

**ANALYSIS OF PRODUCTION COST CALCULATION USING FULL COSTING AND
VARIABLE COSTING METHODS TO DETERMINE SELLING PRICES
(Case Study of Dbaloy Shop MSME)**

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ABSTRACT

Abstract: *This study aims to analyze the calculation of production costs and the determination of the selling price of Prestoku Milkfish products at the Dbaloy Shop MSME using the full costing and variable costing methods. The approach employed was a mixed-methods design, incorporating observation, interviews, and documentation techniques. The results showed that the complete costing method yielded a COGS of Rp 25,431 per unit, with a selling price of Rp 38,000, whereas the variable costing method resulted in a COGS of Rp 17,394, with a selling price of Rp 27,000. The actual selling price of Rp 25,000 used by the MSME was proven not to reflect the total production costs as a whole. A sensitivity analysis showed that a 10% increase in raw material prices could increase COGS to Rp 26,960, which risks causing losses if the selling price is not adjusted. This study concluded that the complete costing method is more accurate for sustainable selling price planning. MSMEs are advised to periodically evaluate their pricing based on data to maintain profitability and competitiveness.*

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1. Introduction

In Indonesia, many businesses are currently flourishing, ranging from large corporations, both local and foreign, to micro, small, and medium enterprises (MSMEs). This growing number of companies is driving increasingly fierce competition, particularly in marketing their products. To face this competition, every business owner naturally strives to maximize profits. One strategy is to minimize production costs without compromising product quality (Amarulloh, Nuraini, and Pradipto 2021, 58).

MSMEs play a significant role in supporting the Indonesian economy and are a key pillar in driving national economic growth. However, overall, only a small percentage of MSMEs have demonstrated positive financial performance. One of the primary causes of this is a lack of awareness among MSMEs regarding the importance of sound financial management (Daur, Herdi, and Goo 2024, p. 101).

One of the essential steps in financial management is calculating the cost of goods manufactured. This calculation helps business owners determine the proper and efficient selling price, thereby maximizing revenue. If the cost of goods manufactured is not calculated correctly, it can hinder business development (Nadhila, Putri, and Ratu 2024, 6313). When preparing the cost of goods manufactured calculation, several essential cost elements must be taken into account. The main components included are raw material costs, direct labor costs, and factory overhead costs, which are divided into two types: variable overhead and fixed overhead. Raw material costs refer to expenses that. Necessary to obtain the primary materials used in the production process. Meanwhile, direct labor costs represent wages paid to workers directly involved in manufacturing a product.

On the other hand, factory overhead costs encompass all production expenses except for raw materials and direct labor. Variable overhead typically includes expenses such as electricity and additional materials, while fixed overhead includes costs such as equipment depreciation and rent on production space.

To increase profits, MSMEs can employ two primary strategies. First, increasing product selling prices has the potential to increase revenue, but it also increases the risk of losing customers. Second, reducing production costs by managing and controlling cost components can minimize production expenses. The second strategy is preferred because it can maintain customer loyalty while maintaining operational efficiency (Median, Sihabudin, and Robby Fauji 2023, 75). When determining the cost of goods manufactured, two primary approaches are commonly employed: the complete costing method and the variable costing method. The whole costing method calculates all components of production costs, including both fixed and variable costs. This means that costs such as raw materials, direct labor, and all overhead expenses, including fixed ones, are included in the total production cost calculation. The advantage of this method lies in its ability to present a more comprehensive cost picture, making it suitable for financial reporting and aiding in determining product selling prices, which tends to provide more consistent information. However, because all fixed costs are assigned to the product, the resulting selling price using this method can be higher than that of other methods.

The variable costing method only considers variable costs when calculating the cost of goods manufactured, including raw materials, direct labor, and variable overhead expenses. Fixed overhead costs are not included in the cost of goods manufactured but are instead charged directly to the income statement as period costs. The variable costing method has the advantage of providing clearer information about the contribution of each product to the company's profit, making it more suitable for managerial analysis and short-term decision-making. However, this method is less ideal for external financial reporting, namely reports presented to parties outside the company, because it does not reflect all actual production costs. The application of these two methods is essential for MSMEs because it provides a better understanding of the cost structure and helps determine the optimal selling price (Tenri, Mayuputra, and Masnawaty 2024, 146).

Both full costing and variable costing methods are used to determine appropriate selling prices, although they have different approaches. Full costing takes into account all components of production costs, both fixed and variable, so the selling price is stable and able to cover all expenses needed to maintain business continuity. Meanwhile, variable costing only includes variable costs in the calculation process, making it more adaptable to short-term conditions. This approach is often used as a basis for rapid and dynamic decision-making. Therefore, selecting the proper method for setting selling prices is crucial for business success.

In this study, the method used to determine product selling prices is the Cost Plus Pricing method. Full costing is a method of determining selling prices by calculating production costs per unit and determining the company's desired profit. This method can then be used to determine the selling price of its product (Harjanti and Murwanti 2021, 86). Previous research has demonstrated the advantages of each method. For example, research (Daur, Herdi, and Goo 2024, 106) at the Sido Moro Tofu and Tempeh Factory revealed that the complete costing method produced higher and more accurate selling prices compared to other methods. Meanwhile, research (Median, Sihabudin, and Robby Fauji, 2023, p. 82) shows that the primary difference between the full costing and variable costing methods lies in the treatment of fixed overhead costs, which impact the calculation of the cost of goods manufactured.

This research draws on cost accounting theory, including the concept of cost classification, which encompasses various types of costs. Variable and fixed costs. Variable costs are expenses that fluctuate in relation to production volume, such as raw materials and direct labor. In contrast, fixed costs are costs that do not change even though production volume changes, such as machine depreciation and factory rental costs in the context of this study, understanding cost classification is very important to distinguish between full costing and variable costing methods in calculating the cost of production (Banding 2020, 18-20), in this study an update was made, namely calculating based on step-by-step unit costs in previous studies was not accompanied by examples of step-by-step unit cost calculations but directly summarized the total costs without explaining the allocation of variable costs such as rates per machine hour or per unit. Full costing and variable costing methods in MSMEs, Dbaloy Shop Tarakan, this study not only compares the two methods theoretically, but also examines how costs are recorded. Accurate factory overhead can influence the cost of goods manufactured and the selling price. Furthermore, this study considers managerial aspects in pricing decisions, making the results more applicable to MSMEs.

The Dbaloy Shop Tarakan MSME is a culinary business specializing in souvenirs from Tarakan. It has been operating since 2016. It offers a variety of product types, including frozen food and ready-to-eat meals. Frozen food includes boneless milkfish, shrimp pempek (shrimp pempek), shrimp karage (shrimp karage),

shrimp tempura (shrimp tempura), cassava cheese sticks, milkfish otak-otak (braised fish), and frozen lalap (chicken lalap). Meanwhile, ready-to-eat meals include prestoku milkfish, stir-fried lung (oseng paru), stir-fried squid (squid), stir-fried tudai (spicy fish), and lung sambal (chicken sambal). One of its best-selling products is prestoku milkfish, which will be the subject of this study.

Prestoku milkfish is made using fish as the main ingredient. Milkfish, also known as Prestoku Milkfish, is a ready-to-eat food that is cooked and can be consumed directly by the public or customers. The selling price per product is IDR 25,000 per piece. Therefore, in this study, the author chose Prestoku Milkfish as the object of analysis for calculating its production cost.

In the production process of Prestoku Milkfish, issues were identified that require further study. One of the main problems identified is the suboptimal recording and calculation of production costs, particularly the factory overhead component. This condition has the potential to lead to inaccuracies in determining the cost of production, which can subsequently affect the determination of the selling price and the level of business profitability. Based on this, this study aims to examine the calculation of the production cost of Prestoku Milkfish.

Full costing and variable costing methods are employed to obtain more accurate results, serving as the basis for making more informed business decisions. UMKM Dbaloy Shop Tarakan has a sales trend that is influenced by seasonal phenomena. For example, during the month of Ramadan, many consumers travel home for Eid, resulting in increased demand. In this situation, UMKM needs to improve the production process of presto milkfish as a souvenir choice for customers. The researcher chose the Dbaloy Shop, located in Tarakan, as the object of research because this business falls under the category of Micro, Small, and Medium Enterprises (UMKM), specifically on a small business scale. This is based on the annual turnover amount that reaches Rp 720,000,000. Referring to Law Number 20 of 2008, a small business is a business that has a yearly income of more than Rp 300,000,000 to A maximum of Rp 2,500,000,000. Another reason for choosing Dbaloy Shop is that the method used to calculate the cost of goods manufactured is still relatively simple. Several cost components that should be included in the calculation have not been fully accounted for. One cost element that has not been included is factory overhead costs. This occurs because overhead costs are not clearly detailed and have not been calculated accurately. This condition causes inaccuracies in the calculation of the cost of goods manufactured, which ultimately can impact the determination of inaccurate product selling prices. Amid challenges such as rising raw material prices and increasingly fierce competition in the market, Dbaloy Shop has been able to survive and maintain its existence. This is inseparable from the support of loyal customers and a properly implemented marketing strategy. Through analysis of the calculation of the cost of goods manufactured using the approach By combining full costing and variable costing, these MSMEs are expected to be able to manage costs more efficiently, increase competitiveness, and encourage business growth amidst increasingly fierce competition. This study aims to provide deeper insight into the importance of accurate production cost calculations, enabling MSMEs such as Dbaloy Shop Tarakan to set appropriate selling prices. Thus, analyzing the application of production costs based on full costing and variable costing methods is a strategic step in setting more optimal and sustainable selling prices.

2. Literature Review and Hypothesis Development

2.1. Cost Accounting

Cost accounting is the process of recording, classifying, and reporting production costs for managerial and external reporting purposes. According to Mulyadi (2018), cost accounting has three main objectives: determining product costs, Cost control and decision-making. In the context of MSMEs, an understanding of cost accounting is essential for operational efficiency and optimal pricing.

2.2. Costs

Costs are the sacrifices that must be made to support one or more production processes. These sacrifices are valued in monetary terms based on prevailing market prices, both for existing and future transactions (Banding 2020).

2.3. Cost Classification

Costs can be classified based on their behavior in relation to production volume into fixed and variable costs (Banding 2020). Fixed costs, such as rent and depreciation, remain constant regardless of changes in volume, while variable expenses, including raw materials and wages, change in direct proportion. To output. This separation is crucial in applying different cost of goods manufactured (COGS) calculation methods.

2.4. Cost of Goods Manufactured

The Cost of Goods Manufactured (COGS) encompasses all costs incurred during the production process, comprising raw materials, direct labor, and factory overhead (Febrianty and Muchlis, 2020). Accurate COGS calculations form the basis for determining selling prices and cost efficiency strategies.

2.5. Cost of Goods Manufactured Methods (Full Costing and Variable Costing)

The whole costing method calculates COGS by including all production costs, both fixed and variable. This method is suitable for financial reporting and long-term planning (Tenri, Mayuputra, and Masnawaty 2024). Conversely, the variable costing method Only includes cost variables in the COGS calculation, making it more suitable for managerial analysis and short-term decision-making (Sujarweni & Wiratna, 2022).

2.6. Selling Price

Selling prices can be determined using the cost-plus-cost-plus pricing method, which adds total costs and a profit margin (Harjanti and Murwanti, 2021). Appropriate pricing takes into account not only costs but also consumer perceptions, competitors, and business profit objectives (Ramdhani and Merida Hendaran, 2020).

3. Research methods

3.1. Research Design

This research uses a mixed-methods approach, a combination of quantitative and qualitative methods used simultaneously to obtain comprehensive, valid, and objective data (Hendrayadi, Kustati, and Sepriyanti 2023). This approach allows researchers not only to calculate production costs and selling prices quantitatively but also to understand business processes and pricing strategies qualitatively. The use of mixed methods is considered appropriate for Provides practical recommendations for the DBALOY Shop MSME in making pricing decisions.

3.2 Data Collection Techniques

Data collection was conducted through three main techniques:

1. Interviews to obtain information from MSME owners/managers regarding cost structures and production activities.
2. Observation, namely direct observation of the Bandeng Prestoku production process, including the materials, tools, and procedures used.
3. Documentation was conducted by collecting financial documents such as production cost reports, which served as sources The primary quantitative data for calculating the cost of goods manufactured.
4. Research Location and Time

The Dbaloy Shop is located at Sebengkok Waru, Rt. 21, No. 47 B, Sebengkok, Tarakan City, North Kalimantan. This research was conducted from December 2024 to March 2025.

4. Results and Discussion

This study analyzes the cost of goods manufactured (COGS) of my Prestoku Milkfish products at the Dbaloy Shop MSME using two approaches, namely the complete costing method and the variable costing method. The calculation results show that the cost of goods manufactured using the full costing method is Rp 25,431 per unit, and the selling price calculated based on this method is Rp 38,000, while the COGS using the variable costing method is Rp 17,394 per unit, with a selling price set at Rp 27,000. Meanwhile, the actual selling price applied by the Dbaloy Shop MSME is only Rp 25,000, which does not reflect the full cost of production, especially not yet. Considers fixed costs comprehensively.

A sensitivity analysis reveals that a 10% increase in raw material prices would result in a corresponding rise in COGS to Rp 26,960, potentially reducing profit margins if the selling price is not adjusted accordingly. These results suggest that the complete costing method more accurately reflects total production costs because it considers all fixed and variable cost components, making it more suitable for long-term planning of selling prices.

5. Conclusion and Suggestion

5.1. Conclusion

Conversely, the variable costing method is more appropriate for short-term decision-making because it only considers variable costs. The production cost is Rp 25,431 per unit, with a selling price of Rp 38,000. In contrast, the variable costing method yields a production cost of Rp 17,394 per unit, paired with a selling price of Rp 27,000. The actual selling price applied by the Dbaloy Shop MSME of Rp 25,000 does not yet fully reflect the entire production cost. Therefore, the whole costing method is more representative for use as a basis for planning selling prices that are oriented towards business objectives.

5.2. Suggestion

The DBALOY Shop MSME is advised to periodically evaluate its pricing policy, taking into account all elements of production costs, including both fixed and variable costs. The whole costing method is used in cost analysis. It is hoped that this will improve the accuracy of managerial decision-making, especially in determining optimal selling prices to maintain profitability and sustainable business competitiveness.

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