

## EXPORT QUALITY MANAGEMENT IN A WORLD GLOBAL ECONOMY

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*ABSTRACT: Quality became the management imperative of the last two decades and will continue to be the key to success in the future. We often see the words “quality first”, and demands for quality invade every sphere of activity, from the motor vehicles we drive, to the domestic appliances we use, the food we eat, the restaurants we dine in, the doctors we visit, and the products we import and export, reminding us that quality is the goal of every business, and that its focus is the “customer”. Satisfying the requirements of the customer is a dynamic activity: both customers and their needs change and the supplier has to recognize this. When it comes to trade, no exporting country can afford to compromise on quality. The current economic climate calls for export marketing and promotion efforts with assurances of superior and consistent quality in products and services, associated with lower prices and delivery of the right product at the right time.*

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### **Going global**

In recent times profound changes have taken place in exporting and importing, even though international trade has been going on for hundreds of years. Few products are produced nowadays from start to finish in a single country, and products obtain value added as they pass from one stage of production to the other from country to country. Furthermore, advances in information and transportation technology have pushed the global economy, and not only large sized companies, but also many SMEs in both developing and developed countries, even those with few employees, have gone global, with business interests in multiple countries, forming joint ventures, exporting products and services under competitive strategies for the global market place. In addition, the assurance of quality in design, production, performance, installation and servicing, as a totality, has emerged as an important aspect of international trade.

Many enterprises around the world use quality management systems and total quality management as a basis for running their operations as well as for their relationships with trading partners. The compelling reason for a company to adopt a quality management system may arise from competitive requirements which may make it necessary for it to focus on quality at the expense of profit margins.

## **Product quality**

A product - which may be hardware, software, processed materials or assemblies or a service - results from a series of processes transforming inputs into outputs.

Many factors influence product quality: these normally cover the raw material, production machines and equipment, production processes, and the workers. For these reasons, it becomes difficult, if not impossible, to make two products identical in “quality”. In practice, however, the process needs to be designed so that it results in products with small or acceptable variations in quality characteristics, resulting in a more uniform and stable quality level meeting the stated and implied needs of the customer. Product quality should normally meet the requirements of the market, as well as contractual and organizational demands, and these requirements should be expressed in functional parameters and documented.

Among the contributors to product quality are the following:

- Continuous improvement or updating of the product to meet the evolving requirements of the market place.
- Building quality into the design of the product to meet the requirements and opportunities of the market place.
- Providing support throughout the life cycle of the product so as to maintain its design characteristics and value for the customer.

For certain products, reliability, maintainability and availability are important quality characteristics.

In recent times, services have become the fastest-growing sector of the world economy. Excessive preoccupation with product quality and the difficulties inherent in defining roles, functions and quality characteristics in the services sector were responsible for the low priority given to the sector in the past. Another important reason for negligence was that customer complaints in the sector were taken lightly and were seen as an irritant rather than an opportunity for improvement; any investment in quality in the services sector was viewed by management as an unnecessary expense.

Quality standards can be more easily established for goods than for services. Goods can be inspected and tested for conformity, defectives can be identified, corrective actions can be taken, provided performance levels have been established. Services are usually produced and consumed at the same time, and service deficiencies cannot be eliminated before delivery, services being personalized and subjective. In addition, service quality standards are difficult to establish because measurements are subjective, and customers will have their own expectations about what service quality is or should be.

Furthermore, a service or service delivery characteristic may be quantitative or qualitative depending on the method of evaluation and who evaluates it, whether it is the service organization or the customer. When it comes to exports, it is not necessary to emphasize that there should be a programme for the continuous improvement of service quality. This should identify changing market demands, any ineffective or insufficient quality system controls, and estimate and reduce costs. All possible means of getting customer feedback needs to be explored, with continuous evaluation of the customer's needs, requirements and perception of service quality, as these parameters and any corrective action they may require are important for profitability and competitive survival.

Before looking at process quality, it is necessary to have a global view of the “business process” to enable the visualization of the overall flow of resources and activities and to determine the purpose and scope of the key processes. The “core business process” is identified as the flow and interaction of activities concerned with meeting customer requirements and which convert market opportunity into actual revenue. In all businesses there are the so called “supporting processes”: processes within the organization required to maintain the effectiveness of the “core business process”. Keeping tight

control of activities deemed critical for the business is essential.

**Quality management – between philosophy and practice**

Quality management is defined in ISO Quality Management and Quality Assurance Vocabulary, 1994, as: "all activities of the overall management function that determine the quality policy, objectives and responsibilities, and implement them by means such as quality planning, quality control, quality assurance and quality improvement..." The definition is clearly reflecting the relationship between the four qualities of management activities - quality planning, quality control, quality assurance and quality improvement - and the classic management cycle -PLAN-DO-CHECK- ACT (PDCA) – Table no.1.:

Table no.1.

**The initial PDCA cycle**

Quality planning	PLAN to achieve customer satisfaction	Identification of all customers, collection of all customer requirements and development of a complete PLAN
Quality control	DO implementation of all processes	Definition of all processes and documentation of only one (core) process
Quality assurance	CHECK measurement of performance	Data collection and analysis of all data on the one process.
Quality improvement	ACT - Action taken for quality improvement	Implementation of a solution to the one problem with the process being measured for further study.

It is common today to use the term “quality management” when referring to internal activities (planning, control, assurance, improvement for internal purposes), and the term “quality assurance” in relation to external activities such as certification, audits, etc.

The first phase of the continuous quality improvement cycle is oriented to meet customer requirements and guarantee customer satisfaction. The emphasis is on customer satisfaction, and it has to be started by focusing on this important and primary goal by knowing who the customers are, and by understanding their requirements and expectations. The next phase is to study the processes necessary to manufacture the products and services to be provided to the customers.

Communication with suppliers is necessary to ensure that they know what the beneficiary’s requirements are and what is expected of them. Methods of reducing waste, simplifying processes, reducing process cycle times and standardizing processes should be examined.

The performance of the process should be measured. Such measurements provide objective performance feedback, help evaluate the need for improvement, gauge the impact of changes, and assist in setting realistic schedules and performance targets. The measurement procedures usually involve collecting objective and accurate information on process performance, the effects of process variation and the choice of critical process characteristics; analysis of process performance data; and the use of statistical methods to interpret time-sequenced data, e.g. the analysis of the variation present in any process by means of control charts.

On the basis of these reviews, one should be able to identify actions to be taken to improve the processes further. The PDCA cycle with its four phases is continuous and forms the structure on

which all improvement efforts should be based. In order to focus on core processes, the analysis could concentrate on one process at a time, with the other processes to be analyzed subsequently.

Managing for quality is today's revolution in management philosophy and practice. Pursuing quality requires a management transformation and a commitment from top management inspired by a clear policy. An enterprise is a system made up of many processes; everyone in the organization should have the opportunity of contributing to the transformation by understanding, and making the required changes to, its key processes: inspection or detecting and rectifying problems is not sufficient. The root causes of the problems need to be removed by upstream prevention, thus eliminating actual error and waste. The quest for quality should be led by top management with the involvement of all concerned, with the organization functioning as a system focusing on upstream prevention and continuous quality improvement with long-term goals.

Moreover, it is necessary to keep the top management periodically informed of the progress of the quality programme, and to make any necessary modifications to the strategy as implementation progresses. The feedback from the programme should be analyzed and strategies should change with shifts in the market place.

The design of the quality system should be appropriate to the objectives of the organization's quality policy. Quality system elements (alternative word: requirements) should be carefully selected. The emphasis on each of these elements will vary from one type of activity to another and from one product to the other; the choice of elements should be made to achieve maximum effectiveness in meeting customer expectations.

Today's customer, in addition to demanding quality products at competitive prices, also expects excellence in services. This has resulted in an increasing interest in service management.

Service quality is usually demanded in two situations:

- After-sales service associated with a physical product.
- When the product is a service.

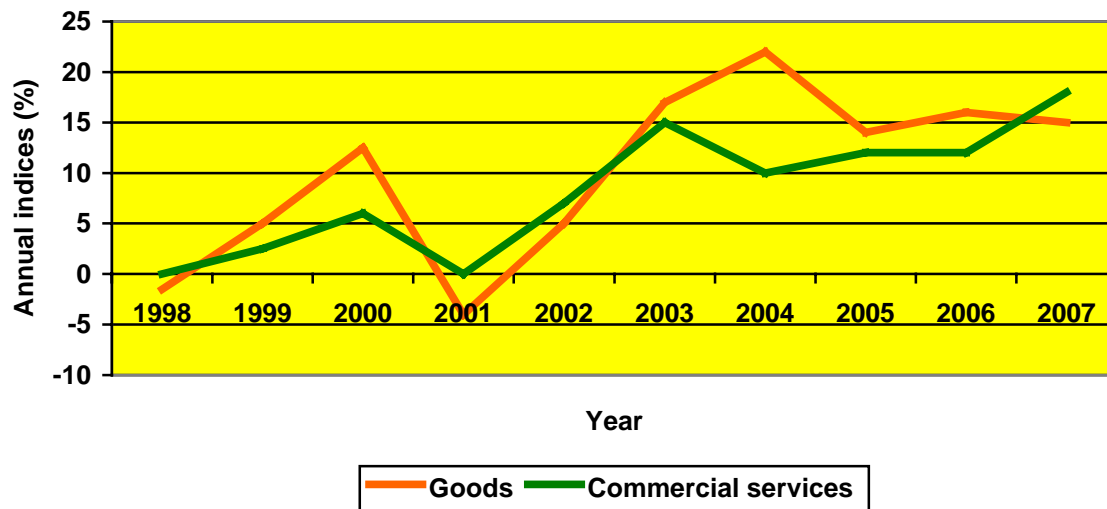
The trade in services is growing rapidly, and currently accounts for about 20% of all international trade. In 2007, world goods exports in dollar terms (nominal terms) registered a growth rate of 15 per cent, to US dollars 13.6 trillion, compared with 16 per cent in 2006. Almost two thirds of this change in the dollar value can be attributed to inflation. In the same year, commercial services exports developed by 18 per cent to US\$3.3 trillion. The increase in commercial services exports in 2007 was markedly faster than in the preceding year and somewhat faster than that of goods trade, which expanded slightly less than in 2006 – Figure no.1.

Services are traded internationally in four ways:

- Cross-border movement of service products.
- Movement of consumers to the country of importation.
- Establishment of a commercial presence in the country where the service is to be provided.
- Temporary movement of natural persons to another country in order to provide the service there.

**Fig. no.1. International trade dynamics in 1998-2007**

Annual indices (last year = 100%)



Source: WTO Data

The basic principles of quality management are equally applicable to physical products and to service operations. One of the main differences between services and products is that services are intangible and invisible. Quality management and assessment of performance in the services sector are therefore difficult. Service performance is not easy to quantify. It is subjective: in effect, what the customer decides is equivalent to a judgment on the quality of the service.

The concepts and techniques of quality management are the same for both large and small and medium-sized enterprises. While large manufacturing enterprises have been applying quality management techniques for many years, many SMEs are now beginning to realize that they, too, can benefit from the implementation of these techniques. Today, producing quality products or delivering quality services meeting customer requirements is the primary objective of any enterprise whether small, medium-sized or large. Higher customer satisfaction will improve one's market share, bringing in larger profits.

### **Export quality – a business imperative**

Export promotion is vitally linked to economic development, and unless a country exports quality goods and services meeting customer requirements, there can be no steady economic growth. No enterprise can afford to compromise on quality if it is to establish a good image for its products and for its country. A single consignment of inferior quality can tarnish the good name of the exporter and the country as a whole.

In the prevailing economic situation, large and small enterprises in developing and developed countries are discovering that the old ways of doing business do not work any more and that new approaches are called for. Companies are adopting new systems of management for both internal and external purposes. The use of Total Quality Management (TQM) principles and quality management systems in cooperating with other companies, entering into agreements, and developing, manufacturing and supplying the required products and services meeting customer expectations is becoming more and more a business imperative.

All over the world, companies are growing increasingly conscious of the competitive potential of quality. The three main factors important to the customer, particularly the export customer, are quality cost and delivery. Of these, quality stands out today as the single most

important competitive instrument.

Total quality management (TQM), as is well known, is basically a business philosophy founded on “customer satisfaction”. The business environment of today is such that managers must plan strategically to maintain a hold on the market by continuous improvement in the quality of their exports. It goes without saying that this is also true even for the internal market. TQM has thus become a way of life in many organizations whatever the sector, from manufacturing to hospitality services, and is an approach for improving the competitiveness, effectiveness, and flexibility of a whole organization. The responsibility for detecting problems is thereby shifted from the customer to the supplier. TQM is essentially a method of planning, organizing and understanding each activity, with the involvement of each individual at each level in the organization. Building a quality culture calls for a reversal of the fundamental assumptions about managing organizations. Instead of change within the system, the system itself is under scrutiny for change.

In the past, all business organizations were oriented only to profit. In contrast, the TQM imperative is customer satisfaction; profits should then follow automatically. Further, to be successful in promoting business efficiency and effectiveness, TQM must be truly organization-wide, starting at the top with the chief executive officer (CEO) accepting responsibility for the quality policy and believing wholeheartedly in TQM.

TQM concepts and practices have evolved over the years as enterprises searched for methods to improve their products and services. TQM is not an abstract philosophy nor is there one method of implementing TQM. It is necessary to customize in each case to meet the requirements of a specific enterprise and in accordance with its culture and past history. Enterprises implementing TQM should focus on customers, seek continuous improvement of business processes, involve all staff members in quality improvement exercises, and create a quality culture with shared learning at all levels with the full commitment of top management. TQM is thus a demanding discipline and a method of managing an organization with the following objectives:

- Customer satisfaction and profitability based on the principle that quality is determined by the customer and the need to manage “quality in” as opposed to inspect “error out”.
- To monitor performance and conformance to standards and specifications and to ensure that the organization is customer-centered, the customers being both internal and external to the organization.
- To enhance the profitability of the enterprise while ensuring satisfaction down the customer chain.
- Continuous quality improvement in all processes, with a view to obtaining “fitness for use”, “fitness to cost” and “fitness to latent requirements”.

Economic studies point out that meeting quality, delivery and cost requirements is the only effective long-term method for success in the export trade. Furthermore, recent studies show that quality is a dynamic, ever-changing concept that has become the business imperative of the day for enterprises of all sizes in both their domestic and export markets.

In the highly competitive international market of today, it is not always sufficient simply to propose meeting the customers' specified requirements. It is also necessary to satisfy their basic expectations which are easily overlooked, as consumers usually take for granted that their basic expectations will be automatically looked after. Customers may switch to a competitor if these basic expectations - together with further customer desires - are not understood and taken fully into account. Some pleasant surprises and unexpected features of the products or services can turn a satisfied customer into a delighted one. Such pleasant surprises, which go beyond just basic satisfaction and desires, play a big role in expanding an exporter's market share.

Quality management to achieve the objectives of the internal quality improvement and for meeting external customer demands requires a systematic, structured approach, an accurate understanding of the needs of the customer, adequate resources, and appropriate procedures for

producing and delivering goods and services with a predictable level of quality.

The three major motivations for implementing a quality system are: customer requirements or pressure, the competitive advantage to be gained and improved internal operations. When it comes to export quality management, the external, market-driven forces are customer requirements and pressures and the competitive advantages to be obtained. If a major customer requires certification, the company may lose the business if it is not certified or if it fails to achieve the requirements for certification. If major customers do not insist on certification, a company can acquire certification on its own initiative, thereby gaining customer confidence and achieving an edge over its competitors.

For a company, especially for SMEs, any problem connected with the implementation of a quality management system is usually due to inadequate resources, the need to hire consultants to interpret the standard in terms of the SME's operations, and the cost of implementing and maintaining the quality system. The investments of money, staff time, etc., have to be cost-effective, with appropriate returns in the form of improved internal efficiency and export market share.

A company's initiative to introduce export quality management arises from market pressures or from a conviction that a marketing advantage will be gained from applying quality management concepts to the export cycle.

Export quality requirements are normally laid down in standard specifications which serve as the basic quality criteria for trade negotiations and agreements, quality assurance and inspection. Standard test methods provide a basis for determining quality characteristics. The use of such standards is acknowledged as an important means of fomenting international trade, and standardization at the design stage is regarded as essential to building quality into a product.

In recent years, an increasing number of regulations laying down safety and quality requirements for products and equipment have been issued by governments and semi-government authorities, thereby giving force of law to standards. These standards are usually adopted to ensure that both imports and domestic products do not endanger the safety and health of the population and the environment.

Today, the development and acceptance of national and international standards play an important role in global trade and competitiveness. This is acknowledged in the WTO - Agreement on Technical Barriers to Trade (TBT).

To ensure that (mandatory) standards do not create a technical barrier to trade, the Agreement requires that they have be based on scientific information and, whenever possible, on international standards.

For the sake of clarity, it is essential to note that the Agreement on TBT defines a "technical regulation" as a "document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory". A "standard" on the other hand is a "document approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory". The Agreement further clarifies that while standards as defined by ISO/IEC (in their Guide 2) may be mandatory and voluntary, standards under the Agreement are voluntary.

Voluntary standards can have the same effect as mandatory standards if governments or semi-government purchasing agencies require products to conform to these standards. Reference to voluntary standards in legislation or regulations issued by government and semi-government organizations is on the increase, giving such standards a mandatory character. Statutes incorporating provisions from standards on quality levels and codes of practice also give the latter a mandatory character; here the obligation is imposed by an authorized agency or by mutual agreement between the standards organization and that authority.

In the European Union, the standardizing bodies at the regional level include the European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC) and the European Telecommunications Standards Institute (ETSI). In addition to

formulating their own voluntary European standards (EN) these bodies adopt standards issued by international standardizing bodies such as the ISO and IEC.

Some standards are made mandatory throughout the European Union by Directives issued by the European Commission. No EU country may retain national legislation deviating from the Directives unless this deviation is justified under Article 30 of the EEC Treaty for reasons of consumer protection or protection of the environment, or under Article 36 on the grounds of public morality, public policy or public security, protection of health and life of humans, animals or plants, protection of national treasures, or the protection of industrial and commercial property.

While many governments - with a view to promoting trade - have thus directed their policies towards enforcing the minimum or acceptable quality requirements needed for quality improvement, significant national differences have become apparent in their ability to reach acceptable quality levels. Each has adapted its approach to quality policy formulation and implementation within regions to reflect different national economic situations, as well as different national traditions in government-industry relations.

It will therefore be clear from the above that quality requirements for varying needs are the prime objective of a national or international standard. This applies whether it remains a voluntary standard for adoption by interested parties or it is of a mandatory, compulsory or regulatory nature, in the interests of society as a whole.

The issue of global competitiveness is often put forward as the objective for industrial policy. This same competitiveness is also recognized as the key to gaining a greater share of the world's wealth generation, which will bring with it higher standards of living. In the international market of today, the rivalry focuses not on price but on quality where both consumers and suppliers everywhere are growing increasingly conscious of the competitive potential of quality.

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