The costs of quality – potential growth source for the entity performance

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Abstract: *For the last 15 years, an increased number of entities have learned that the quality of the products must be designed prior their manufacture and that it is expensive, but not impossible, to control the product quality after the product has exited the manufacture line. Sellers must take into account the powerful competition, the alternative products and services, as well as their prices. It can be noticed that in the same period in several countries, for instance in Japan, the quality of the products has been improved concomitantly with the decrease of their prices. To cope with the domestic and external markets, economic entities from our country must manufacture qualitative goods at competitive prices. However, quality is not something that the economic entity brings in during a certain stage of the manufacture process or something that is automatically produced. In this respect, the USA have suggested the implementation of an operational mechanism where all the economic functions act together to assure the quality of the company's products and services, under the name: Total Quality Management- organizational environment which allows the calculation of reliable quality pointers needed by managers to fulfill the manufacture goals regarding high quality products and services at reasonable prices.*

Key words: quality, cost, expenses, administration accountancy, quality pointers.

1. Establishing the costs of quality

The costs of quality are factored based on the data registered under the administration accountancy and presumes the fulfill - ment of the following stages:

- To establish the consumption of raw materials and materials related to the costs of quality;

In this respect, there must be separated the expenses made with the raw materials and the materials which concern the manu -

facture related quality cost or the administrative expenses. Such allotment may be performed by registering a preset pointer under the consumption document.

- To establish the wages due to quality costs

Such estimation starts from the information within the payrolls and from the duties of the personnel within the qualitative center. This can be computed according to the relation: $q_{SC} = Sc/S$ where:

q_{SC} = the wages of the research personnel involved in the quality costs;

Sc = the wages of the research personnel who have performed research regarding the quality assurance;

S = total of the wages owed to the personnel within the research-design center.

- To identify the amortization of the technologic equipment used for quality control;

Given that such devices and equipment have specific destinations, it is mandatory to locate their amortization within the quality control.

- To factor the production costs for the rejected products.

Based on the "Rejection minute", there is established the loss generated by the rejected products as difference between the costs of the rejected products and the amount recovered from the guilty people and the amount gained by selling the rejects.

The calculation of the quality costs has a series of advantages: it assures the comparison of the quality improvement programs, with priority for the one which leads to a higher cost decrease; it allows highlighting the expensive nature of non-quality.

2. Quality pointers based on costs

The quality based costs represent a class which reflects the significance paid by a productive entity to quality and permanent improvement of products and manufacture stages.

Competition has always determined the productive and services entities to focus on the manufacture of qualitative goods and services, as otherwise the economic entities may lose their market share on behalf of competitors and, finally, they may even interrupt their economic activity.

For a certain person, quality means a product which is better than another one – whether due to design, resistance or different features. But, within an economic system, quality represents an operational environment where the good, the service designed or provided by the entity for the first time complies with the requirements of a third party. The quality related costs represent expenses explicitly related to the fulfillment or non-fulfillment of a certain quality level for the respective goods or services. In other words, the total quality costs include:

a) Appropriate quality costs , made in order to assure the efficient performance of a good or service;

b) Inappropriate quality costs , made to transform a rejected product or service into one which is acceptable for the client.

The quality related costs represent a significant portion of the total cost of a good or service. Some studies assess that between 25% and 40% of the labor force and total assets of manufacture units are represented by inappropriate quality costs. Therefore, a proper control regarding the quality costs has a significant impact upon profitableness.

Managers should be able to identify the activities related the quality improvement and should be aware of the costs of the resources used to reach a high quality level.

The quality related costs have two constituents: compliance expenses , which are represented by the consumptions made to achieve a qualitative good or asset and non-compliance expenses , which are represented by the consumptions made to correct the flaws of a good or service. The compliance expenses comprise: preventive expenses and assessment expenses.

The preventive expenses are represented by expenses associated with the prevention of flaws and defects of goods and services, for instance: the training of employees regarding quality; the projects' review; the quality planning activities; the current-preventive repairs; the design and development of qualitative equipment; the quality improvement projects; etc.

The assessment expenses are represented by expenses related to the activities of products' assessment, quantification or control, processes and services in order to assure their compliance with quality standards and performance requirements, for instance: samples' preparation; control activities; necessary adjustments and tests for the products' simulation and manufacture; controls and trials at the seller; current repairs of the testing equipment and of those used for quality improvement; etc.

The non-compliance expenses are represented by expenses regarding the flaws before delivery (internal) and flaws regarding the flaws after delivery (external).

The expenses regarding the flaws before delivery (internal) are represented by expenses made subsequently discovering flaws before delivering the product or rendering the services towards the client, for instance: definitive and recoverable flaws; recontrol of remade products; qualitative static time; flaws related losses; flaws related unit degradation; etc.

The expenses regarding the flaws after delivery (external) are represented by expenses made subsequently delivering the rejected products or services, such as: loss of trade fund and further orders; requests for warranties and adjustments; processing of complaints received from clients; clients' service; trials regarding product related debts; returned goods, etc.

The practical activity of the productive trade units has proved that the two main classes of expenses are balanced: if an economic unit makes compliance expenses, the non-compliance expenses decrease and, on the other hand, if little attention is paid to the compliance expenses, the non-compliance expenses increase.

The administration accountancy is the one responsible for the control of the quality costs. It overall objective is to avoid non-compliance expenses because the internal and external rejects affect the clients' satisfaction degree. A high level of compliance expenses is justified when it triggers a stultification of the total quality costs throughout the entire existence of the respective product or service; in other words, the financial means spent now will pay off later.

3. Non-financial quality pointers

The quantification of the quality costs represents the amount of money spent by the economic unit for its efforts to improve the quality and services provided. However,

managers need a quantification and assessment system which would highlight the inappropriate quality in due time in order for coercive measures to be taken before the product gets to the client. Therefore, the assessment of the performances regarding the exploitation activity endorses the use of non-financial pointers of the overall quality.

The non-financial quality pointers address: product design, incoming of the raw materials, control of the manufacture and delivery process and products' acceptance by the clients.

- **Quality pointers regarding the product design**

Quality problems are often the result of an inappropriate design of the product. At present, in our country, as well, most of the productive units use computer based design, an electronic design system, with software which indentifies the integrated design flaws. This software detects automatically the deficient sub-ensembles or manufacture process so that engineers may correct such problems before starting the actual manufacture.

Although, accountancy is not directly involved in this process, it must know about the existence and use of the product design's control pointers.

- **Quality pointers regarding the incoming of the raw materials**

In order to assure the quality of the raw materials and sub-ensembles used to manufacture the product, the productive units must give up the old thinking way, namely to work with tens of suppliers, searching the lowest price. They must analyze the raw materials suppliers in order to assess who are more reliable, who have more qualitative products, who deliver on time and have competitive prices. After identifying them, these suppliers become integrant part of the manufacture team and may play their role in the product's design in order to make sure the proper sub-ensembles and raw materials are used. The administration accountancy must make the necessary study in order to identify and monitor the trustworthy suppliers so that highly qualitative raw materials at acceptable prices to be available when needed.

- **Control pointers regarding manufacture and delivery**

Automatic equipment may be associated to control mechanisms of the products throughout the manufacture process so that there is not necessary to wait the control moment to discover the products' flaws. The control techniques represent a permanent control system which highlights the deficient areas, contributes to the significant decrease of the rejects' frequency, decreases the total time the equipment is used to process the rejects and eliminates the manufacture costs which do not generate value made by the traditional control activities. Although the administration accountancy does not have any duties regarding the creation and programming of the quality control within the manufacture system, it must understand the control's goals and to obtain a report of the frequency of the goods made as rejects, for instance: the number of rejected per a million rejects (pursued per product lines), also, the accountancy must keep track of the timely deliveries in order to identify the performances of the company's delivery system.

4. Pointers of client reaction

The sale and delivery of a product should not represent the last stage of the accountancy's duties, in general, and of the ad-

ministration one, in particular. The analysis of the clients' reaction contributes to the assessment of their satisfaction degree. The accounting pointers used to determine the acceptance degree of the products by the clients comprise:

- the predominance of the products delivered and returned by the clients
- the number and type of complaints received from clients
- the predominance of the products delivered on time
- the analysis of the number and reasons of the calls to warranty

These pointers help the productive unit to reach its permanent improvement goal regarding the products and services' quality and the activity's performance. Entities, being highly concerned with the quality performance, invest a lot in the informational system in order to measure the client's satisfaction.

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