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Quality Cost Monitoring Models in Practice of Woodworking Company in Slovakia

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Abstract

Since the 1950s, a considerable amount of attentions has been given on the cost of quality in theory and practice. Quality is now seen as an economic category, which can be measured. The paper is focused on the comparison of two models that monitor quality cost - the model PAF (prevention, appraisal a failure) and the process cost model in the selected woodworking company in Slovakia. There were evaluated advantages and disadvantages of these models, solutions and appropriate steps for improvement of management in the area of quality cost were proposed. The importance of this paper can be considered mainly from the point of view to pay attention to the monitoring the quality cost in practical conditions of enterprises. It can be concluded that both models have a great economic benefit for the business. Thanks to them, there were discovered gaps in the area of quality management of the woodworking company which defence the success of the company on the timber market of Slovakia. These gaps can be eliminated through setting the administrative measures and solutions in the investigated area.

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1. Introduction

Monitoring of the quality costs is a very effective method how to find new ways of increasing the success of enterprises (Sopkova & Mojzitova, 2008). The above mention idea has led to the development of a new way of quality management, namely cost management quality, which is presented in this paper. The aim of the article is to compare two models for monitoring the quality costs - one based on traditional principles to quality management and the second on process principles, in practice of the woodworking company in Slovakia. Under the traditional approach such attitude can be regarded to the management of any company which focuses on the allocation of responsibilities of employees and management on the basis of functional specializations such as human resources,

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finance, purchasing etc. (Klementova, 2014). The process approach in comparison with the traditional approach focuses on coherent set of activities, i.e. processes (Chen & Yang, 2003). Process approach follows the flow of activities across the various departments in the company, while the functional approach focuses on the activities of the specialized departments (Pires et. al., 2013).

2. Methods and resources

To achieve the aim of this paper, firstly there was necessary to define suitable models for monitoring the quality costs for both approaches. Model PAF has been selected for the needs of the traditional approach and process model of quality costs for the needs of process approach. To compare these two models of quality cost monitoring, it was required to use methods of summary, synthesis and analogy of the knowledge and creation of a short literature review.

PAF model consists of the following four basic costs groups (Sansalvador & Brotons, 2013):

- a) **Prevention costs** are costs for any activity concerning the prevention and elimination of risk and presence/occurrence of variations as well as costs for quality improvement.
- b) **Appraisal costs** are all costs concerning the appraisal process and agreement rendering which are to be bear by manufacturer. That means the second group (together with prevention costs) effectively spent funds within each enterprise.
- c) **Internal losses** represent costs arising internally in an enterprise as a result of faults made when fulfilling quality requirements and requirements stated by the legislature. These have a feature of unnecessary costs.
- d) **External losses** originate as a result of nonfulfillment of customer requirements and legislature requirements after being delivered to customers and also have the character of unnecessary costs.

Process cost model divides costs of quality into two basic groups (Lari & Asllani, 2013):

- a) **agreement costs** – are the result of effort to meet customers' requirements at corresponding output or work (costs arising from systematic quality planning, prevention measures, education in the area of quality, etc.),
- b) **disagreement costs** – are connected with non-meeting of customers' requirements and those spent to eliminate just made divergences from customer requirements (costs on finishing work, guarantee and legal guarantee, costs on loss which is created by the withdrawal of unsatisfied customers, etc.).

These two models were the starting point for the carrying out of the comparison of the analysed topic in practice. In the second phase, it was necessary to split the quality costs of the monitored woodworking company according to the requirements of the selected models. For the needs of PAF model, the quality costs were divided into four groups: prevention costs, appraisal costs, internal and external losses. For the purposes of process cost model it was necessary to elaborate a process map of the woodworking company and on its basis to define all processes and sub-processes which run in the enterprise. For this model it was necessary to select only one process in the analysed woodworking company on which the model was applied. The model has been verified on the main process – **timber saw milling**, which is considered as a crucial process in the enterprise. Subsequently, the incurred quality costs in a given process were divided into agreements and disagreements costs, how it classifies the process cost model. Evaluation of the results of both models was carried out through graphical method and subsequently through method of comparison. At the end the findings were evaluated the advantages and disadvantages of both models.

3. Results and discussion

3.1. Model PAF

From the analyses and monitoring of quality costs according the model PAF in the woodworking company, it was found out the following results which are presented in Table 1 and summarized in Figure 1.

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