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THE METHODOLOGICAL ISSUES OF THE QUALITY COSTS CONTROL: OBJECTIVES, STAGES, CONTROL PROCEDURES

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The article is aimed at developing the system of internal cost control of enterprise, taking into account the information needs of the quality management system. The essence and objectives of internal control over the quality costs have been substantiated on the basis of the analysis of Ukrainian and foreign scientific research. Quality cost control being one of the efficient instruments of quality management, however, has not been given adequate attention due to the complexity of their differentiation from the total costs amount and lack of methodological base taking account of specifics of this control area. The features of internal control of various classification groups of quality costs and the key elements of its methodology have been covered: objectives, stages, information base, control methods, control procedures. The directions of improvement of the methodology of quality costs internal control have been suggested in order to enhance the effectiveness of managerial activities within quality management system.

Keywords: *quality costs, internal control, quality, quality management, active control.*
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Луцюк І. В. Методичні аспекти контролю витрат на якість продукції: завдання, етапи та процедури

Метою статті є розвиток системи внутрішнього контролю витрат підприємства з урахуванням інформаційних потреб системи управління якістю продукції. На підставі аналізу напрацювань вітчизняних і закордонних науковців у статті обґрунтовано сутність та завдання внутрішнього контролю витрат на якість як одного із ефективних інструментів управління якістю, якому, однак, не приділяється достатньо уваги через складність виокремлення витрат на якість із загальної номенклатури та недостатню методичну базу, що враховувала б специфіку цієї ділянки контролю. Розкрито особливості внутрішнього контролю різних класифікаційних груп витрат на якість та ключові елементи його методики: завдання, етапи, інформаційну базу, методи контролю, контрольні процедури. Запропоновано напрями вдосконалення методики внутрішнього контролю витрат на якість задля підвищення ефективності управлінських дій у сфері менеджменту якості продукції.

Ключові слова: *витрати на якість, внутрішній контроль, якість, управління якістю, активний контроль.*
Табл.: *2.* ***Бібл.:*** *10.*

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Луцюк И. В. Методические аспекты контроля затрат на качество продукции: задачи, этапы и процедуры

Целью статьи является развитие системы внутреннего контроля затрат предприятия с учетом информационных потребностей системы управления качеством продукции. На основании анализа трудов отечественных и зарубежных ученых в статье обоснована сущность и задачи внутреннего контроля затрат на качество как одного из эффективных инструментов управления качеством, которому, однако, не уделяется достаточно внимания из-за сложности выделения затрат на качество из общей номенклатуры и недостаточной методической базы, которая учитывала бы специфику этого участка контроля. Раскрыты особенности внутреннего контроля различных классификационных групп затрат на качество и ключевые элементы его методики: задачи, этапы, информационная база, методы контроля, контрольные процедуры. Предложены направления совершенствования методики внутреннего контроля затрат на качество для повышения эффективности управленческих действий в области менеджмента качества продукции.

Ключевые слова: *затраты на качество, внутренний контроль, качество, управление качеством, активный контроль.*
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Ensuring the proper quality of products (works, services) and its continuous improvement are the necessary conditions for increasing the competitiveness of an enterprise in the market environment. Therefore, economic entities should seek to achieve a balance between their striving for quality growth and cost minimization. Decisions in the field of quality management should be based on reliable information on costs related to maintaining and improving the quality level. Functioning of the quality management system at an enterprise necessitates the development of new approaches to the organization of the internal control system, modification of control tasks, and appearance of a specific control area – quality cost control.

Despite the considerable attention of scientists to the theoretical and methodological principles of internal control of costs, the area of quality cost control remains insufficiently developed. The organizational and methodological foundations of internal control are explored in scientific works of A. Zahorodniy, T. Butynets, D. Brewer, V. Lakis & L. Giriunas, V. Firescu, and others. Issues of organization and methodology of quality cost control remain the focus of research conducted by V. Parkhomenko, T. Bondar, O. Grytsenko, O. Skorba, and others. In the article, further to the existing scientific developments, we will focus on improving the methodology of quality cost control within the context of modification of its tasks and transition from traditional passive control to the means of active control.

The *aim* of the research is to improve the methodology of internal control of quality costs in order to increase effectiveness of activities within a quality management system.

During the implementation of measures related to the establishment, support and improvement of the quality management system, the managerial staff are interested in obtaining timely and reliable information on the evaluation of effectiveness of such measures.

According to [1; 2], quality costs are one of the most effective instruments to evaluate quality management system effectiveness.

Accounting system of an enterprise is the primary source of information for management. At the same time, the accuracy and relevance of accounting data must be confirmed by means of internal control.

A system of internal control is that part of enterprise management system, ensuring the implementation of goals, effective economic-commercial performance of the enterprise, observance of accounting principles and effective control of work risks that enables organization minimize the number of intentional and unintentional mistakes, to avoid frauds in the process of enterprise performance made by authority or employees [3, p. 148].

According to A. Zahorodniy [4, p. 165] "the specifics of the control subsystem in the system of accounting and analytical support of enterprise management is that the control in this subsystem is implemented: firstly, over the correctness of the organization accounting and analytical support subsystems and the reliability of generated information; and, secondly, over the economic object (the enterprise) and the processes taking place at it".

Quality costs are an integral part of an enterprise's total costs, but they have a number of certain special characteristics that should be taken into account when establishing an internal control system. The area of quality cost control is closely related to technological quality control carried out at all stages of the manufacturing process. These types of control are the components of a quality management system and are aimed at ensuring the proper quality of products. However, while the main purpose of technological control is to verify product compliance with standards, quality cost control is intended to ensuring the optimum (most economically feasible) ratio of product quality and costs of conformance. The article focuses on economic cost control within a quality management system.

In current dynamic highly competitive economic environment, managerial staff expects the control not only to identify the existing deficiencies and deviations but also make real recommendations for improving the current management system and its accounting and information support.

The development of quality management necessitates the transition from the passive (traditional) control system, in which the cycle ends at the stage of drawing of conclusions and recommendations, to the active (newest) where the control continues until the object reaches the optimal parameters [5].

Consequently, internal control should not be limited solely to diagnostics of the accounting system in order to establish its conformity with the actual indicators, but should be oriented primarily to improving the current state of the object under control.

The analysis of recent research in the sphere of internal control [3; 4; 6; 7] provides an opportunity to identify the tasks of the internal control over quality costs and supplement them with the tasks related to active control:

1) evaluating the validity and economic feasibility of the quality costs incurred;

2) ascertaining the correctness of the quality cost recording in the system of accounts and the accuracy of their amount;

3) elaborating proposals for adjusting the quality costs accounting methodology within the legal field, in response to the trends in users' information needs;

4) optimizing functional responsibilities of structural units of the enterprise in order to generate reports on quality costs with maximum efficiency and timely submit them to stakeholders;

5) adjusting the parameters of the existing control system, aimed at quality cost optimization;

6) forecasting of quality costs for the medium-to-long term, under the circumstances: lack of action to adjust the state of the object under control; implementation of cost optimization measures proposed by the controller.

As for the control procedures, control measures can be divided in terms of the time of their implementation into preventive, detective, and corrective (reactive) controls [8].

Preventive controls are aimed at preventing mistakes and fraud. With regard to quality costs, preventive control measures include a pre-feasibility study of quality costs before their occurrence. These actions can be fully applied only to preventive and appraisal costs, as long as a manager and, therefore, a controller does not have direct influence on failure costs, because their occurrence or absence is not a result of a specific management decision and depends on combination of factors and effectiveness of the quality management system in general.

Detective controls are related to the implementation of procedures for detecting mistakes and misuse. Detective controls include, in particular, assessment of the actual state of the object under control and its comparison with the planned (desired) state, indicators of previous reporting periods, normative values; identification of causes of deviations and persons responsible for them.

Corrective (reactive) controls involve developing recommendations and taking measures to modify the object under control in order to address the identified deficiencies.

Quality costs are divided into classification groups depending on their purpose. Common classification includes prevention costs, appraisal costs, and failure costs [9]. In this context, the desired result from using the quality management system is to minimize failure costs and reach such a minimum value of preventive and appraisal costs which will ensure the proper level of product quality and its compliance with the needs of consumers. The characteristic of control procedures applied for different quality costs categories are presented in *Tbl. 1*.

the total quality costs are minimal. Therefore, it is important for the subject of control to estimate a critical point of time after which an increase in these costs does not lead to lower failure costs and to reducing the total quality costs.

The effectiveness of the implemented procedures depends on the well-established information base for quality cost control that includes three blocks of information:

1) legal and regulatory information: tax legislation, international and national accounting standards on costs,

Table 1

Control measures (procedures) applicable to different categories of quality costs

Quality costs	Preventive controls	Detective controls	Corrective (reactive) controls
Preventive costs	Preliminary assessment of appropriateness and reasonableness of the expected costs before making a decision on the certification of the quality management system, investment in employee development, implementation of the newest quality management technologies	Verification of information on incurred prevention costs (data reliability, completeness, legitimacy, economic efficiency); detection of deviations from the planned indicators, assessment of trends in costs and product quality	Development of proposals on optimization of quality cost structure, enhancement of the quality management system, improvement of accounting policy in terms of recognition and distribution of quality costs
Appraisal costs	Estimation of the validity of planning documents of the departments (employees) responsible for product quality control (frequency of inspections, their volumes, number of personnel, procedures, reagents and equipment used for quality control)	Verification of calculations and accounting records on appraisal costs in terms of their elements (wages and social insurance contributions of employees engaged in technological quality control, depreciation of laboratory equipment, cost of reagents, other material costs, etc.). Comparison of the appraisal costs and failure costs dynamics	Formation of proposals concerning: quantity and volume of control procedures for product quality assessment; improvement of the accounting methodology related to quality control
Failure costs	Assessment of feasibility and timeliness of developing the planned waste indicators, verification of contract documentation with the suppliers for establishing responsibility for poor-quality raw materials	Checking the correctness of accounting records of the failure costs, comparing the actual quality indicators of the production process with the plans, identifying the causes and the perpetrators of waste	Analysis of amount of failure costs and their causes, development of proposals for preventive measures regarding their elimination

Source: developed by the author.

Assessing the structure of quality costs is one of the most important procedures for quality costs control. An increase in internal and external failure costs indicates deterioration in the product quality, and therefore inefficiency of managerial decisions on quality; consequently, it is desirable for an enterprise to keep the minimal proportion of such costs and, ideally, their complete avoidance. Since preventive and appraisal costs are essential for ensuring the proper product quality, it is important for the controller to compare the trends in these groups of costs and losses from inappropriate quality. An increase in preventive and appraisal cost is desirable until it leads to reducing losses from inappropriate quality, but

instructive materials on application of the plan of accounts, methodological recommendations on the formation of cost of production (works, services), instructive documents of international and national organizations for standardization and certification, norms of expenses approved by the enterprise;

2) accounting information and statements: primary and consolidated accounting documents in terms of quality cost elements (invoice, receipt, delivery slip, depreciation charges, payroll, service acceptance act, manufacturing defects reports, cost calculation, reclamations, etc.); accounting ledgers of the accounts of production, manufacturing defects, production overhead costs,

administrative costs, costs of marketing, other expenses; financial statements, in particular, Balance Sheet, Profit and Loss Statement;

3) other sources of information: quality certificates, reports of quality control department, contracts, marketing research, etc.

In article [10], we consider the application of the system of active control over quality costs, i.e., control which allows not only to identify existing deficiencies and deviations but also optimize the structure and amount of quality costs and forecast future changes. In more detail, the methodology of quality cost control is considered in *Tbl. 2.*

Table 2

Stages of quality cost control

Input (sources)	Stage	Output (results)
Planned quality costs, costs in previous reporting periods, monitoring results	Preparation stage	Objective and tasks of control, control program
Primary documents of quality cost accounting, financial statements of the enterprise, accounting ledgers	Implementation stage	Control worksheet, controller's conclusion on the legality of incurred costs, compliance of the actual costs with accounting data, cost-effectiveness of the quality management
Controller's conclusion on the conformity of the object under control with the target parameters, deviation sheet, quality management strategic documents, analysis of the external influence	Subcritical stage of modifying the object under control	Proposals for adjusting of the existing control system parameters in order to optimize quality costs
Proposals of the controller, indicators of the state of the object under control after the implementation of the recommendations	Inertial stage	Forecast indicators of the quality management system development in the medium and long term under the following conditions: (1 lack of any actions to adjust the state of the object under control: (2 implementation of the measures proposed by the controller at the previous stage to optimize quality costs

Source: developed by the author based on [5].

The control implementation is the key stage of control, since further adjustments and development of the object under control depend on the completeness and reliability of the information obtained. In the area of quality cost control the following control procedures would be appropriate to implement: verifying the presence of confirmatory documents regarding quality costs and correctness of their filling in; verifying the identification of costs within the classification groups of quality costs; checking the correctness of the allocation of certification expenses and recognizing them as expenses of the reporting period; verifying the amount of losses from manufacturing defects and their further inclusion in the production costs or activity costs; verifying the level of identifying the persons responsible for the defects and compensation for the losses incurred; verifying the correctness of distribution of overhead costs and their inclusion in the production costs; verifying the conformity of data of synthetic and analytical accounting with records in the registers and statements; comparing the actual quality costs with the planned ones, indicators of past reporting periods; estimating the structure of quality costs, their share in the total costs of the enterprise / production costs, % to the volume of sales.

The methodology of internal control is associated with a number of methodological techniques, which in the most general form can be divided into documentary, computational and analytical, and organoleptic ones. The choice of methods applicable in the process of quality cost control depends on the category of costs: preventive costs, appraisal costs, failure costs. Methods of documentary control can be mainly applied to the first and second categories. These methods include substantive examination, formal verification, arithmetic check, analytical review, checking of accounting entries, regulatory review; computational and analytical methods, which are used to estimate the quality costs structure, comparison of reporting and baseline indicators, simulation of the costs function, etc. Organoleptic techniques (inventory taking, technological expertise, experiment, etc.) along with the documentary, computational, and analytical methods are used for the third category of quality costs, which includes manufacturing defects.

CONCLUSIONS

Thus, the improvement of the organizational and methodological principles of internal control over quality costs with consideration for the peculiarities of different categories of these costs and the information needs of management is necessary to ensure efficient product quality management. The quality cost control subsystem, being closely connected with the area of technological

quality control, is primarily aimed at determining the expediency of costs incurred, their impact on achieving product quality objectives; drawing up recommendations aimed at addressing the identified deficiencies and improvement of the current state of the object under control. Taking into account the aims and purposes of quality management we suggest to divide the internal control of quality costs into following stages: preparation stage, implementation stage, subcritical stage of modifying the object under control, inertial stage. Control procedures at the subcritical and inertial stages are aimed at bringing the object under control (quality costs) into conformity with specific pre-established benchmarks that should be adjusted if and when necessary. ■

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