

Application of the Variable Costing Method in Calculating Product Cost to Determine the Selling Price at Ud. Lyvia Nusa Boga

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ABSTRACT

The variable costing method is one of the cost accounting methods used to calculate product costs. Calculating product costs is very important for companies because it helps manage costs and serves as a basis for determining selling prices. This study aims to determine product costs by applying the variable costing method to set selling prices at UD. Lyvia Nusa Boga. The research method used is qualitative research with a descriptive approach. The results show that the calculation of product costs for Cakalang Fufu Rica-Rica, Sambal Roa, and Sambal Cumi still uses simple or traditional methods. Therefore, it is recommended to apply the variable costing method because, based on the calculations, this method is more beneficial for the company as it results in lower product costs and selling prices.

INTRODUCTION

In general, every business is established to achieve specific goals and targets, with the main objective of sustaining operations and remaining competitive. One important factor in achieving this is setting an appropriate selling price that covers all production costs and provides a reasonable profit margin. Therefore, accurate calculation of product cost is essential as the basis for determining selling prices. In business, especially in manufacturing, cost calculation plays a crucial role. However, many business owners do not clearly understand the difference between production cost and product cost. Production cost refers to the total costs incurred during a certain period, while product cost represents the cost per unit produced and ready for sale.

Accurate calculation of product cost helps companies manage costs effectively, evaluate production efficiency, and make strategic decisions that support business sustainability. However, inaccurate cost calculation can lead to serious problems, such as setting selling prices that do not reflect actual production costs and weakening cost control, which ultimately reduces efficiency and profitability. Therefore, companies must ensure that cost calculations are performed correctly and consistently. In calculating product cost, two methods are commonly used: full costing and variable costing. The full costing method allocates both fixed and variable production costs to product cost, while the variable costing method assigns only variable production costs, with fixed costs treated as period expenses.

UD. Lyvia Nusa Boga is a trading business that produces various types of chili sauces and shredded fish products with distinctive natural flavors based on regional cuisine. The company is located at Griya Paniki Indah (GPI) Housing Complex, Jalan Gandaria V No. 9, Paniki Atas, Mapanget District, Manado City. In addition to producing chili sauces and shredded fish products, in 2024 UD. Lyvia Nusa Boga introduced its newest products, namely snack products in the form of cookies and snacks. Currently, UD. Lyvia Nusa Boga offers a total of 20 different product types. The types of products produced by UD. Lyvia Nusa Boga are presented in Table 1 below :

Table 1: Types of Products at UD. Lyvia Nusa Boga

Chili Sauce Products	Shredded Fish Products	Snack Products (Latest)
Sambal Roa	Abon Cakalang	Klappy Cookies
Sambal Cakalang	Cakalang Fufu Rica-rica	Ontbjtkoek Cookies
Sambal Tuna	Abon Tuna	Onde - onde Cookies
Sambal Rintek Wuuk	Abon Tuna Nori	Palm Cheese Sugar Cookies
Sambal Woku Blanga	Abon Roa	
Sambal Bawang	Abon Roa Kelapa	
Sambal Cumi	Abon Tuna Kelapa	
Sambal Ijo		

Source : UD. Lyvia Nusa Boga

Based on the data in Table 1, UD. Lyvia Nusa Boga produces a variety of products, including chili sauces, shredded fish products, and snacks as its latest product line. However, this study focuses on calculating the cost of goods manufactured and determining the selling prices of the company's best-selling products, namely Sambal Roa, Cakalang Fufu Rica-Rica, and Sambal Cumi.

In calculating its cost of goods manufactured, UD. Lyvia Nusa Boga still uses simple or traditional methods with limited accounting records. Production costs such as raw materials, labor, and operational expenses are recorded generally without clear classification between fixed and variable costs, resulting in less relevant cost information for management and potentially inaccurate selling price determination. Therefore, the variable costing method is considered an appropriate alternative for calculating product costs. Although this method does not directly determine profit or loss, it helps focus on variable production costs and supports selling price determination through a contribution margin approach. Compared to full costing, variable costing may result in lower product costs and selling prices while still supporting effective cost control.

Research conducted by Romadon and Kusumawardhany (2024) shows that the reconstruction results indicate the production cost of Es Tehuh was Rp1,868 per cup, which is Rp17 lower than the previous calculation. A study by Susanto et al. (2022) found a difference between the company's cost calculation and the variable costing method; in 2020, the cost of yellow glosor noodles was Rp3,748/kg according to the company, while the variable costing method resulted in Rp3,750/kg. Furthermore, Alfian et al. (2024) revealed that the variable costing approach produced a lower total production cost of Rp6,271,616,917 compared to the company's actual calculation of Rp6,165,220,371. In addition, Voerman et al. (2023) found that selling prices calculated using the cost plus pricing method were higher than those set by the company.

LITERATURE REVIEW

Accounting

Accounting is defined as a systematic process of recording, classifying, summarizing, and reporting financial transactions, as well as interpreting the results to provide useful financial information for organizations (Sujarweni, 2020). It also serves as a discipline that provides information needed to carry out activities efficiently and to evaluate organizational performance (Fauziah, 2020). In addition, accounting involves identifying, recording, summarizing, and reporting transactions in accordance with generally accepted standards so that stakeholders can understand the financial position of an entity and make appropriate economic decisions (Bahri, 2020).

Based on these definitions, accounting can be concluded as a structured process of identifying, recording, and reporting financial transactions to support economic decision making and the efficient evaluation of organizational performance (Sujarweni, 2020; Fauziah, 2020; Bahri, 2020).

Cost Accounting

Cost accounting is the process of recording, classifying, summarizing, and reporting costs related to the production and sale of goods or services (Mulyadi, 2020). It plays an important role in providing cost information to management to support operational activities and decision making (Dunia, Abdullah, & Sasongko, 2020). Cost accounting also includes the systematic reporting of all costs arising from production until the sale of products or delivery of services (Bahri, 2020).

Based on these definitions, cost accounting can be concluded as a systematic process of providing cost information to assist management in decision making. Costs are commonly classified by business function, relationship to cost objects, cost behavior, and period of benefit, including production, marketing, and administrative costs; direct and indirect costs; variable, semivariable, and fixed costs; as well as capital and revenue expenditures.

Product Cost (Cost Per Unit)

Product cost refers to the cost per unit of goods that have been completed and are ready for sale. It is derived from the total production cost incurred during a specific period divided by the number of units produced. Thus, while production cost represents the total manufacturing costs, product cost reflects the unit cost of each finished product. According to Mulyadi (2020), product cost consists of raw material costs, direct labor costs, and manufacturing overhead. Pramawati et al. (2021) explain that the components used in calculating product cost include:

1. Raw Material Costs, which consist of direct materials that can be easily traced to the product and indirect materials used as supporting inputs;
2. Direct Labor Costs, which cover wages paid to workers directly involved in the production process; and
3. Manufacturing Overhead Costs, which include all indirect production costs such as indirect materials, indirect labor, utilities, depreciation, and other supporting production expenses.

Methods of Calculating Product Cost

The method of calculating production cost is a technique used to identify and include all cost elements into production costs. According to Purwanti (2023), there are two commonly used approaches in calculating product cost, namely full costing and variable costing.

1. Full Costing Method

Full costing is a method that includes all production costs in product cost calculations, consisting of raw material costs, direct labor costs, and manufacturing overhead, both variable and fixed. Therefore, product cost under the full costing method comprises direct materials, direct labor, variable manufacturing overhead, and fixed manufacturing overhead, divided by the number of units produced to obtain the cost per unit.

2. Variable Costing Method

Variable costing is a method that includes only variable production costs, such as raw material costs, direct labor costs, and variable manufacturing overhead. Fixed manufacturing overhead is treated as a period cost. Under this method, product cost is calculated by dividing total variable production costs by the number of units produced to determine the cost per unit.

Variable Costing Method

The variable costing method is a product cost calculation method that includes only variable production costs, namely raw material costs, direct labor costs, and variable manufacturing overhead (Sujarweni, 2022). According to Purwanti (2023), fixed costs are excluded from product cost and charged directly to the income statement, allowing a clear distinction between fixed and variable costs for decision making.

The main benefits of variable costing include better cost control, support for short-term decision making, and ease in short-term profit planning. However, this method also has limitations, such as difficulty in separating fixed and variable costs and its suitability mainly for companies whose income depends on sales volume.

Selling Price

According to Hasibuan and Annam (2022), the selling price is defined as the total cost incurred by a company to produce goods or services combined with the expected profit. Tjiptohadi (2020) states that in setting the selling price, management mainly considers the combination of production costs and consumers' purchasing power. The selling price, or tariff, represents the amount charged by a business entity to consumers for the goods or services sold. The objectives of determining the selling price include business survival, maximizing current profit, maximizing current revenue, and achieving maximum sales growth. To determine the selling price of a product before it is marketed, several pricing methods can be used, as follows:

1. Cost-Based Pricing (Cost Plus Pricing Method)

This method is also known as normal pricing or cost-plus pricing, where a predetermined markup percentage or the desired markup is added to the product cost to determine the selling price. The selling price can be calculated as follows:

$$\text{Selling Price} = \text{Cost per Unit} \times (1 + \text{Markup Percentage}) \text{ or} \\ \text{Selling Price} = \text{Cost per Unit} + (\text{Markup Percentage} \times \text{Cost per Unit})$$

The cost per unit can be calculated using either the full costing or variable costing approach.

2. Value-Based Pricing Method

This method determines the selling price by considering the perceived value of the product offered. The value delivered to customers is the main factor in pricing decisions, which relates to consumers' understanding of their needs and their willingness to pay for the product.

3. Competitive-Based Pricing Method

This method requires prior observation of competitors' prices for similar products. It can be applied in two ways: follow-the-leader pricing, by setting prices equal to or lower than competitors, or going-rate pricing, by setting prices at the same level as competitors.

METHODOLOGY

Types Of Research

The type of research used in this study is qualitative research. This research aims to identify and describe actual conditions based on data obtained directly from the company, namely UD. Lyvia Nusa Boga, regarding the application of the variable costing method in calculating product costs to determine selling prices, which are presented in descriptive narrative form.

Place and Time of Research

The research location is UD. Lyvia Nusa Boga, which is located at the Griya Paniki Indah (GPI) Housing Complex, Jalan Gandaria V No. 9, Paniki Atas, Mapanget District, Manado City. The research was conducted from July to October 2025.

Data Type

This study uses both qualitative and quantitative data. Qualitative data consist of descriptive information that provides a general overview of the company, including the profile of UD. Lyvia Nusa Boga, such as its history, vision and mission, and business structure. Meanwhile, quantitative data refer to measurable data expressed in numerical form, covering all production-related costs, including raw material costs, direct labor costs, and manufacturing overhead costs.

Data Sources

The data used in this study are primary data. Sugiyono (2020) explains that primary data are data collected directly from respondents as the main source of information through methods such as observation and interviews. In this research, primary data were obtained firsthand from UD. Lyvia Nusa Boga using surveys, interviews, observations, and documentation. The data collected include production cost information, namely raw material costs, direct labor costs, and manufacturing overhead costs.

Data Collection Methods

This study applies several data collection methods to obtain the required information. **Observation** is conducted through direct field observation at UD. Lyvia Nusa Boga to gain a comprehensive understanding of the production process and the calculation of product costs and selling prices (Sugiyono, 2020). **Interviews** are carried out through direct question-and-answer sessions to exchange information and ideas related to the research topic (Sugiyono, 2020). The interview informants include the owner and manager, Suriani, and a production employee, Mariani. **Documentation** involves collecting existing

company records, written documents, and other supporting materials to complement data obtained from interviews and observations (Sugiyono, 2020).

Data Analysis Method

The data analysis method used in this study is descriptive analysis. This method presents and explains all information obtained during the research to describe the collected data based on the results of observations, interviews, and documentation at UD. Lyvia Nusa Boga.

Analysis Process

The analysis process in this study is carried out through the following steps:

1. Collecting data from various sources through interviews, observations, and document analysis obtained from the manager and employees of UD. Lyvia Nusa Boga.
2. Analyzing and summarizing the key information obtained in the first stage, including the company profile, history, organizational structure, operational activities, and data related to production costs.
3. Identifying production-related costs required for calculating product cost and then calculating the cost of goods using the variable costing method with the following formula:
Product Cost = Raw Material Costs + Direct Labor Costs + Variable Manufacturing Overhead
4. After obtaining the product cost using the variable costing method, adding the profit margin (markup) determined by the company to calculate the selling price using the cost-plus pricing formula as follows:
Selling Price = Product Cost + (Markup Percentage × Product Cost)
5. Finally, drawing conclusions after the data collection, calculation, and analysis processes are completed, and providing recommendations to UD. Lyvia Nusa Boga based on the research findings.

RESEARCH RESULT

Identification of Production Cost Elements

At UD. Lyvia Nusa Boga, production activities involve several cost elements, including raw material costs, labor costs, and manufacturing overhead, both fixed and variable. This study identifies and explains the production costs related to three selected products: Cakalang Fufu Rica-Rica, Sambal Roa, and Sambal Cumi. Based on observations and interviews at UD. Lyvia Nusa Boga, these products are produced once a week with the following weekly production volumes:

Table 2: Weekly Production Volume

Jenis Produk	Jumlah Produksi per Minggu (pcs)
Cakalang Fufu Rica-Rica	100
Sambal Roa	90
Sambal Cumi	50

Source: UD. Lyvia Nusa Boga, 2025

Raw Material Costs

1. Cakalang Fufu Rica-Rica

The raw materials used to produce Cakalang Fufu Rica-Rica for one week of production include 25 kg of skipjack tuna, 3 kg of chili, 2 kg of shallots, 1 kg of garlic, 16 liters of cooking oil, 2 packs of seasoning, and 1 pack of salt. The details of acquisition prices and total costs are presented in Table 3 :

Table 3: Raw Material Costs for Cakalang Fufu Rica-Rica

Raw Material	Quantity	Unit Price (Rp)	Total Cost (Rp)
Skipjack Tuna	25 kg	70,000	1,750,000
Chili	3 kg	90,000	270,000
Shallots	2 kg	50,000	100,000
Garlic	1 kg	50,000	50,000
Cooking Oil	16 liters	20,000	320,000
Seasoning	2 packs	10,000	20,000
Salt	1 pack	5,000	5,000
Total (Rp)			2.515.000

Source: UD. Lyvia Nusa Boga, 2025

2. Sambal Roa

The raw materials used to produce Sambal Roa for one week of production consist of 7 kg of ground roa fish, 6 kg of chili, 3 kg of shallots, 2 kg of garlic, 14 liters of cooking oil, 1 pack of seasoning, and 1 pack of salt. Details of the acquisition prices and total costs are presented in Table 4,

Table 4: Raw Material Costs for Sambal Roa

Raw Material	Quantity	Unit Price (Rp)	Total Cost (Rp)
Ground Roa Fish	7 kg	100,000	700,000
Chili	6 kg	90,000	540,000
Shallots	3 kg	50,000	150,000
Garlic	2 kg	50,000	100,000
Cooking Oil	14 liters	20,000	280,000
Salt	1 pack	5,000	5,000
Seasoning	1 pack	10,000	10,000
Total (Rp)			1.785.000

Source: UD. Lyvia Nusa Boga, 2025

3. Sambal Cumi

The raw materials used to produce Sambal Cumi for one week of production consist of 3 kg of squid, 3 kg of chili, 1 kg of shallots, 1 kg of garlic, 8 liters of cooking oil, 1 pack of seasoning, and 1 pack of salt. The details of acquisition prices and total costs are presented in Table 5,

Table 5: Raw Material Costs for Sambal Cumi

Raw Material	Quantity	Unit Price (Rp)	Total Cost (Rp)
Squid	3 kg	110,000	330,000
Chili	3 kg	90,000	270,000
Shallots	1 kg	50,000	50,000
Garlic	1 kg	50,000	50,000
Cooking Oil	8 liters	20,000	160,000
Seasoning	1 pack	10,000	10,000
Salt	1 pack	5,000	5,000
Total (Rp)			875.000

Source: UD. Lyvia Nusa Boga, 2025

Direct Labor Cost

At UD. Lyvia Nusa Boga, the production process for each of the three products studied is carried out by three employees who serve as direct labor and work collaboratively during the production process. Each product is produced once a week. The direct labor wage system is calculated on a daily basis, from Monday to Saturday, at a rate of Rp95,000 per person per day.

Table 6: Direct Labor Cost

Product Type	Number of Direct Labor	Daily Wage per Person (Rp)	Total Cost per Week (Rp)
Cakalang Fufu Rica-Rica	3 persons	95,000	285,000
Sambal Roa	3 persons	95,000	285,000
Sambal Cumi	3 persons	95,000	285,000

Source: UD. Lyvia Nusa Boga, 2025

Factory Overhead Costs

1. Packaging and Sticker Costs

The packaging and sticker costs used by UD. Lyvia Nusa Boga are calculated on a per-unit basis of Rp3,000 per piece. Therefore, the packaging and sticker costs for the three products studied in one week of production are as follows:

Table 7: Packaging and Sticker Costs

Product Type	Packaging and Sticker Cost (Rp)
Cakalang Fufu Rica-Rica	300,000
Sambal Roa	270,000
Sambal Cumi	150,000

Source: UD. Lyvia Nusa Boga, 2025

2. Indirect Labor Costs

UD. Lyvia Nusa Boga employs one indirect labor worker in the administrative department (admin). The monthly salary for this position is Rp2,000,000. Based on four working weeks per month, the weekly allocation of indirect labor cost is calculated as follows:

Indirect Labor Cost = Monthly Salary / Total Production Weeks
= Rp2,000,000 / 4 weeks = Rp500,000/week

3. LPG Gas Costs

The cost of LPG gas used by UD. Lyvia Nusa Boga is Rp20,000 per 3 kg cylinder. In one production cycle, two gas cylinders are required for cooking. Therefore, the total gas cost incurred is Rp40,000 per product.

Table 8: LPG Gas Costs

Product Type	Gas Cost per Product per Week (Rp)
Cakalang Fufu Rica-Rica	40,000
Sambal Roa	40,000
Sambal Cumi	40,000

Source: UD. Lyvia Nusa Boga, 2025

4. Electricity and Water Costs

At UD. Lyvia Nusa Boga, electricity costs already include water expenses and amount to Rp50,000 per week. The production of the three products is carried out once a week from Monday to Saturday. The production of 100 units of Cakalang Fufu Rica-Rica requires machine usage for 4 hours, 90 units of Sambal Roa also require 4 hours, and 50 units of Sambal Cumi require 3 hours. The machine operates for 4 hours per day.

Total weekly production hours = 4 hours × 6 days = 24 hours
Electricity and water cost per machine hour = Rp50,000 / 24 hours
= Rp2,083 per hour

5. Machine Depreciation Costs

Machine depreciation costs represent the allocation of expenses to reflect the decrease in asset value over time due to factors such as age, usage, and obsolescence. The production process at UD. Lyvia Nusa Boga can be categorized as semi-automatic or manual. The machines used in the production process are listed below:

Table 9, List of Machines Used in the Production Process

Description	Quantity	Economic Life	Acquisition Cost	Total
Continuous Band Sealer	1	3 years	15,000,000	15,000,000
Pet Can Sealer	1	3 years	15,000,000	15,000,000
Abon Mixer	2	3 years	600,000	1,200,000

Source: UD. Lyvia Nusa Boga, 2025

Weekly Depreciation Cost = Total Acquisition Cost / Economic Life
 = Rp31,200,000 / (3 years × 52 weeks)
 = **Rp200,000 per week**

Cost of Goods Manufactured According to UD. Lyvia Nusa Boga

Based on observations and interviews at UD. Lyvia Nusa Boga, the company calculates the cost of goods manufactured by including raw material costs, direct labor costs, and factory overhead costs, both fixed and variable, such as indirect labor, gas, and machine depreciation. However, packaging and sticker costs as well as electricity and water costs are excluded. The following presents the calculation of the cost of goods manufactured for Cakalang Fufu Rica-Rica, Sambal Roa, and Sambal Cumi.

1. **Cakalang Fufu Rica-Rica**

Table 10: Cost of Goods Manufactured of Cakalang Fufu Rica-Rica
According to UD. Lyvia Nusa Boga (per one week of production)

Cost Type	Amount (Rp)	Production Volume
Raw Material Cost	2,515,000	100
Direct Labor Cost	285,000	100
Factory Overhead Costs:		
Indirect Labor Cost	500,000	100
Gas Cost	40,000	100
Machine Depreciation Cost	200,000	100
Total Production Cost	3,540,000	100
Cost of Goods Manufactured /Unit	35,400	

Source: UD. Lyvia Nusa Boga, 2025

2. **Sambal Roa**

Table 11: Cost of Goods Manufactured of Sambal Roa According to UD. Lyvia Nusa Boga (per one week of production)

Cost Type	Amount (Rp)	Production Volume
Raw Material Cost	1,785,000	90
Direct Labor Cost	285,000	90
Factory Overhead Costs:		
Indirect Labor Cost	500,000	90
Gas Cost	40,000	90
Machine Depreciation Cost	200,000	90
Total Production Cost	2,810,000	90
Cost of Goods Manufactured / Unit	31,222	

Source: UD. Lyvia Nusa Boga, 2025

3. **Sambal Cumi**

Table 12: Cost of Goods Manufactured of Sambal Cumi According to UD. Lyvia Nusa Boga (per one week of production)

Cost Type	Amount (Rp)	Production Volume
Raw Material Cost	875,000	50
Direct Labor Cost	285,000	50
Factory Overhead Costs:		
Indirect Labor Cost	500,000	50
Gas Cost	40,000	50
Machine Depreciation Cost	200,000	50
Total Production Cost	1,900,000	50
Cost of Goods Manufactured / Unit	38,000	

Source: UD. Lyvia Nusa Boga, 2025

Product Selling Prices at UD. Lyvia Nusa Boga

Based on observations and interviews conducted at UD. Lyvia Nusa Boga, the selling prices of sambal products range from Rp35,000 to Rp40,000, while abon products are priced between Rp40,000 and Rp45,000. The company applies a profit margin of 35%. The following table presents the selling prices set by UD.

Lyvia Nusa Boga for the three products examined: Cakalang Fufu Rica-Rica, Sambal Roa, and Sambal Cumi.

Table 13: Selling Prices of Products at UD. Lyvia Nusa Boga

Product Type	Company Selling Price
Cakalang Fufu Rica-Rica	Rp45,000
Sambal Roa	Rp39,000
Sambal Cumi	Rp38,000

Source: UD. Lyvia Nusa Boga, 2025

DISCUSSION

Analysis of Production Cost Components

Based on the research findings, UD. Lyvia Nusa Boga has three main cost components in its production process: raw material costs, direct labor costs, and factory overhead costs. These costs are incurred in producing three products – Cakalang Fufu Rica-Rica, Sambal Roa, and Sambal Cumi—with weekly production volumes of 100, 90, and 50 units, respectively.

However, the company still applies a traditional costing system, in which factory overhead costs are not separated into fixed and variable components. The company's cost calculation includes raw materials, direct labor, indirect labor, gas, and machine depreciation, while packaging and sticker costs as well as electricity and water costs are excluded. This practice may reduce the accuracy of cost of goods calculations and affect the determination of selling prices.

1. Analysis of Raw Material Costs

The research results indicate that raw material costs are the largest cost component in the production process at UD. Lyvia Nusa Boga. The total weekly raw material costs for the three products studied are Rp2,515,000 for Cakalang Fufu Rica-Rica, Rp1,785,000 for Sambal Roa, and Rp875,000 for Sambal Cumi. The highest raw material cost is incurred in producing Cakalang Fufu Rica-Rica (100 units), while the lowest is for Sambal Cumi (50 units). Raw material costs are classified as variable costs because their amount changes in line with production volume. Under the variable costing method, these costs constitute a key component in calculating the cost of goods manufactured per unit.

2. Analysis of Direct Labor Costs

Direct labor costs represent expenses incurred for employees who are directly involved in the production process, from processing raw materials to producing finished goods ready for sale. Based on the research findings, direct labor costs amount to Rp285,000 per week for each product, assuming three workers are involved in one weekly production cycle with a daily wage of Rp95,000 per person.

In the current costing practice at UD. Lyvia Nusa Boga, the direct labor cost is recorded at the same amount for all three products, even though their production volumes differ (100 units, 90 units, and 50 units).

3. Analysis of Factory Overhead Costs

Factory overhead costs are indirect production costs that support the production process. The findings show that UD. Lyvia Nusa Boga includes only part of factory overhead in its product cost calculation, namely indirect labor costs, gas costs, and machine depreciation. Meanwhile, packaging and sticker

costs as well as electricity and water costs are excluded, even though they are closely related to production and include both variable and fixed (semi-variable) elements.

Under the variable costing concept, factory overhead costs should be classified into fixed and variable components:

a) **Fixed Factory Overhead Costs**

These costs remain relatively constant regardless of production volume, consisting of Indirect labor costs: Rp500,000 and Machine depreciation: Rp200,000

b) **Variable Factory Overhead Costs**

These costs change in proportion to production volume, including :

1. LPG gas costs: Rp40,000,
2. Packaging and sticker costs, which vary by production volume (Rp3,000 per unit), amounting to Rp300,000 for Cakalang Fufu Rica-Rica, Rp270,000 for Sambal Roa, and Rp150,000 for Sambal Cumi per week.
3. Electricity and water costs, allocated based on machine usage hours, totaling Rp8,332 for Cakalang Fufu Rica-Rica, Rp8,332 for Sambal Roa, and Rp6,249 for Sambal Cumi per week.

This classification highlights the importance of properly separating fixed and variable overhead costs to improve the accuracy of product costing under the variable costing method.

Cost of Goods Manufactured Based on the Variable Costing Method

Next, the cost of goods manufactured is calculated using the variable costing method to compare it with the company's current approach. This method includes only variable production costs, namely raw materials, direct labor, and variable factory overhead. Since UD. Lyvia Nusa Boga has not previously applied this method, the following calculations present the cost of goods manufactured for Cakalang Fufu Rica-Rica, Sambal Roa, and Sambal Cumi using the variable costing approach.

1. **Cakalang Fufu Rica-Rica**

Table 14: Cost of Goods Manufactured of Cakalang Fufu Rica-Rica Based on the Variable Costing Method (One Week of Production)

Cost Component	Amount (Rp)	Production Volume (Units)
Raw Material Cost	2,515,000	100
Direct Labor Cost	285,000	100
Variable Factory Overhead:		
Packaging and Sticker Cost	300,000	100
Gas Cost	40,000	100
Electricity and Water Cost	8,332	100
Total Production Cost	3,148,332	100
Cost per Unit	31,483	

Source: Processed Data, 2025

Based on Table 14, the total production cost to produce 100 units of Cakalang Fufu Rica-Rica using the variable costing method is Rp3,148,332, resulting in a cost per unit of Rp31,483.

2. Sambal Roa

Table 15: Cost of Goods Manufactured of Sambal Roa Based on the Variable Costing Method (One Week of Production)

Cost Component	Amount (Rp)	Production Volume (Units)
Raw Material Cost	1,785,000	90
Direct Labor Cost	285,000	90
Variable Factory Overhead:		
Packaging and Sticker Cost	270,000	90
Gas Cost	40,000	90
Electricity and Water Cost	8,332	90
Total Production Cost	2,388,332	90
Cost per Unit	26,537	

Source: Processed Data, 2025

Based on Table 15, the total production cost to produce 90 units of Sambal Roa using the variable costing method is Rp2,388,332, with a cost per unit of Rp26,537.

3. Sambal Cumi

Table 16: Cost of Goods Manufactured of Sambal Cumi Based on the Variable Costing Method (One Week of Production)

Cost Component	Amount (Rp)	Production Volume (Units)
Raw Material Cost	875,000	50
Direct Labor Cost	285,000	50
Variable Factory Overhead:		
Packaging and Sticker Cost	150,000	50
Gas Cost	40,000	50
Electricity and Water Cost	6,249	50
Total Production Cost	1,356,249	50
Cost per Unit	27,124	

Source: Processed Data, 2025

Based on Table 16, the total production cost to produce 50 units of Sambal Cumi using the variable costing method is Rp1,356,249, resulting in a cost per unit of Rp27,124

Table 17: Comparison of Product Cost According to UD. Lyvia Nusa Boga and the Variable Costing Method

Product Type	Cost per Product (Company) (Rp)	Cost per Product (Variable Costing) (Rp)	Difference (Rp)
Cakalang Fufu Rica-Rica	35,400	31,483	3,917
Sambal Roa	31,222	26,537	4,663
Sambal Cumi	38,000	27,124	10,876

Source: Processed Data, 2025

Based on Table 4.18 above, it can be seen that there are differences in the cost of goods manufactured (COGM) for the three products analyzed when calculated using the method applied by UD. Lyvia Nusa Boga and the variable costing method. The COGM calculated by the company is higher than that calculated using the variable costing method. The largest difference occurs in the Sambal Cumi product, while the smallest difference is found in Cakalang Fufu Rica-Rica. These findings are consistent with the research conducted at PT Tiga Wira Persada, which showed that the company's COGM was higher than the COGM calculated using the variable costing method (Aziziyah & Mardiana, 2021).

The differences in calculation results arise because the company includes both variable and fixed factory overhead costs, such as indirect labor costs, gas costs, and machine depreciation costs. In contrast, the variable costing method only includes variable factory overhead costs in the calculation of the cost of goods manufactured. This is in line with the variable costing concept proposed by Sujarweni (2022). By applying the variable costing method in calculating product costs, UD. Lyvia Nusa Boga can more accurately distinguish between direct and indirect costs, which is particularly useful for short-term decision-making, especially in fluctuating market conditions. Furthermore, the application of this method can assist the company in determining appropriate product selling prices.

Product Selling Price Based on the Cost Plus Pricing Method

After calculating the cost of goods manufactured using the variable costing method, the next step is to determine the selling price of the products using the cost plus pricing method. Under this method, the selling price is determined by adding a markup (profit) to the cost of goods manufactured per unit. UD. Lyvia Nusa Boga applies a markup of 35%.

The formula for calculating the selling price using the cost plus pricing method is as follows:

$$\text{Selling Price} = \text{COGM per unit} + (\text{Markup} \times \text{COGM per unit})$$

The calculation of selling prices for the three products studied is presented below:

1. Cakalang Fufu Rica-Rica

Based on the research results, the company's selling price for Cakalang Fufu Rica-Rica is **Rp45,000**, while the COGM per unit based on the variable costing method is **Rp31,483**.

$$\text{Selling Price} = \text{Rp31,483} + (35\% \times \text{Rp31,483}) = \text{Rp42,502}$$

2. Sambal Roa

Based on the research results, the company's selling price for Sambal Roa is **Rp39,000**, while the COGM per unit based on the variable costing method is **Rp26,537**.

$$\text{Selling Price} = \text{Rp26,537} + (35\% \times \text{Rp26,537}) = \text{Rp35,825}$$

3. Sambal Cumi

Based on the research results, the company's selling price for Sambal Cumi is **Rp38,000**, while the COGM per unit based on the variable costing method is **Rp27,124**.

$$\text{Selling Price} = \text{Rp}27,124 + (35\% \times \text{Rp}27,124) = \text{Rp}36,617$$

Table 18: Comparison of Product Selling Prices According to UD. Lyvia Nusa Boga and the Cost Plus Pricing Method

Product Type	Selling Price (Company) (Rp)	Cost Plus Pricing (Rp)	Difference (Rp)
Cakalang Fufu Rica-Rica	45,000	42,502	2,497
Sambal Roa	39,000	35,825	3,175
Sambal Cumi	38,000	36,617	1,383

Source: Processed data, 2025

Based on Table 4.19, it can be seen that there are differences in the selling prices of the three products when compared between the prices set by UD. Lyvia Nusa Boga and those calculated using the cost plus pricing method. According to Garrison et al. (2020:125), the cost plus pricing method determines selling prices by calculating the production cost per unit, deciding the desired markup, and then setting the selling price. This concept is consistent with this study, where the cost of goods manufactured based on the variable costing method is added to the desired profit margin, resulting in selling prices that are lower than those currently applied by the company. These findings are also in line with the case study conducted at UD. Karunia, which showed that the company's initial selling prices were higher and became lower after applying the cost plus pricing method (Purniawan, Mas'ud, & Wulandari, 2020).

CONCLUSIONS AND RECOMMENDATIONS

Based on the research results and discussion above, the conclusions in this research are as follows:

1. UD. Lyvia Nusa Boga has not yet applied the variable costing method in calculating the cost of goods manufactured, as it still uses a traditional method that includes all production costs without distinguishing between fixed and variable overhead costs.
2. The calculation of the cost of goods manufactured for Cakalang Fufu Rica-Rica, Sambal Roa, and Sambal Cumi using the variable costing method results in a lower product cost compared to the company's calculation, as seen in the Cakalang Fufu Rica-Rica product, where the company's COGM is Rp35,400 while the variable costing result is Rp31,483.
3. The selling prices determined using the cost plus pricing method based on variable costing are also lower than the selling prices that have been applied by UD. Lyvia Nusa Boga.

Based on the conclusions discussed above, the author provides the following suggestions and recommendations to the company:

1. UD. Lyvia Nusa Boga is advised to consider applying the **variable costing method** in calculating product costs and determining selling prices, as this method can assist in setting selling prices by adding the desired

contribution margin, thereby reflecting a selling price that may appear lower compared to other methods.

2. Since the variable costing method only considers **variable production costs** and treats fixed costs as period costs, it can help the company owner more easily analyze daily operating costs and facilitate **short-term decision-making**, especially amid fluctuating market conditions.

ADVANCED RESEARCH

Based on the conclusions and recommendations above, future research is suggested to expand the scope of analysis by applying the variable costing method to a wider range of products or to similar small and medium-sized enterprises in order to compare cost structures and pricing strategies more comprehensively. Further studies may also incorporate additional costing approaches, such as activity-based costing or full costing, to evaluate their effectiveness in supporting managerial decision-making. In addition, future research could examine the impact of implementing the variable costing method on profitability, cost control, and pricing competitiveness over a longer period, particularly in response to changes in market conditions and production volume.

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