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COMMUNICATION WITH CUSTOMERS AND ITS IMPACT ON THE PROFITABILITY QUALITY

ABSTRACT Quality management has to consider a lot of new aspects regarding the latest trends in the field. Authors of proposed paper will point at the interconnection of three major aspects: technical, communication and economical aspect. Authors proposed from these aspects Triad of quality. The main aim of quality management is essentially increasing the effectiveness indicators in organisation rather than satisfying customers by certain product properties or focusing on increasing the market share. Authors propose indicators of profitability quality-returns on quality ROQ Authors proposed triad of quality as a new way of perceiving the economical aspects of quality. The paper will comprise a proposal of system of indicators based on communication aspect and economical aspect of quality.

KEYWORDS

profitability of quality, quality triad, returns on quality, return on innovation activities

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1. INTRODUCTION

It is interesting that neither the Slovak literature on quality nor professional community do mention that majority of the projects aimed at building the quality management systems and various quality programmes have failed. This obviously does not mean that the acquisition of a certificate or another support in the field of quality is considered a failure. The aim should be to achieve the results better than those achieved before the application of the abovementioned projects, rather than a pure acquisition of a certificate. That means that the costs for the projects must be lower than the yields achieved due to the implementation of such project. As documented in sources, numerous enterprises thus either abandoned those programmes or dramatically reduced them; there were even some cases of bankruptcy due to the application of such programmes. Neither do the Slovak sources mention how many enterprises, having won a quality certificate or award, went bankrupt. The bankruptcy under the conditions of economic crisis definitely cannot be ascribed to the application of quality projects. On the other hand, if quality projects are effective, the enterprise should be protected to certain degree from the impact of the economic crisis.

There is a question whether quality does or does not have a direct influence on economic results of an enterprise /2/. Authors of the current paper are convinced that such direct influence does exist, yet

certain principles (e.g. those accented by Juran, contact with customers in particular) have been neglected in the field of quality management. Just look at the contents of ISO standards. Customers are mentioned, yet the methods of contact, assessment of post-production stages and particularly their feedback on research and development are missing in the standards.

The first version of ISO standards defined the role of marketing in quality management (Juran's idea that marketing represents both inlet and outlet of quality management), while this was omitted in the later versions. Similarly, the subject of economy quality was stated just marginally in ISO standards. The target should not be enhancing the technical properties of a product, or eliminating the active approach of employees towards quality by directive standards, but rather increasing the profitability of organisation. Companies seem to forget that a product must meet customer demands, yet the main aim is increasing the profitability of organisation; otherwise all the effort to increase quality is fallacious. Increased attention should be therefore paid to communication with customers while emphasising the economic returns on quality.

2. QUALITY TRIAD

Doubts regarding whether quality has or does not have a direct impact on the economic results of a company leads to the fact that management in many enterprises, instead of seriously dealing with quality, declares the increase of quality and

acquisition of certificate just formally, thus considering the task accomplished.

Deming, one of the major gurus of quality, claimed (correspondingly to the concept of quality management in his time), that there is not a direct connection between financial results and quality, as financial returns on quality are invisible and unrecognisable. Such (mis)concept of management has been revealed by the U.S. General Accounting Office claiming that just a minority of enterprises-finalists of the Malcolm Baldrige award proved some savings or better economic results achieved due to quality programmes /1/. Authors of this contribution take the liberty to claim that the situation in Europe is even worse in this context.

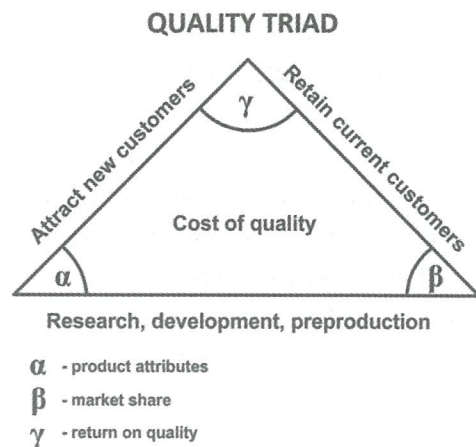
Quality is a very complex phenomenon influenced by numerous factors. When elaborating any quality programmes, three major aspects have to be taken into account:

- technical aspect; a product must be designed and manufactured with the properties assuring that the customer satisfaction will be met,
- communication aspect; customers must be convinced about the advantage of an offered product's purchase; thus the acquisition of new customers and retention of current ones are the matter of communication aspect, yet it is the communication aspect which is not sufficiently regarded in quality programmes,
- economic aspect; the aim of the quality programmes should be neither increasing the technical level of individual properties of the manufactured products, nor increasing the level of satisfying the customer needs, but

achieving the advanced technical level of the manufactured products and satisfying the customer needs, i.e. achieving better economic results and profitability of the enterprise.

The authors of this paper will attempt to express the relationships between these aspects by Quality Triad (this triad is contribution of authors to new understanding of quality economics). Since technical aspect is primarily a matter of constructors, developers and managers of production processes, this paper focuses on the communication, economic aspects in particular. As for the communication aspect, it is worth to emphasise that the achieved economic results of quality depend on effective communication with customers, and the economic aspect must therefore express the main aim of quality programmes and quality increase. Neglecting these facts necessarily leads to the failure of programmes or projects of quality increase.

Fig. 1 Triad of quality



Sides of the triangle in the triad of quality express the activities that must be implemented in order to assure the success of quality programmes, while the basis expresses the technical aspect of quality (a product must be designed and manufactured with certain properties), and the legs express the communication aspect of quality (only an effective communication with customers and monitoring their demands and satisfaction with the supplied products can help retain current customers and attract new ones). Communication is generally carried out by the department of marketing, while it is the communication itself which is a pre-requisite of effective quality programmes.

Angles of the triangle express the results of activities. The results of activities in the field of design are products with certain properties, while the result in the field of communication with customers is the manufacturer's market share, and subsequently the increase of market share is the supposition of good economic results achieved via quality programmes. The top of the triangle expresses the economic result of the previous activities and can be thus indicated as Return on Quality (ROQ).

The sequence of the quality increase process can be expressed by four basic steps:

- Step 1: carrying out the research targeted to determining the customer requirements and assessing the organisation's ability to meet those requirements; elaborating the list of requirements and harmonising the customer requirements with the organisation processes.
- Step 2: carrying out the communication with customers in order to convince them about the organisation's ability to meet customer expectations,
- Step 3: assuring the impact of the manufactured product's quality on customer satisfaction,
- Step 4: measuring the market share and the impact of quality on the achieved profit. Within this step, it is necessary to determine the quality programme related costs, net present value (NPV) due to the increased market share and to compare the profit improvement with the costs associated with the implementation of quality programmes.

Triad of quality provides a new insight into quality economics. Most companies currently apply the approaches based on PAF model in quality economics. The model which appeared in 1946 does not regard the changes having taken place in quality management and the concept of quality itself. PAF Model is exclusively focused on technical aspect, as its original objective was to seek an optimum level of low-quality production. This also defined the structure of so called quality costs used in the model, which is focused on low-quality rather than quality, though losses due to low-quality production and product quality are in fact caused by wasting material, energy and workforce involved in particular production process, thus having nothing in common with quality. In these conditions if the ratio of wasters decreases, quality is better and vice versa. This does not mean that the losses of the wasters should not be decreased and monitored, yet by

modern definition of quality these costs are not quality costs. Similarly appraisal costs are in fact a component of production process costs, while prevention costs are a component of the costs for training the staff/3/.

Regarding the abovementioned triad of quality, we are presenting a brand new structure of quality costs focused on costs for quality assurance. The structure of quality costs comprises the following groups:

- costs for research, development and preparation of production,
- costs for retaining current customers (defensive strategy) /1/,
- costs for acquiring new customers (offensive strategy) /1/.

As for group 1, it actually expresses the slogan saying that 80% of quality is created in pre-production phases. If this is true, then costs in this field are quality costs. Costs to retain current customers actually represent the total of all benefits an organisation provides to loyal customers including the costs for post-production phases. Those costs may be considered the ones for defensive strategy of a company. Costs for acquiring new customers represent the costs particularly for advertising, as well as the costs for market research, identifying the customer requirements etc. Those may be considered the costs for offensive strategy of a company.

3. INDICATORS OF PROFITABILITY QUALITY

The effectiveness of such approach requires building a system for monitoring and assessing the quality costs, comprising the following steps:/4/

- defining the cost issues that will be included into particular groups of quality costs,
- determining responsibility for issuing the initial documents for individual cost issues,
- establishing a system for collection and summarisation of quality costs,
- assessing the impact of quality costs on the company profit.

There are several options to assess quality. ROQ indicator is one of them /5/. Authors of this paper propose that this indicator takes the following form:

$$ROQ = \frac{P}{QC}$$

Where $QC = CRD + CD + CO$

P is profit from the production of particular product, costs for research and development (CRD), costs for defensive strategy (CD) and costs for offensive strategy (CO).

Denominator in the formula says that profit is not created barely by quality cost. The ratio does not directly express the effectiveness of quality system. However, if to examine the ratio in a sequence of time, we can indirectly deduce the effectiveness of quality management system from

whether the variations of the ratio exhibit positive or negative development. When creating this indicator, the influence of time factor should be taken into account. If a product is manufactured for more than 1 year, costs for research and development are single-shot; ROQ formula should then involve only the ratio of the costs attributable to 1 year of the product manufacturing.

The abovementioned indicator applies to total production. If a company manufactures several products and needs to express ROQ indicator for the one product, this indicator will include the profit and the quality costs of this product

$$ROQ_i = \frac{P_i}{QC_i}$$

The quality triad allows also to express the return on innovation activities with the indicator ROIA

$$ROIA = \frac{P}{CRD}$$

If we follow the evolution of the profitability of quality this development could we express by means of the proportional indicator

$$\frac{RQ_{x+1}}{RQ_x} = \frac{\frac{P_{x+1}}{QC_{x+1}}}{\frac{P_x}{QC_x}}$$

This indicator should be greater than 1. If it does not, the produce products cease to meet customers requirements and manufacturer should change the properties of products.

Using this approach we applied in a small company (47 employees) produces furniture (sofas and kitchen units). The results for a period of 5 years are shown in the table

Tab.Nº 1 Using and results of indicators ROQ (2007-2011)

Indicators	2007	2008	2009	2010	2011
P	186	46	38	119	160
CQ	77	67	61	76	84
ROQ	2,41	0,69	0,62	1,57	1,9
ROQ ₁ /ROQ ₀	–	0,29	0,01	2,53	1,21
CRD	48	62	43	55	61
ROIA	3,87	0,74	0,88	2,16	2,62

As can be seen, ROQ is a dynamic indicator. This indicator copies the state of the macro environment. More emphasis on quality attributes were reflected in the years 2010 and 2011. The organization began to vigorously invest in a quality of products and indicator ROQ grew.

4. DISCUSSION

The information in the article are based on previous analyzes of foreign and domestic literature. Application of indicator ROQ in practice has not yet been comprehensively evaluated and is currently the subject of solutions of grant tasks. All

information contained in the article are intellectual property of authors and represent a new trend in the field of evaluation of profitability quality. In practice and in the literature this approach is unknown and not used. The authors used expert methods treatment.

5. CONCLUSION

Besides technical aspect, quality management should involve also communication and economic aspects in order to be successful. It is essential re-

garding the effectiveness of quality management, the profit achieved and profitability of a company. Triad of quality discussed in the paper provides a new aspect of quality costs, focusing on quality itself rather than on low-quality as in case of PAF model. The quality costs used in the PAF model should be monitored because it reduces the company profit, but having nothing common with the modern understanding of quality. In contrast, the approach used in article and the designed structure of quality costs allows to track the relationship between quality and the company profit and directly expresses the profitability of the quality.

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