

## **Production Cost Analysis as a Control Tool at PT Perkebunan Nusantara IV Medan**

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*Submitted: 25-05-2025 Reviewed: 01-06-2025 Revised: 11-06-2025 Accepted: 14-06-2025 Published: 07-07-2025*

**Abstract:** This paper aims to analyze production costs as a tool for cost control at PT Perkebunan Nusantara IV Medan. Effective cost control is essential to ensure the efficiency and profitability of the company, particularly in the plantation sector, where production costs significantly affect overall financial performance. The research method used is a descriptive analysis with a quantitative approach, focusing on data related to material costs, labor costs, and factory overhead costs. The results indicate that the company's production costs have not been optimally controlled, especially in the areas of indirect labor and maintenance expenses. Variance analysis between the standard costs and actual costs revealed significant deviations, which suggest inefficiencies in the production process. The study concludes that accurate and continuous analysis of production costs is a critical component for enhancing cost efficiency. It also recommends that management improve planning and cost monitoring mechanisms to support better decision-making and operational performance.

**Keywords:** production cost, cost control, variance analysis, cost efficiency, plantation industry.

### **INTRODUCTION**

The main purpose of a company is to meet human needs while ensuring its survival through the generation of reasonable profits (Sulistyaningsih, 2023). To achieve this, companies must consistently strive to produce high-quality goods and services at competitive prices (Kuc & Wackowski, 2021). Efficient and effective cost management becomes essential, especially in determining the cost of goods manufactured (COGM), as this directly influences the selling price and profit margins (Arifin & Eristiawan, 2025). Accurate cost control enables companies to assess profitability and avoid financial risks arising from incorrect cost assumptions, which can result in either overpriced or underpriced products in the market.

In manufacturing companies such as PT Perkebunan Nusantara IV Medan, production cost is a critical component in determining the selling price of products and evaluating financial performance. The cost of goods manufactured includes all expenses related to transforming raw materials into finished goods, which is a major factor in setting a competitive price (Stahel & Jackson, 2024). Errors in classifying or calculating production costs can lead to inaccurate pricing strategies, jeopardizing the company's market position and long-term sustainability (Rounaghi et al., 2021). Therefore, a thorough and consistent analysis of production costs is vital in ensuring the company's ability to compete effectively.

Pricing is one of the most strategic decisions for a company because it directly affects revenue, profitability, and market share (Nagle et al., 2023). If prices are set too high, consumer purchasing power may decline; if too low, the company risks insufficient profit to sustain operations (Pangestuti et al., 2022). This is why understanding and controlling production costs is indispensable in setting rational selling prices. As highlighted by experts, production cost analysis is not only important for financial reporting but also plays a crucial role in strategic planning and decision-making related to marketing and product development (Olayinka, 2022).

PT Perkebunan Nusantara IV Medan, a company operating in the palm oil industry, is significantly influenced by production costs due to the nature of its agricultural and industrial processes. Palm oil production involves various cost components, including raw materials, labor, and factory operations. Furthermore, as palm oil contributes greatly to Indonesia's economy through job creation, regional development, and export income its efficient cost management also supports broader economic goals. The derivative products of palm oil used in food, cosmetics, pharmaceuticals, and even furniture, increase the complexity and importance of accurate cost allocation within the company.

**Table 1.** Palm Oil Realization and Sales at PT. Perkebunan Nusantara IV Medan

Year	Production Price (Rp/kg)	Selling Price (Rp/Kg)
2021	Rp. 2,545.53/kg	Rp. 8,210.40/kg
2022	Rp. 2,559.10/kg	Rp. 7,192.25/kg
2023	Rp. 3,583.56/kg	Rp. 5,995.93/kg

In this context, production cost analysis serves as a vital control tool at PT Perkebunan Nusantara IV Medan. By regularly analyzing production costs, the company can monitor performance, identify inefficiencies, and implement cost-saving measures. This analysis helps ensure that pricing decisions are data-driven and aligned with market realities, ultimately improving competitiveness and financial performance. A strong cost control system not only supports internal management but also provides a foundation for sustainable growth in an increasingly competitive palm oil industry.

## **THEORETICAL REVIEW**

### **Efficiency Theory**

Efficiency Theory focuses on achieving maximum results with the minimal use of resources. In the context of management and economics, this theory emphasizes the importance of efficiency in production processes, distribution, and decision-making to ensure that organizations achieve their goals optimally without waste (Litvaj et al., 2022). Efficiency is not only about cost reduction but also involves improving productivity, quality, and time management. In practice, the application of Efficiency Theory encourages continuous evaluation of work systems, technologies, and strategies to ensure that every action provides maximum added value for both organizations and individuals (Bankins et al., 2024).

### **Definition of Costs**

Definition of Costs refers to the monetary value of resources sacrificed or foregone to achieve a specific objective, such as producing goods or providing services. In a business context, costs encompass all expenditures incurred in the process of generating revenue, including direct costs like raw materials and labor, as well as indirect costs such as utilities, rent, and administrative expenses (Banerjee, 2021). Understanding and accurately calculating costs is essential for effective budgeting, pricing, financial reporting, and decision-making within an organization.

### **METHODS**

This research uses a descriptive approach, which aims to provide a systematic, factual, and accurate description of facts, characteristics, and relationships among phenomena under study. Descriptive research is used to explain the causes or impacts of past events and current phenomena, as well as to predict future conditions. According to (Mazhar et al., 2021) the data source in this study is secondary data, which refers to data obtained from existing, completed, and published materials. The secondary data used in this research includes production cost reports from PT. Perkebunan Nusantara IV Medan.

The data collection techniques employed consist of three main methods. First, interviews were conducted through direct question-and-answer sessions with employees and finance department staff at PT. Perkebunan Nusantara IV Medan to gather practical insights. Second, documentation was carried out by reviewing relevant books, company reports, and theoretical references related to the research topic. Third, observation was performed through direct examination of financial documents such as profit and loss statements, production cost reports, and cost classifications available at the company, providing an in-depth understanding of cost-related practices.

The method used in this study is descriptive analysis. The data collected is organized to provide a comprehensive and clear picture of the problem under investigation. Descriptive analysis is used to arrange, clarify, and analyze the data, allowing researchers to interpret it and find solutions to the problems identified. This study uses a theoretical approach related to the Cost of Goods Sold (COGS), including components such as raw material costs, direct labor costs, and factory overhead. These

components are analyzed to assess cost efficiency and their role as a control tool in PT. Perkebunan Nusantara IV Medan.

## RESULTS

The cost of goods produced and the cost of goods sold used in analyzing the calculation of the cost of goods manufactured at PT. Perkebunan Nusantara IV Medan in 2022 include components such as direct labor costs, indirect labor costs, factory overhead costs, and selling prices. In line with the theoretical framework of cost accounting and the company's operational overview, the analysis focuses on evaluating how PT. Perkebunan Nusantara IV Medan applies cost accounting principles in calculating its cost of goods manufactured. The company's production costs are categorized into direct and indirect costs.

Direct costs consist of raw material costs, which represent the economic resources needed for material procurement or production; plantation costs such as salaries, allowances, maintenance, fertilization, harvesting, and transportation to the factory; factory costs including employee compensation, machine processing, maintenance, packaging, and insurance; and depreciation of plantation and processing assets. Indirect costs include operational and administrative expenses such as management staff salaries, transportation, accommodation, maintenance of facilities, inventory usage, taxes, insurance, security, lighting, and water supply. From an accounting standpoint, production costs are generally divided into three major components: direct raw material costs, direct labor costs, and factory overhead costs. This classification provides a structured approach for determining total production costs and serves as a vital tool for managerial decision-making in terms of efficiency and cost control.

## DISCUSSION

### Calculation of Cost of Goods Sold

Cost of goods manufactured (COGS) is the total production costs incurred or the sacrifice of economic resources in the creation of a product. Every company expects to generate the much-needed profit from every production activity. Cost of goods manufactured (COGS) can serve as a benchmark for companies in establishing product pricing policies. Therefore, calculating the cost of goods manufactured (COGS) is crucial for a manufacturing company to determine or estimate potential profits. Companies use full costing to calculate the cost of goods manufactured. They also classify production costs according to their relationship to the cost of goods manufactured, namely direct and indirect costs. Fixed and variable costs are included in the cost of goods manufactured calculation.

**Table 2.** Production Costs for December 2021-2023

Year	Production Cost/Kg
2021	Rp. 2,545.53
2022	Rp. 2,559.10
2023	Rp. 3,583.56

## **Definition of Method Full Costing**

PT. PTPN IV Medan is a palm oil producer. The costs incurred by the company include raw material costs, direct labor costs, and overhead costs. The total costs incurred by the company can serve as a reference for the company in the form of selling prices, where increased production costs will also impact the company's profitability. increasing selling prices given by the company PT. Perkebunan Nusantara IV Medan. Calculation of production cost in determining selling price at PT. Perkebunan Nusantara III Medan data processing used in this study is by using descriptive method, namely explaining, describing, and interpreting existing data so that it can be expressed with a clear picture of the problems that have been formulated, and data processing used using the full costing method. In addition, the classification of costs carried out by the company is not appropriate so that there are several costs that are not taken into account in the process of calculating production cost.

The elements and classification of production costs at PT. Perkebunan Nusantara IV Medan consist of several key components that contribute to the overall calculation of production expenses. First, raw material costs refer to the primary materials used in the production of palm oil products, where the composition and percentage of these materials differ from other supporting materials, making them a crucial component in the production process. Second, direct labor costs represent wages paid to employees who are directly involved in the production process at the palm oil factory, encompassing activities from raw material inventory management to product packaging. Third, indirect costs or factory overhead include various supporting expenses required to ensure the smooth running of the production process until the final product is ready. These overhead costs cover transportation, employee salaries, maintenance of housing and company facilities, plant care, fertilization, land and plant taxes, as well as other employee allowances. Together, these elements form a comprehensive classification of production costs essential for accurate cost analysis and control at PT. Perkebunan Nusantara IV Medan.

Thus, based on the results of the analysis and discussion, it can be seen that the company PT. Perkebunan Nusantara IV Medan uses the calculation of the cost of production using the full costing method where the costs are Included in the calculation of the cost of production are all costs used, namely raw materials, direct labor costs, and factory overhead costs. Based on the research that has been obtained, it can be concluded that the efficiency of the full costing method for PT. Perkebunan Nusantara III Medan is able to display the amount of overhead costs comprehensively because it has two types of costs in it, fixed and variable overhead costs which can also delay the burden of overhead costs when the product has not yet been sold on the market.

## **CONCLUSION**

Based on the results of this study, several key conclusions can be drawn regarding the factors influencing the quality of financial reporting in industrial companies in Malang City. First, financial statement audits have a positive and significant impact on the quality of financial reporting. A strong external audit enhances the reliability, accuracy, transparency, and timeliness of financial reports, indicating that audits conducted in accordance with applicable standards serve as credible mechanisms to ensure that financial statements are free from material misstatements and fairly represent the company's financial condition. Second, internal audits also play a significant role in improving financial reporting quality. Through independence, professionalism, and comprehensive audit coverage, internal auditors help maintain internal controls and verify the integrity of financial data, ensuring compliance with ethical and regulatory standards and boosting stakeholder confidence.

However, good corporate governance was found to have a relatively weak influence on financial reporting quality in this context. The study reveals that the implementation of governance principles in the surveyed companies remains suboptimal, particularly in areas such as corporate responsibility and stakeholder engagement. This suggests a need for stronger emphasis on transparency, accountability, and ethical management to enhance governance structures. In conclusion, both financial and internal audits are crucial in enhancing financial reporting quality, and companies should integrate robust audit practices with continuous improvements in corporate governance systems to ensure reliable and trustworthy financial information.

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