MODEL OF EXPORT QUALITY

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ABSTRACT

The outcry to save the Tanzanian industrial sector from 'perishing' is a phenomenon triggered by trade liberalization and the resulting stiff competition from imported products. Simultaneously, the Tanzanian economy has been experiencing adverse economic hardships, because of the poor quality of her products which in many cases do not very well meet the needs of users, satisfy consumer expectations, comply with applicable standards and specifications as well as conform to statutory requirements. As a solution, this paper proposes an "Export Quality Strategy". The concept is defined and a model to adopt it within the Tanzanian environment is presented.

INTRODUCTION

With the introduction of trade liberalization many Tanzanian industries came face to face with the quality problem with a real crisis for the very first time. The industries which were the only (monopoly) producers of goods are now threatened by cut-throat competition from imported goods considered to be of higher quality and selling at lower prices [1]. The industries are operating under a growing siege of stiff import competition. Unless drastic steps are taken this could completely erode the Tanzanian industries.

Indeed the performance of the industrial sector in Tanzania is very poor, with current resource utilization resulting in yearly losses for the economy of over hundred million dollars [2]. This observation shows that the objectives of the Basic Industrial Strategy (BFS) instituted in 1975, which gave birth to the present manufacturing sector have not been met. BIS was mostly geared towards imports substitution of the consumer goods in

and capital goods.

Another reason contributing to the losses is customer aversion to use locally made goods, including engineering products [3]. The reluctance is wide spread and deep rooted. The local consumers have low trust in the local products. To them a "good" product should be imported. In order to match with the external competitors we therefore have to attain export quality standards levels.

It is unfortunate that the only quality control function undertaken in Tanzania, not even systematically, is the inspection function. Inspection principles are narrow in scope and are designed for sorting defective products from the good ones. This is not effective quality control; it is post-production, wasteful detection of bad products before they reach the customer [4]. An aggressive quality-based strategy for the country to gain and hold markets with quality as a competitive linchpin is needed.

As regards quality management, many approaches and methods have been proposed by practitioners and academics including Oakland [4], Juran [5], Faigenbaum [6], and Schonberger [7]. They have described a variety of technical and organizational approaches including the use of statistical techniques, changes in organizational structure, employee education and so on. However, these prescriptions are largely not derived from organizational theory but are based on the authors'many years of practical experience and observation in the quality field. Quality management is an organization-wide function, therefore, organization theory should be used to explain, describe, and improve it. This paper therefore is a systematic attempt towards this end, and essentially seeks a conceptual and operational definition of Export Quality followed by the development of a model for the same.

QUALITY VIEWS

A review of the pertinent literature suggests the existence of varied views related to the quality concept: product view, process view, customer view, cost view and the chain view [8]. In this paper it is contended that an export view should be adopted for Tanzania as the most effective and realistic way of ensuring the development of indigenous quality consciousness and capababilities in the local industry and the survival in

the increasingly competitive business environment.

Product View: The product view of quality focuses on the measurement of how closely a product conforms to specified requirements. Under this view we define: quality of design as a measure of how well the product is designed to achieve its stated purpose [9]; quality of conformance as the extent to which the product achieves the quality of design, that is meeting standards specified by the design function [9]; and, quality involving functional abilities, which are built in the product during design. They are, "availability", "reliability" and "maintainability" [10].

Process View: The process-view of quality focuses a lot on the capability of the process, in delivering a quality product. Management of process quality is thus mainly concerned with managing the inputs, the conversion and the outputs from the system. Inputs to the process include equipment and tools, materials, information, procedures, people and records. The target in the operation of the process should be total avoidance of non-conformance [4]. The latter is made possible by preventive measures through process certification (see Oakland [4], Juran [5] and Schonberger [7]).

Customer Focus: Markets/consumers are the basic determinats of product quality which is saleable [7]. This view is defined as a product's ability to satisfy the needs and expectations of customers. More generally it means delivering products that meet customer standards, meet and fulfill customer needs, meet customer expectations, and will meet unanticipated future needs and aspirations [11].

The Cost View: Costs of achieving quality must be carefully considered since they will be reflected in the final price of the product. The chief concern of this view is to lessen losses or costs. Genichi Taguchi [4], observed the cost reduction drive from the opposite side, arguing that, it is strongly related to quality; hence his definition: Product quality is the loss imparted to the society from the time the product is delivered. But, the view should be modified to include losses incurred since conception of the product, to be the loss/costs imparted to society from the time the product is conceived [8].

The Chain View: The quality chain view relates linked sets of customer-

The Chain View: The quality chain view relates linked sets of customer-supplier pairs [4,7]. It is defined as meeting requirements right in the first time, and at the right place [7]. In order to perfectly meet the requirements of internal and external customer the organization should be linked, and the series of quality chains throughout and beyond the company should not be broken at any point. Good performance in the link, from external supplier to internal customer and supplier respectively, forms a chain of quality ending at the final paying customer outside the firm.

The Export Strategy View: The whole world is moving towards "Quality Systems" based on ISO 9000 of quality standards series, which are the prerequisite for the buyers market. The standards dictate tightening of quality standards. Quality Systems is now a world wide movement. Regardless of country, or industry, the laggards are at risk; the leaders will acquire insulation against failure. A good promoter can still sell junk, but it is tougher when another firm down the street, across the country or beyond the sea sells quality at the same or lower price [8].

Seller's market, as well as a country's policies which aimed at protecting local industries induced laxity in quality within developing countries and particularly in Tanzania. No wonder it is a big surprise when Tanzanian industrialists appeal for govenrment's protection at this age. Without (unnecessary) protection industrialists would devise ways to enhance efficiency in their business and reduce operational costs. Simultaneously it will foster the use of locally available inputs, and hence raise the domestic value-added.

Effectiveness and efficiency applied in production process will ensure profitability. This should be the real sources of protection of any given firm as opposed to government protection. Thus the core solution to combat this threat is that, Tanzanian firms must follow the "Export Quality Strategy". The latter should be, a broad course of action to effectively use-company's resources to produce exportable goods and thus increase productivity. The strategic goal should be, production of goods that on reaching foreign markets will either be: of cheaper price and/or of better quality than domestically produced counterparts. The overseas clients are interested in getting quality products at competitive prices, and according to committed delivery schedules.

The strategy will quarantee asustainable shield for the firms against any effect of stiff competition, in the domestic and external markets. That is, if they can compete in foreign markets, they will succeed in the local ones. As regards Tanzania, we should refine, and make use of the quality views explained above and use them within the framework of export strategy to attain effectiveness and efficiency in our firms. The export strategy therefore aims at products from effective and efficient enterprises, saleable and acceptable both in international and domestic markets at very competitive price-levels.

MODEL OF EXPORT QUALITY

The framework (Fig. 1) links a firm's relevant quality of human resources management, quality strategy choice, quality of the information system, and quality of technological facilities to their influence on export quality performance. They dynamics of the relationships between the above mentioned factors, emphasize that, to realize superior export quality performance, the firm must achieve smooth and harmonious interactions or mutually reinforcing relations between them.

As can be seen from the model, each firm, according to the nature of its product(s), should seek and secure reliable information pertaining to quality requirements of the target market. Thereafter, the firm should design an effective quality management system capable of meeting export quality standards levels, while protecting the company interests. The quality system should be structured and adapted to the company's particular niche. [4] Environmental factors should be considered because they will afect both the inputs to, (requirements) and outputs (product quality). Feedback from the market will assist the firm in making necessary changes.

Management Responsibility and Human Resources

Management Responsibility

Today in Tanzania management should be held responsible for poor quality This management responsibility should be manifested in:

a. Quality policy aiming at removing quality deficiencies.
b. Quality organization to achieve desired objectives.

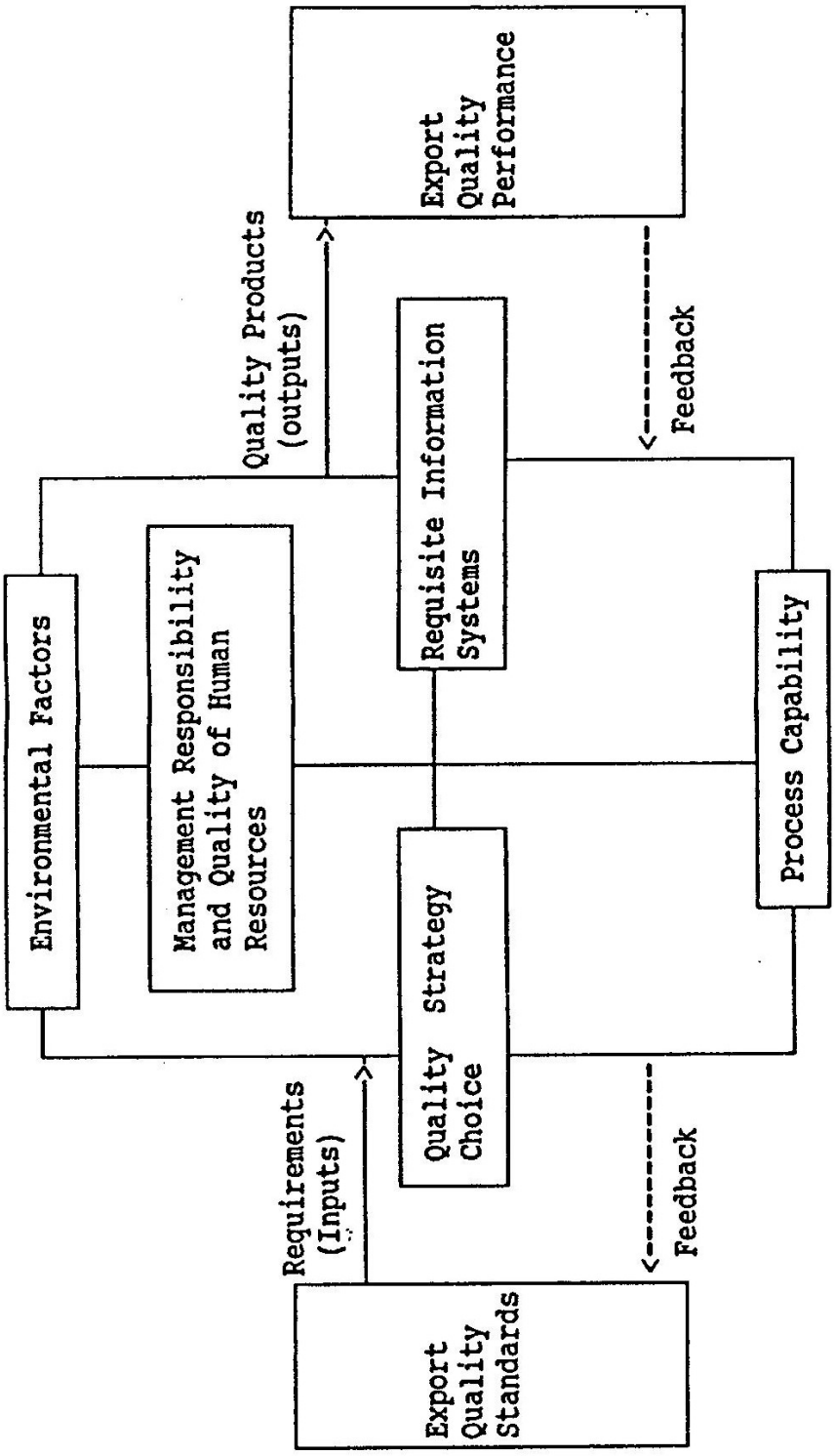

Fig. 1: Model of Strategies For Attaining Export Quality Standards

c. Marketing to establish needs of export quality standards.
d. Planning to attain the export quality standards.
e. Operational procedures regarding quality activities.
f. Pragmatic maintenance of facilities to keep the quality of machine and equipment.
g. Quality audits to confirm performance and recommend corrective actions with respect to quality deficiencies.

Quality of Human Resources

Tanzania needs to export not just raw materials but finished products produced by trained and well motivated people.

Quality training and supervision: It is unfortunate that less than 1% of Tanzanian industrial employees have attended quality related training [8]. Thus, it is important to train. The following should be done:

a. The training objectives should be to develop attitudes, knowledge and skills in quality consistent with achieving export quality standards.
b. Requisite training methods should be chosen.
c. Training programmes should be prepared to train both level-wise and discipline-wise.
d. Training records should be kept to provide references for further training.
e. Effectiveness of quality training should be checked.
f. Special attention should be paid to recruited personnel and those transfered to new assignments.
g. Supervision should aim at better utilization of materials, men and machines.
h. And in order to ensure that Tanzania is not a dumping place for substandard quality products means to impart quality awareness to the public must constantly be sought.

Motivation to Meet Quality Standards: Wages in the public sector have been adjusted for the past five years, but each time much less than the rise in the cost of living. Obviously the objectives of the government paper number 1 of 1981, "The National Policy on Productivity, Income and Prices" are not met. To improve workers performance and prevent them

from seeking parallel jobs they should be motivated through:

a. Performance-based incentives (bonuses for quality work).
b. Satisfaction of safety and security needs (to remain employed).
c. Satisfaction of social needs (love and belongingness).
d. Ego needs (self respect and respect for others).
e. Satisfaction of self fulfillment needs (creativity and self expression).

Moreover, equity, job specification, communication within the firm and quality of the organization character will further foster worker morale towards achievement of goals set [12].

Quality Strategy Choice

Every company should have a quality strategy to define what the firm wants to achieve, establish the overall direction and guide the day to day decision making and operational activities that are imperative to achieve the strategic goal [13]. The latter should be "Leadership through quality". Therefore, Tanzanian firms should strive for leadership position in particular industry based on requisite product quality dimensions [8]. Superior quality is not enough, product prices must be competitive as well. To reverse the loss making trend in Tanzanian firms, companies should simultaneously engage themselves in cost reduction and prevention of quality deficiencies, in order to secure a competitive edge in the market. Quality costs should therefore be known and means to minimize them must be constantly be sought and emphatically implemented.

Information management

Another problem facing our local industries is poor information systems. A good information system will assist in understanding and attainment of export standards levels. The information to be managed pertains to means to determine and define products, customer and society requirements.

a. Product requirements: Standards (international, national and company), materials and specifications to be used.
b. Customer requirements: What are (market) customer needs in terms of quality dimensions (eg. conformance, performance, value,

durability price, etc.).

c. Society requirements: Laws, statutes, regulations and rules, codes, environmental considerations, health and safety needs, and conservation of energy and materials.

Further, the above will be assisted by quality documents (including quality manual and records, and data to provide reference for improvements). To save a large amount of human time and energy apt software packages for quality information systems should be chosen from those available [4].

Process Capability

The matching of the exported products to the requirements of taget market is achievable through: (1) design and manufacture of a product to required quality levels; and, (2) export packaging which ensures that the customer receives the product in the expected conditions. In this connection ensuring effective process capability is absolutely essential. Process quality capability should be set by the following steps:

a. Identify the process needs (eg., through brainstorming).
b. Identify the process quality characteristics.
c. Develop causal relationship concerning the process (aided by process flow diagrams eg., the Ishikawa diagram).
d. Identify possible problems and then rank them by using the Pareto diagram. Then seek to address them, starting with the most pressing.

The above is not enough. To ensure that the process is under control; additionally, Statistcal Process Control tools (eg., control charts and various sampling methods/charts) should be used to monitor the performance of the processes over time.

Another input to the process is a well designed product. Quality cannot be achieved during manufacture if it is not designed into the product. Moreover, to make sure that the system is complete, the following should consistently be taken care of: proper procurement, packaging and labelling, process control verification and product inspection, and effective handling of post production functions (i.e., handling, storage and delivery).

Environmental Factors

Here we are talking about the environment, external or surrounding the enterprise, capable of defining, promoting or constraining the firms potential product quality and hence market opportunities. Factors to be advocated at national level are legal (to enforce standardization, certification, import and export inspection, etc) and business environment (conducive business environment, eg. market needs).

CONCLUSION

Measures of performance in the presented framework should demonstrate the efficacy of the combined effect of all input variables, and their interactive influence in maximally achieving competitive goals. Definitely environmental factors will strongly affect attainment of export-standards levels in quality. However, the factors remaining the same, the framework formally suggests that, superior performance in quality levels will result when there is a good interaction among a firm's quality of human resources, quality of human resources, quality strategy choice, process quality capability and requisite information system. Therefore, the model proposed here can be used to upgrade quality in Tanzanian firms. It presents propositions for any firm that is interested to adopt the export quality view The model applies to any company desiring to accomplish export level standards, not essentially export-oriented.

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