) can be built. A QMS based on a criteria set, documentation and audit authentication is one of the best option available to the management of industry and business in the developing countries. Trying to adopt TQM philosophy without a sound QMS can result in more burden on the industrial resources and management efforts of the developing countries. Industries and businesses in these developing countries may not achieve the benefits (tangible or intangible) associated with the TQM business philosophy unless to adopt initially a sound QMS, like ISO 9000. Hence, a phased-out and logical sequential implementation of a QMS and CQI process presents a more suitable choice because of the developing economy and low corporate quality culture in the industry and business of these countries.

The phased-out strategy of quality improvement to counter the quality challenges in the developing countries, if implemented with commitment and corporate quality culture is expected to give greater advantages.

INTRODUCTION

Quality is much closer to the human nature and has a longer history of existence than its associates, such as Productivity and Cost. Quality is a common feature of interest between manufacturers and customers. Kondo has presented his views on such a situation as shown in Tables 1 and 2.

In the author’s opinion, the status of quality of products produced and services provided by the industries and business in the developing countries are seem to be quite different than that shown in Tables 1 and 2. This is evident from the quality challenges faced by these countries as shown in later part of this paper.

In the era of open trade under the World Trade Organisation (WTO) agreement, quality with lower price tag may be the only survival factor for goods produced and services provided. As the protectionism barriers in the developing countries (also called Less and Semi industrialised Countries) are lowering, greater quality challenges are faced by their industries and businesses. These industries and businesses can sustain competitive advantages through better quality
Table 1. Human History of Quality, Cost and Productivity

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<table>
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<tr>
<td>Quality</td>
<td>1,000,000 years</td>
</tr>
<tr>
<td>Cost</td>
<td>10,000 years</td>
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<tr>
<td>Productivity</td>
<td>200 years</td>
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Table 2. Principal concerns of Manufacturers and Customers

<table>
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<tr>
<th>Manufacturers</th>
<th>Customers</th>
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</thead>
<tbody>
<tr>
<td>Quality*</td>
<td>Quality*</td>
</tr>
<tr>
<td>Cost</td>
<td>Price</td>
</tr>
<tr>
<td>Productivity</td>
<td>After-sale services</td>
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* Note that manufacturers and customers often view quality from different standpoints

and lower price of their products and services or may perish from the list of industry with the incoming wave of good quality products or services of the developed countries (also called "Fully Industrialised Countries.

Literature indicates that the developing countries are facing great quality challenges besides its political, social, ethnic and economic problems. The quality challenges faced by the developing countries are scattered in nature in the literature. A review of literature shows that synthesis of these quality challenges under appropriate labelling can foster a broad and clear picture of the situation. Strategic measures are needed and the Macro (Government level) and Micro level (Organisa-tion level) to prepare them for facing the quality challenges ahead. Developing economy of these countries may not permit to implement the total remedial measures in one go. Phasing out of the quality improvement strategy may be one of the best economical and viable solution available.

The aim of this paper is to make aware the management in industries and business of a developing country of suitable and feasible strategic measures for the quality improvement of their products and services to face the challenges of the open trade era.

QUALITY CHALLENGES FACED BY THE DEVELOPING COUNTRIES

Most of the developing countries, a group of 88 are facing the quality challenges for their products produced and services provided besides its political and economic instability as evident from the literature. In the list of major quality challenges are Poor Business Management, Unguided Research and Development, Poor Quality Management System, limited financial resources, Low education and training, a lack of quality awareness and corporate quality culture and obsolete technology and equipment etc. The representative statements of the quality challenges shown are by no mean a complete text and its discussion. However, it can give a quick view of the quality and its management challenges faces by the developing countries. Judgmental process is used to synthesise these representative statements under appropriate headings. The labelling represent the general area covered by each quality challenge. However, different labelling is possible for representation of these quality challenges.

1. Lack of Quality Awareness
2. Lack of Quality Culture
3. Low Education
4. Lack of Training
5. Poor Business Management
6. Lack of Quality Management System
7. Unskilled Human Resources
8. Unguided Design (Research and Development)
9. Lack of Vendor Quality Development
10. Limited Financial Resources
11. High Cost of Quality
12. Lack of Marketing Skills
13. Limited or Incomplete Data and Information
QUALITY IMPROVEMENT STRATEGY

Keeping in view the quality challenges faced by the industry of the developing countries, a strategy for quality improvement is required both at Macro and Micro levels to face these quality challenges in the incoming era of open trade. The barriers of protectionism, different trade and tariff rules and quota system shall lower. The total World shall be analogous to an 'Industrial Village with no wall of trade barrier'. Lower prices tag alone may no longer serve as the buying criteria for a customer. Mostly, the customer would insist on quality with low price tag because they would be available with a choice of purchase. Local native industry (less multinationals and joint ventures) are expected to be mostly affected by the open trade because of its traditional family style entrepreneurship and low management capabilities. Implementation process of quality improvement is suggested in the following two phases:

PHASE I - ISO 9000 QMS CERTIFICATION

ISO 9000 QMS was first aired in 1987 by the International Organisation for standardisation (ISO) and adopted by more than 90 countries of the World as such in the first instance without any change. Most of the developing countries are included in such list. ISO 9000 QMS can provide a sound quality management foundation for an organisation of a developing country to build a CQI process of TQM on it. Different quality proponents have presented their views above such a proposition According to Munro Faure et al., "An effective quality management system (QMS) is a key building block for Total Quality. It is, however, only one element in a total quality management organisation. It describes a controlled, documented system of procedures, designed to ensure that only conforming products or service are released to customer".

Taylor\(^8\) states that "Some organisations may not have well developed system and procedures in which case it would be folly to attempt TQM until such a basic foundation was in place. It ultimately depends on where an organisation is, where it want to be, and what need to be changed".

Tsiotras and Gotzamani\(^9\) state that "TQM may be viewed as the outer edges of a system concentric circles, with quality assurance and quality control as central, core elements. Leaping to the edges of the circles will leave a dangerous vacuum at the centre".

This means that ISO 9000 QMS is to be adopted first as its certification can cover a large portion of the basic quality challenges facing by the industry of the developing countries, such as quality awareness, training, quality management, design review, documents and procedure, test equipment and its calibration etc. The ISO 9000 QMS certification shall result in reduction of cost, wastage, scrape, traceability, documentation and other products and services failure.

PHASE II - CQI PROCESS BASED ON TQM PHILOSOPHY

Basic quality challenges can be covered by establishing a sound quality foundation of ISO 9000 QMS through its certification. Further quality improvement to cover the higher order challenges are required that can best be achieved through the CQI process of TQM philosophy. TQM is a business philosophy and a main phenomenon of 1980s. Enrichment and variety are two major characteristics of TQM business philosophy. Review of the quality literature is carried out to synthesised the main factors of TQM philosophy under suitable labelling.\(^5\,11\,13\,21\)

Followings are some of the major contributing factors of TQM business philosophy. This is by no means a deliberation on complete TQM philosophy but rather a short listed major factors only.

TOP MANAGEMENT IN LEADERSHIP ROLE

Top management of an organisation has to perform the 'visionary' role as leader. This visionary role provides the guiding philosophy and long term view to the company business. The company efforts being continuously guided and supported (through time, resources, and commitment) by the management in the desired direction. Top management commitment and support is a prime factor for TQM implementation success. TQM encourage the participative vision of all in the company than the isolated and imposed one.

LONG TERM POLICY AND PLANNING

The long term policies and planning are the visible version of the abstract vision of the top manage-
ment leadership. The written mission and policy statements are all the documents on which goals and strategies are based. This is a step in realisation of the abstract desire and wishes for the business success. The documents communicate all these desired statements of the business future success and involve the employees of the company in the business processes decision making. Participation and involvement at all levels are encouraged.

MARKET AND CUSTOMER FOCUS

To be successful, the business prime focus is to be external oriented, market driven, and customer focused but also fulfilling the employees needs. This is necessary in order to meet the external customer needs and expectations.

HUMAN RESOURCES DEVELOPMENT

The soft aspect of the TQM philosophy is the human development, involvement, motivation and recognition. Management job is to tap their talent. TQM also put emphasis on the quality culture aspect of the human resources. External control being replaced mainly with the internal self control and management of the job being done. This is with a view to achieve the quality and business excellence.

EDUCATION AND TRAINING

Education, may be basic or technical, is a leaning process and mostly the first stage to reach the quality excellence. Training is a further development of learning process to enhance the skill and efficiency of the employee. Great emphasis is placed by the quality gurus on the training. This shall result in achieving the quality of product and service and results in overall business competitive position.

MEASUREMENT AND CONTROL

TQM is a continuous improvement process. This necessitate the use of a sound measuring and control system to measure the progress and improvement made. Improvement and progress can not be checked without a sound measurement and control system. Quantitative measures for individual performance and business processes are encouraged.

CONTINUOUS IMPROVEMENT

Continuous improvement is one of the important concept of TQM. Continuous improvement against a standard or a benchmark is to bring the business to a stage of excellence. Audit, review and self assessment are used for the improvement purpose.

SATISFACTION

Satisfaction of all those associated with the business provide a valid reason for the survival and competitive advantage to achieve a business excellence. Almost all the quality gurus are agreed on prioritising the satisfaction of external customer. Satisfaction is the end result of total efforts put in by all associated with the company.

RELATIONSHIP AND SEQUENCE OF IMPLEMENTATION BETWEEN ISO 9000 QMS AND TQM PHILOSOPHY

There exist a logical and sequential relationship between ISO 9000 QMS and TQM. ISO 9000 QMS to be implemented firstly because it is a documented, audited and certificate based series of standards. The very nature of ISO 9000 QMS series of standards shall established a sound quality foundation and documented procedure on which CQI process can be built. Different quality proponents have presented their views about such relationship. Marash22 states that "The ISO 9000 series of standard is a useful entry key for an organisation wishing to adopt a total quality programme. ISO 9000 has the advantage of being a completely contained subset of TQM, one that has a measurable achievement quality system certification by an accredited registrar".

Cilberth23 states that "ISO 9000 is a stepping stone along the road to the total quality assurance and to total quality management".

The organisations which Taylor10 survey has shown that "Some companies are having both ISO 9000 QMS and TQM. However, 67% of these companies have adopted ISO 9000 first".

Ho18 model number one establishes a possible relationship between ISO 9000 QMS and TQM as "See 9000 as the starting point for TQM. ISO 9000 tackle the procedural infrastructure which precedes the more
<table>
<thead>
<tr>
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<th>ISO 9000 QMS response to quality challenges</th>
<th>TQM response to quality challenges</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Lack of Quality Awareness</td>
<td>There is no such complete element on the quality awareness. However, ISO 9000 as a complete QMS has created quality awareness in a substantive way throughout the world.</td>
<td>TQM put emphasis on the factor of quality awareness and is probably the first element of culture change in a company.</td>
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<td>2.</td>
<td>Lack of Quality Culture</td>
<td>Element 4.18 of ‘Training’ can help in the development of quality culture in a company.</td>
<td>Corporate quality culture is a major factor of TQM soft aspect of human resources development.</td>
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<td>3.</td>
<td>Low Education</td>
<td>Element 4.18 of ‘Training’ can help in education but not in a substantive way.</td>
<td>TQM put great emphasis on ‘Education’ and also include it in as a factor for benefit to society.</td>
</tr>
<tr>
<td>4.</td>
<td>Lack of Training</td>
<td>Element 4.18 ‘Training’ completely covering the issue.</td>
<td>TQM also put great emphasis on the ‘training’ aspect of human resource development.</td>
</tr>
<tr>
<td>5.</td>
<td>Poor Business Management</td>
<td>Element 4.1 of ‘Management responsibility’ covers it but only the quality aspect of the product or service.</td>
<td>TQM focus on the total business management process including quality issue.</td>
</tr>
<tr>
<td>6.</td>
<td>Lack of Quality Management System</td>
<td>ISO 9000 presents a complete series of standards to serve as a Quality Management System.</td>
<td>TQM also include ‘Quality Management System’ as one of its major subset.</td>
</tr>
<tr>
<td>7.</td>
<td>Human Resources Management</td>
<td>Not covered as a complete element in ISO 9000. However, element 4.18 of training can cover some aspect of the human resources management.</td>
<td>TQM cover human resources management as a major factor and put emphasis on it.</td>
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<td>8.</td>
<td>Unguided Design</td>
<td>Element 4.4 completely cover the basics of design control.</td>
<td>TQM put more emphasis on the ‘Innovation’ creativity and design improvement.</td>
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<td>9.</td>
<td>Lack of Vendor Quality Development</td>
<td>Element 4.6 and 4.7 only control the input to the company, however, can be extended to help the vendor quality development.</td>
<td>Vendor (supplier) quality control and development is a major factor of TQM.</td>
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<tr>
<td>10.</td>
<td>Limited Financial Resources</td>
<td>Not covered in ISO 9000 QMS elements.</td>
<td>TQM cover it under the heading of 'Resources or financial resources' as a major factor.</td>
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<td>11.</td>
<td>High Quality Cost</td>
<td>Element 4.14 and 4.17 can result in the reduction of cost of quality at company level.</td>
<td>Cost of quality is a major factor in the TQM criteria.</td>
</tr>
<tr>
<td>12.</td>
<td>Lack of Marketing Skill</td>
<td>Some basic requirements are covered under element 4.6 of purchasing.</td>
<td>TQM put emphasis on 'Marketing' research as a major factor.</td>
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<td>13.</td>
<td>Incomplete Data and Information</td>
<td>Element 4.2 and 4.16 covers the basic internal documentation and data.</td>
<td>TQM processes are based on internal data as well as external data data and information for bench marking and is included as a major factor.</td>
</tr>
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<td>14.</td>
<td>Lack of Technology and Equipment</td>
<td>Element 4.11 and 4.12 covers but only the 'Inspection' and measuring equipment.</td>
<td>TQM cover the 'Technology and equipment appropriation' as a major factor.</td>
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</table>

difficult changes of culture and attitudes. Obtaining ISO 9000 provides the institution with the Kitemarked confidence to go forward to tackle the large issues associated with TQM”.

Yung after comparing the similarities and differences among elements of the ISO 9000 and the TQM states that “Conclusively speaking, the fair statement "ISO 9000 is a step to TQM" is generally true”.

The above quotations shows that ISO 9000 QMS is a part of TQM and is to implemented first to cover most of the basic quality challenges faced by the developing countries.

**ANALYTICAL ANALYSIS OF PHASE I AND II**

An indicated earlier, ISO 9000 QMS provides a documented, third audited QMS to an organisation. However, it is not so comprehensive to cater for the high order challenge of CQI process to TQM philosophy. Let us see in a tabulated form the quality challenges faced by the industry of the developing countries and its corresponding remedial measures present in ISO 9000 QMS in phase I and in TQM in phase II.

It is now almost evident from the tabulated correspondent that all the quality challenges are covered by the ISO 9000 QMS elements and the TQM factors. This analysis also shows that strategic measures of phased-out quality improvement process is a suitable and feasible solution to the quality challenges of the developing countries to prepare them for the competitive era of open trade.

The prevailing situations of quality challenges also suggest to first the industrial house in-order in the developing countries by adopting a criteria and documented set of QMS of ISO 9000. ISO 9000 QMS seems to answer most of the basic quality challenges faced by the industrial and business management of the develop-
ing countries. TQM can answer the advance stage of the quality challenges that are either partially covered by ISO 9000 QMS or not covered by the ISO 9000 QMS. Therefore, the best choice is to plan for TQM philosophy in Phase II only while keeping ISO 9000 QMS in Phase I as a base for the improvement process.

ADVANTAGES

Following advantage are expected from the quality improvement strategy suggested.

1. Most of the basic quality challenges faced by the developing countries are covered by ISO 9000 QMS and is proposed to implement it in Phase I.

2. ISO 9000 QMS certification shall firstly provide a sound quality base for further quality improvement.

3. Consistency of quality of products and services is assured by ISO 9000 QMS certification in phase I of the strategic quality improvement process.

4. Continuous Quality Improvement process is kept in phase II of the strategic improvement process. This phasing out shall give time to an organisation to develop corporate quality culture and shall also reduce the economic burden on the organisation and the efforts by the management.

5. Through the strategic measures, developing countries can be easily prepared to face the quality challenges ahead for competition in the open trade.

CONCLUSION AND RECOMMENDATIONS

Quality is much closer to the human nature and is of common interest to the Supplier, Producer and Customer but from different standpoint. The quality of products and services of the developed countries is mostly of higher value because of its well established quality practices and management techniques as compared to the developing countries. The developing countries are facing with great challenges of quality in the open trade era besides others Political, ethnic and economic instability etc.

A phased-out quality improvement strategy is posed to first establish a sound quality foundation through ISO 9000 QMS and then start a quality improvement process through the implementation of TQM to take care of the higher order quality challenges. Greater advantages are expected from the quality improvement strategy suggested in this paper, if implemented with full commitment and corporate quality culture.

It is recommended that supplier organisations should also be encouraged and helped out to obtain the ISO 9000 QMS certification in Phase I for the consistency of quality of material inputs. CQI process based on TQM philosophy to be planned in phase II of the strategic quality improvement process.

REFERENCES


