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TOTAL QUALITY MANAGEMENT (TQM) PRACTICES OF THE BANGLADESHI AND THAI COMPANIES: A COMPARATIVE ANALYSIS

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ABSTRACT

The comparative analysis of TQM practices between Bangladesh and Thai companies clearly shows planning, implementation and operational differences. Bangladeshi companies portray TQM vision consciousness but in many cases they fall victim of treating TQM as a *fad* rather than an essential component. The management principles are narrowly viewed, communicated and understood in Bangladeshi companies even with well-documented procedures and instructions. All the Bangladeshi companies concerned are well equipped and successful to some extent in achieving customer satisfaction with regard to product and service quality excellence, but they lack close working relationships, interest groups and the promoting aspect of working environment. Bangladeshi firms make a visible effort in empowerment of quality control circles but apparently follow a comparatively rigid hierarchical structure, but nonetheless are able to assure quality. In terms of organization and distribution, all of the concerned companies are suitably equipped and positioned, but suppliers are not benchmarked with respect to specific criteria and special quality ratings in terms of product attributes and therefore information regarding supplier reliability is not available in any objective form. Bangladeshi firms have much to achieve in the areas of creativity and R&D, and therefore, investment in those areas is imperative.

Key words: TQM, Vision, Operational Philosophy, MBO, Quality Circle, Supply Chain, Quality Assurance, Quality Rating

ISSUE

From an economically conservative culture Bangladesh is gradually progressing towards the new era of open market policies and globalization. Industrially the country is still underdeveloped. The concept of quality management is recent in Bangladesh and the country is in a partial awareness state. The few organizations that have adopted quality management practices have experienced an overall improvement in corporate performance. In nearly all cases, these

organizations achieved better employee relations, higher productivity, better customer satisfaction, increased market share and improved profitability. Recently a number of companies are trying to maintain ISO standards and to get due certification to run their businesses efficiently and to have a competitive edge, both in domestic and global market. The lowering of trade barriers in today's world implies that opportunity to compete will be available to everyone and that will be based on quality (Khader, 1997). The fact that quality is the most potent competitive weapon for any organization is being well realized, though slowly, in the industrial sector of Bangladesh. Thus a movement has started to strive for higher quality in products and services and even for practicing quality management, which is a relatively new concept. The economic commitment of the government of Bangladesh is also very much commendable with the present trend of globalization. Government has realized that improvement in the manufacturing sector with private investment with export orientation as well as foreign investment will facilitate competition and expedite the drive for world-class quality.

Implementation of large-scale change such as TQM will inevitably face resistance, which should be addressed directly by change agents. A key element of TQM is working with customers, and the notion of soliciting feedback/expectations from customers/clients and collaborating with them (Frehr, 1997). Perhaps with customers defining quality, is a radical one in many agencies, particularly those serving involuntary clients (e.g., Protective services). At another level, management resistance to employee empowerment is likely. They may see decision-making authority in zero sum terms, i.e., if employees have more involvement in decision-making, managers will have less (Taha, 1982). In fact, one principle in employee involvement is that each level will be more empowered and managers lose none of their fundamental authority. There will undoubtedly be changes in their roles, however. As noted, they will spend less time on control and more on facilitation. For many traditional managers, this transition will require teaching, training, self-reflection, and time, as well as, assurances from upper management that they are not in danger of being displaced.

With above scenario and TQM practices in mind this study is to make a comparative analysis between Thai and Bangladeshi companies who are actively practicing total quality management measures. Here TQM practices in the Thai Bridgestone Company, a quality leader in manufacturing, is taken as a subjective standard and compared those practices with the ones in three Bangladeshi private companies, namely, BOC Bangladesh Ltd., Rahimafrooz Batteries Ltd., and Beximco Infusions Ltd., the recognized leaders in the industry they operate (Mamun, 1999). The study also looked into relative positioning and analyzing inadequacies, if any, of the companies in terms of TQM and gave general recommendations considering short-term and long-term strategies for the Bangladeshi companies.

The report assiduously concentrates on a comparative analysis with regard to TQM but the nature of the analysis does not restrict itself to the boundaries of TQM. Various subjective perspectives are provided where deemed required. It may be mentioned here that the selection of the Bangladeshi companies was not chosen at random, rather the leading companies in terms of TQM were consciously preferred. The companies follow various principles of TQM system in order to serve society with their products and services. The parameters used for the comparative analysis includes vision, operational philosophy, sense of management by objective (MBO), customer satisfaction, making things right at the first time, making everything work better, quality assurance system, quality control circle, strong supply chain, special quality rating system, continuous improvement and diversified services (Petrarolo 1998). These practicing issues supplemented by comparative pictures of the Thai and Bangladeshi companies are discussed below.

VISION

“*Serving society with products of superior quality*” was the vision of the founder of Bridgestone Shojiro Ishibashi and even today its incorporation remains deeply rooted in the company's culture with emphasis on real contribution and well being of people. The present president of Bridgestone Mr. Kaizaki's ambition is to become much more than just one of the biggest tire manufacturers in the world. BOC Bangladesh Ltd., on the other hand, although operating in the Southeast Asia region since the days of British India, it was not until the early 1990s that BOC, the largest manufacturer of welding electrodes and gasses, felt the need for quality leadership. Therefore it would be fair to assess BOC as a late adopter of a TQM vision. But it must also be remembered that this does not undermine its integrity in implementing TQM practices in its organization culture. BOC personnel constantly remind themselves that “*quality is defined by the customer*” and their TQM practices go beyond ISO-9002 certification standards.

The activities of Rahimafrooz management always gave the impression that they indeed had a vision of TQM embedded in them since the incorporation in 1954. Receiving its ISO certification in 1997, Rahimafrooz continues to satisfy customers through their quality products and services. Rahimafrooz basically follows the TQM concepts of Edward Deming (Rao et al., 1996) as per vision realization. The vision is expressed in their corporate mission statement “*ensure quality product and service excellence for total customer satisfaction.*” Incorporated in 1990 and receiving its ISO 9001 certification in 1996, the Beximco Infusions Ltd. makes it clear that its pursuit for TQM is not just words. This relatively new company realizes that a constant TQM vision is the only way for the company to survive in the market of intravenous fluids.

Apparently it appears that vision dictates terms in Thai Bridgestone. Among the Bangladeshi companies BOC portrays TQM vision consciousness and Rahimafrooz's activities display successful TQM vision implementation in its organization culture. BIL, like others, communicate determination on ensuring a TQM culture incorporation, but they may fall victim to treating TQM as a “fad” rather than an essential component in its long run strategy. The conclusion is drawn from the fact that no formal attempts to quantify the effects of ISO certification have been undertaken in Bangladeshi organizations (Taormina, 1996)). Top management TQM vision consciousness, which in turn would determine proceedings of the Bangladeshi companies, is suggested.

OPERATIONAL PHILOSOPHY

Dedication, commitment, creative innovation and R&D accentuate the operational philosophy of Thai Bridgestone. BOC, on the other hand, emphasizes on preparing and developing people in making a distinction in the quality of organizational performance. In their view, much is required beyond ISO 9002 through practicing TQM. Rahimafrooz's operational philosophy can be observed in its quality policy of ensuring that all its products manufactured and sold either meet or exceed customer requirements, with obvious weight on customer satisfaction. Rahimafrooz follows Deming's operational philosophy, in the form of the seven Ps, which are: positive commitment, planning, participation, process control, problem identification, problem elimination, and permanence (Goetsch and Davis, 1997).

Beximco Infusions meet their quality standard not only by meeting specifications but also by ensuring reproducibility of the processes in each stage of the production, packaging, quality control, storage and distribution. In comparison with Thai Bridgestone in terms of operational philosophy, BOC and BIL have much to achieve in the areas of creativity and R & D and

therefore, investment in those areas is suggested for the concerned companies. In contrast to its Bangladeshi counterparts, Rahimafrooz's venture into Solar Photovoltaic Power systems and technological collaboration with leading international manufacturers depict the company's awareness of the importance of R&D investment requirements.

MANAGEMENT BY OBJECTIVE (MBO)

From the top level to the bottom, Bridgestone people are cognizant about the objectives, both organizational and individual, of the company along with the founder Shojiro Ishibashi's vision, which implies the assimilation of the MBO concept. Apparently MBO concept has also made its way into the BOC culture. BOC quality control personnel feel that acquiring and sustaining ISO 9002 is a useful strategy to manage human resources development profession in transition, however, according to them it is equally important to start thinking beyond ISO 9002 and turn these thinking into operational elements in all major functional areas.

Rahimafrooz's MBO are found in the form of the 5S Japanese technique they follow both in the organizational and individual level: *seiry* (differentiating between necessary, unnecessary and disposable), *saiton* (a layout satisfying all requirements), *saiso* (emphasis on a clean work environment), *setuske* (routine effectiveness of operations), and *seiketsu* (maintaining an organized standard). The interaction between and accountability to its constituencies (employees, customers, suppliers, fellow citizens and shareholders) largely shape MBO practices in Beximco Infusions. In Thai Bridgestone MBO concept is well communicated and understood. In BOC, Rahimafrooz and BIL the MBO concept incorporation is pronounced by ISO certification, the 5Ss and constituency interests respectively. MBO concept extensions for Bangladeshi firms, in general, and BOC, in particular, are advised.

WORKING TO SATISFY CUSTOMERS

A multi-brand strategy is the cornerstone of Bridgestone marketing to satisfy its customers. Through developing and promoting comprehensive product lines, working closely with auto-makers, taking advantage of its international network and efficient cost performance through retreadability, Bridgestone is able to satisfy its customers worldwide. BOC's attitude towards its customer satisfaction is found in their thinking the customer defines quality. They try to satisfy the customer in all the quality aspects, putting equal emphasis on service quality along with product quality. Rahimafrooz not only ensures customer satisfaction through providing quality products but also has a good after sales service policy. Battery failure within 90 days of purchase results in a replacement with no questions asked and from the 91st day up to the 365th day if any defects occur, a free-cost-repair is gladly provided. Through rigid implementation of quality assurance practices BIL ensures uniform quality and in turn customer satisfaction.

All the companies concerned are well equipped and successful in achieving customer satisfaction with regard to product and service quality excellence. But in comparison with Thai Bridgestone with the exception of Rahimafrooz, close-working relationships among the company and interest groups is not observable. The promoting aspect of working to satisfy customers is also another non-observable element. The following enactment are therefore suggested:

- (i) Developing a database tailored to accumulate significant pieces of information continuously from various interests groups, addressing problem areas from the acquired data and taking prompt action for improvements.

- (ii) Educating the target audience about the meaning of ISO 9000 series and certification through various media. The difference between earning an ISO certification and maintaining one should also be emphasized.
- (iii) Product promotion through TV commercials, print-media and radio. Maintaining a high profile through local celebrity endorsements, local involvement in various social programs and providing innovative solutions in a crisis situation. The local promotional aspects do not apply to BIL due to general legal constraints.

MAKING THINGS RIGHT AT THE FIRST TIME

To survive in a market of intense competition Bridgestone through advanced technology coupled with human motivation has secured a competitive edge. Empowered employees look after their own work. Teamwork in small groups has effectively attained desired level of productivity and in turn made things right the first time. BOC concentrated mainly reducing wastage as per standards and maintained special quality control charts in the production sector of welding division in an effort to succeed in the initial attempt. Compliance with the ISO elements virtually ensures product conformity to standards in the case of Rahimafrooz batteries. In Beximco Infusions, quality assurance practices dictate terms in success production at the initial attempt. All the companies follow their respective ISO standards and virtually ensure that “*making things right at the first time*,” which is the essence of TQM, is achieved.

MAKING EVERYTHING WORK BETTER

Thai Bridgestone makes great tires by questioning the conventional wisdom of tire design and finding new ways to resolve old issues. Their vast R&D network in effect achieves timely solutions and appropriate innovations. BOC is an unlikely contestant in the field of innovativeness in the light of questioning old conventions, rather it may be seen as a company, which often follows in the footsteps of its parent entity. Among the three Bangladeshi companies Rahimafrooz is unquestionably the one who not only tries to incorporate in its products new concepts but also the one who tries to excel in innovativeness with a comparatively stronger R&D. BIL depends on its hierarchical structure to provide suggestions in making everything work better.

Thai Bridgestone excels in making everything work better. Rahimafrooz makes a visible effort in this regard through employee empowerment in quality control circles. BOC apparently follows in the footsteps of its parent entity in making everything better while BIL depends on a comparatively rigid hierarchical structure for this purpose. With respect to the prevailing situation in Bangladesh, the following executions are suggested:

Taking R&D initiatives especially, utilizing the specialized skills of university students and researchers in dealing with various problems and providing innovative solutions.

Seeking specialized talent through arranging and financing science and technology expositions.

QUALITY ASSURANCE SYSTEM (QAS)

Thai Bridgestone set a quality assurance system following the 4Ms criteria to achieve the highest quality products. The 4Ms are (i) machinery (characterized by advanced machinery and state-of-the-art technology for the production process), (ii) materials (characterized by careful testing of raw materials obtained from the parent company and other reliable suppliers, and the use of *kanban* system), (iii) methods (characterized by effective quality control circles, implementation of MBO concept and strong commitment of work force), and (iv) manpower (characterized by continuing seminars, workshops and business learning trips).

BOC strictly follows the ISO standards for quality assurance. Quality control circles are also effectively managed. Rahimafrooz's quality assurance, besides the maintained standard comes from the empowerment of employees and its continual improvement sequence of *Plan, Do, Check and Act* (Dean and Evans, 1994). BIL after determining the eleven major areas and stages of its product's life cycle used a comprehensive quality assurance procedure in a persistent effort to sustain compliance to ISO standards. Hence it can be said that well documented procedures and instructions have been established and maintained throughout the Bangladeshi organizations defining processes, responsibilities and authorities in terms of quality assurance as per ISO requirements. What is more required is the explanation and in depth understanding of the procedures and instructions.

QUALITY CONTROL (QC) CIRCLE

QC circle of Bridgestone, a small working group of seven, through employee participation and empowerment has been able to come up with innovative solutions to problems constantly and proved its worth and effectiveness. In placing a lot of effort in managing quality control circles BOC has improved its customer handling techniques, scheduling review meeting and call charts. Rahimafrooz has developed clearly defined roles and functions of a quality circle organization consisting of steering committee, facilitator, circle leader and QC members. Each of the 24 QC circles of Rahimafrooz consists of 8-10 members who solve problems through participation.

In contrast to quality circles BIL has a hierarchical quality management system (HQMS) comprising of top management, a quality manager, a work manger, head of quality control, head of production, a quality control officer, a quality assurance officer and three other employees. Thai Bridgestone's quality control circles have proven to be effective. Rahimafrooz's QC circles, characterized by employee empowerment, have actually worked quite well and have been able to accomplish results. BOC and BIL maintain a comparatively less flexible QC circles in terms of employee empowerment, but nonetheless are able to assure quality. Hence what is required is QC circles with adequate empowerment and close monitoring.

INTERORGANIZATIONAL CHAIN

Inter-organizational supply chain includes suppliers, organization and the distributors. Bridgestone acquires raw materials from its parent company and local sources and distributes its products through its strong international networks. For BOC Bangladesh, the concerned company evaluates reliability of suppliers and has a strong distribution network. Employees have say in the quality of the materials supplied and are encouraged to provide suggestions. BIL similarly evaluates reliability of suppliers and has a strong distribution network.

In terms of organization and distribution, all of the concerned companies are suitably equipped and positioned. Individual evaluations of suppliers are carried out in the Bangladeshi companies, but suppliers are not benchmarked with respect to specific criteria and therefore information regarding supplier reliability is not available in any objective form. Bridgestone is free of this constraint as Western countries, by and large, practice maintaining supplier rating systems, which provide objective information on relevant criteria. Recently, in USA online bidding of suppliers has come into being, where a selected number of top rated suppliers are contacted and requested to bid on major international tenders at a specified time. The whole bidding process takes place online; openness is observed efficiency is dramatically increased and the award is

given based on objective comparisons. Above all compliance with terms and conditions of the agreement is enforced and ensured. Therefore, in Bangladesh, at the initial stage, the development of an objective supplier rating system can be effective.

QUALITY RATING SYSTEMS

Bridgestone products have been rated in the top of Uniform Tire Quality Grading (UTAG), a quality rating system developed by the department of transportation. The system was designed to provide relevant information to consumers. For BOC, Rahimafrooz, or Beximco Infusions, no such internal rating system has been devised or any external rating sought to provide information to the customers about the related products. In fact special quality ratings in terms of product attributes are not practiced in Bangladesh. Therefore, initiation and communication of similar ratings of product attributes is recommended.

CONTINUOUS IMPROVEMENT

For the continuous improvement of a company the following 20 key areas are found important. These include cleaning and organizing, rationalizing the system/goal alignment, small group activities, reducing work-in-progress, quick changeover in technology, *kaizen* of operations, zero monitor manufacturing, coupled manufacturing, maintaining machines and equipment, time control and commitment, quality assurance, developing your suppliers, eliminating waste, empowering employees to make improvements, skill versatility and cross training, production scheduling, efficiency control, using information systems, conserving energy and materials, and using technology for strategic advantage.

Bridgestone company carries out its continuous improvement through the following activities: (a) task force for quality development, (b) research and development (R & D), (c) strong information support system, (d) working in a lot of ways - for safety and security. BOC emphasizes in changing the attitude and behavior in the organization for continuance performance improvements. BOC believes in preparing and developing people differently. Rahimafrooz in seeking continuous improvement emphasizes on participation, harmony, cooperation and the quality principle. BIL expects continuous improvement through the hierarchical structure of quality assurance. All the companies in question, through distinctive procedures, achieve continuous improvement. For Bangladeshi companies what is more important is a strong database for support services.

DIVERSIFIED SERVICES

A variety of interrelated diversified services and their close relationship are important for TQM. Thai Bridgestone has the following diversified services:

- (a) Tire technical service center
- (b) Business process re-engineering
- (c) Support of events such as car rallies, a driver license project, the T-bird project
- (d) Involvement in various environmental conservation projects (e.g., Water treatment facilities, natural gas as fuel, green areas reservation).

Other than providing welding electrodes and specialized gas, BOC does not seem to have any diversified services. Rahimafrooz's diversified services include manufacturing of automotive and motorcycle batteries, industrial batteries, lead oxide, solar photovoltaic power systems, standby power systems and operating a computerized car maintenance service, a tire retreading

operation, literacy programs, income-generating schemes. BIL restricts itself to manufacturing intravenous fluids. BOC and BIL may contemplate providing diversified services, as it is the case with Thai Bridgestone and Rahimafrooz.

CONCLUSIONS AND RECOMMENDATIONS

The comparative analysis of TQM practices between Bangladesh and Thai companies clearly shows planning and operational differences. But all the companies in question, through distinctive procedures, achieving continuous improvement. BOC and BIL may contemplate providing diversified services, as it is the case with Thai Bridgestone and Rahimafrooz. Apparently vision dictates terms in Thai Bridgestone, whereas, Bangladeshi companies portray TQM vision consciousness (BOC), TQM vision implementation (Rahimafrooz) and determination on ensuring TQM culture incorporation (BIL). In many cases they fall victim of treating TQM as a *fad* rather than an essential component. Top management TQM vision consciousness, which in turn would determine proceedings of the Bangladeshi companies, is suggested. In terms of operational philosophy, Bangladeshi firms depict the company's awareness of the R&D investment requirements, but they have much to achieve in the areas of creativity and R&D, and therefore, investment in those areas is imperative. The management principles are narrowly viewed in Bangladeshi companies and as a result not well communicated and understood. Well-documented procedures and instructions have been established and maintained throughout the organizations defining processes, responsibilities and authorities in terms of quality assurance as per standard requirements. Here ISO certification, the 5Ss and constituency pronounce the MBO concept incorporation interests. Educating the target audience about the meaning of ISO 9000 series and certification through various media is necessary. The difference between earning an ISO certification and maintaining one should also be emphasized.

All the Bangladeshi companies concerned are well equipped and successful to some extent in achieving customer satisfaction with regard to product and service quality excellence, but they lack close working relationships, interest groups and the promoting aspect of working environment. Hence developing a database tailored to accumulate significant pieces of information continuously from various interest groups, addressing problem areas from the acquired data and taking prompt action for improvement is necessary. Product promotion through TV commercials, prints media and radio maintaining a high profile through local celebrity endorsements, local involvement in various social programs and providing innovative solutions in a crisis situation may be helpful. In TQM practice it is very important '*making things right at the first time*' making everything work better. Bangladeshi firms makes a visible effort (Rahimafrooz) in this regard through employee empowerment in quality control circles but apparently follows the footsteps of its parental entity in making everything better (BOC) or depends on a comparatively rigid hierarchical structure (BIL) for this purpose. QCs have proven to be effective TQM measure for Thai Bridgestone. But that demands more empowerment. Rahimafrooz's QC circles, characterized by employee empowerment, have actually worked quite well and have been able to accomplish desired results; but BOC and BIL maintain a comparatively less flexible QC circles in terms of employee empowerment, but nonetheless are able to assure quality. With respect to the prevailing situation in Bangladesh, it is suggested that R&D initiatives utilizing the specialized skills of universities and researchers in dealing with various problems and providing innovative solutions should be taken. In terms of organization and distribution, all of the concerned companies are suitably equipped and positioned. Individual evaluations of suppliers are carried out in the Bangladeshi companies, but suppliers are not benchmarked with respect to specific criteria and therefore information regarding supplier reliability is not available in any objective form. Special quality ratings in terms of product attributes are not carried out in Bangladesh. This suggests practice maintaining supplier-rating

systems, which provide objective information on relevant criteria and initiation and communication of similar ratings of product attributes, is suggested. Finally resistance to change and skepticism in implementing TQM practices has proven to be a major obstacle in the Bangladeshi companies. Such resistance must be dealt with appropriately to ensure TQM incorporation in the organizational culture.

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