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# Explanation and Ranking of Quality Costing Components and Indicators in Manufacturing Companies

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## Abstract

The goal of quality costing is to identify and optimize these costs so that companies can manage their resources more effectively while meeting expected quality standards. By analyzing and ranking these indicators, manufacturing companies can identify their strengths and weaknesses in quality management and adopt strategies for continuous improvement. The purpose of this study is to explain and rank the components and indicators of quality costing in manufacturing companies. A qualitative research method was used, with content analysis conducted in the first stage and grounded theory applied in the second. Interviews were carried out with 18 experts from both industry and academia in 2024. In the content analysis phase, twenty-one indicators were identified. The ranking of quality costing components is as follows: (1) Objectives and strategies component, (2) Organizational component, (3) Management component, and (4) Group component. Based on the results, it is suggested that manufacturing companies aim to optimize costs and improve product quality by adopting a comprehensive and integrated approach to quality costing—through training, enhancing design processes, and activating quality improvement groups.

**Keywords:** Quality Indicators, Quality Costing, Manufacturing Companies.

**JEL Classification:** L15, D24, E23, L11.

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## INTRODUCTION

Today, cost and quality are considered two fundamental factors and key competitive advantages. In recent years, especially in leading industries, increasing attention has been paid to reducing production costs while improving the quality of products and services. On the other hand, manufacturers constantly strive to minimize production expenses while maintaining quality at a level that meets consumer expectations (Shahrjardi et al., 2016). Quality costing is a strategic approach in production management that identifies, measures, and manages the costs associated with the quality of products and services. In manufacturing companies, understanding and controlling these costs is essential for gaining competitive advantage, enhancing profitability, and ensuring customer satisfaction. This study aims to provide a comprehensive framework for managers and experts by explaining and ranking the key components and indicators of quality costing. Quality is a multifaceted concept that extends beyond the absence of defects—it includes all features and characteristics of a product or service that deliver value to the customer. The costs related to achieving and maintaining quality can vary across the entire product life cycle, from design and production to delivery and after-sales support. The goal of quality costing is to identify and optimize these costs so that companies can manage resources more effectively while continuing to meet expected quality standards. By analyzing and ranking quality indicators, manufacturing companies can pinpoint their strengths and weaknesses in quality management and adopt strategies for continuous improvement. Prioritizing quality costing indicators enables managers to allocate resources more effectively to areas with the greatest impact on improving quality and reducing costs. This approach also helps companies monitor performance over time, assess the effectiveness of corrective actions, and ensure ongoing improvement. The purpose of this research is to explain and rank the components and indicators of quality costing in manufacturing companies.

## METHODOLOGY

The present study is exploratory in nature and follows a mixed qualitative and quantitative approach. The statistical population was selected based on the following criteria: specialization in management accounting or management, current employment in the field, and experience in conducting research related to management accounting and quality costing. In this study, a purposive (selective) sampling method was used to choose 18 professional experts, including management accountants, accountants, financial managers, and university faculty members. In the first stage, quality costing indicators in manufacturing companies were identified through content analysis. In the second stage, by conducting expert interviews and achieving theoretical saturation using grounded theory, the components and indicators of quality costing were ranked.

## RESULTS

The present study was conducted with the aim of explaining and ranking the components and indicators of quality costing in manufacturing companies. The results indicated that quality costing is a multifaceted approach encompassing components such as objectives and strategies, organizational structure, management, and group activities. Recognizing and addressing these components and their associated indicators can help manufacturing companies enhance product quality, eliminate unnecessary costs, and improve overall operational efficiency.

In order to answer the research question regarding the identification of dimensions and indicators of the quality costing pattern in manufacturing companies, it was developed in the form of four components and twenty-three indicators. According to the research results, the components of quality costing in manufacturing companies include, respectively, 1) the Goals and Strategies component, 2) the Organizational component, 3) the Management component, and 4) the Group component. Also, the component indicators of Goals and Strategies are, respectively: 1) the indicator of attention to prevention costs in quality costing, 2) the indicator of attention to compliance costs in quality costing, 3) the indicator of achieving the desired quality, 4) the indicator of attention to quality costs for continuous improvement in product quality, 5) the indicator of recognition, classification, and improvement in quality costs, and 6) the indicator of attention to non-compliance costs in quality costing. The organizational component indicators are: 1) the indicator of attention to quality costs during value chain design, 2) the indicator of considering the quality control unit, 3) the indicator of applying quality costing as a comprehensive quality control technique, 4) the indicator of quality costing as a tool for increasing the effectiveness of manufacturing companies, 5) the indicator of attention to quality costs resulting from the failure of the organization's systems, services, and products, 6) the indicator of attention to the operational costs of the quality control unit, 7) the indicator of attention to quality costing in evaluation costs, 8) the indicator of performing inspection activities, 9) the indicator of attention to quality costs resulting from non-value-added activities in manufacturing companies, and 10) the indicator of developing and increasing production capacities. Accordingly, the indicators of the Management component are: 1) the indicator of presenting the importance of quality issues in a language that is of interest to senior managers of manufacturing companies, 2) the indicator of pointing out quality-related activities to senior managers of manufacturing companies, 3) the indicator of attracting positive opinions of managers regarding quality concepts, and 4) the indicator of determining the main points of attention of senior managers in reducing production costs. Accordingly, the indicators of the Group component are: 1) the indicator of activating quality improvement groups in manufacturing companies, 2) the indicator of teamwork, and 3) the indicator of conscientiousness. The results of the study are consistent with the studies of Vaerenbergh et al. (2019), Mathew et al. (2020), and Rouhanipour et al. (2023).

## CONCLUSION

According to the research results, the following suggestions will help improve quality and reduce costs in manufacturing companies: 1. It is necessary to implement training programs for managers and employees of manufacturing companies on the importance of quality costing and its impact on reducing overall costs and continuously improving product quality. This training can include concepts such as prevention, compliance, and non-compliance costs, as well as methods for identifying and reducing these costs. 2. Manufacturing companies should move towards integrating quality management and costing systems. This integration can include integrating quality control, inspection, and evaluation processes into accounting and cost management systems. Such an approach will lead to more accurate identification of quality costs and more informed management decisions. 3. The research results emphasize the

importance of considering quality costs in the design stages of the value chain. Manufacturing companies should encourage product design teams to pay attention to quality aspects and related costs from the beginning. 4. Activating quality improvement groups at different levels of the organization, especially in production lines, can help identify quality problems, propose solutions, and continuously improve processes. These groups can achieve a better understanding of quality challenges and provide practical solutions with the participation of employees.

**Contribution of Authors**
This study was conducted individually.

**Ethical Approval**
Written informed consent was obtained from individuals for the publication of their anonymous information in this study.

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**Conflict of Interest**
No conflict of interest was declared by the authors.

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