

Analysis of the Cost of Goods Sold (COGS) for Warung Cahaya

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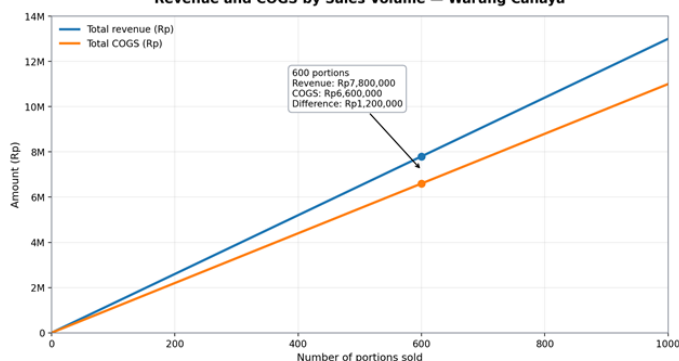
Abstract

Micro, small, and medium enterprises (MSMEs) are central to the Indonesian economy, yet many owners set selling prices without systematically calculating production costs. This study analyzes the cost of goods sold (COGS) of smashed fried chicken with rice (nasi ayam penyet), the best-selling product of Warung Cahaya, a culinary MSME in Medan, North Sumatra. A descriptive quantitative case study was conducted using an interview with the owner, field observations, and documentation. Costs were classified into direct material, direct labor, and overhead, summed, and divided by monthly sales volume to obtain the COGS per portion, which was then compared with the selling price to determine profit and profit margin. Monthly production of 600 portions incurred total costs of approximately Rp6,600,000, consisting of direct materials of Rp4,655,000, direct labor of Rp0 (the owner and her husband perform all work without wages), and overhead of Rp1,945,000. The COGS was Rp11,000 per portion against a selling price of Rp13,000, yielding a profit of Rp2,000 per portion and a profit margin of 15.38%. Because the margin is thin, increases in ingredient or gas prices could quickly erode profit. The study recommends routine cost recording and periodic cost control as the basis for pricing decisions.

Keywords: Cost of goods sold; Micro, small, and medium enterprises; Selling price; Profit margin; Culinary business; Cost accounting

Gambar 1. Graphical Abstract

Revenue and COGS by Sales Volume — Warung Cahaya



Note: Total COGS is modeled as Rp11,000 × portions sold. This is a COGS comparison, not a BEP calculation, because fixed and variable costs are not separately identified.

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Novelty Statement

This study applies a complete cost-element analysis (direct material, direct labor, and overhead) to the best-selling product of a small family-run culinary business in Medan and compares the resulting cost per portion with the actual selling price, showing that a price that appears profitable leaves a margin of only 15.38%. The case offers small food vendors a simple, replicable procedure for cost-based pricing.

1. Introduction

Micro, Small, and Medium Enterprises (MSMEs) are productive business entities owned either by individuals or business organizations that meet the criteria stipulated in Law Number 20 of 2008. MSMEs serve as a cornerstone of the national economy, accounting for over 99% of all existing business units. Furthermore, they contribute 60.5% to the Gross Domestic Product (GDP), absorb 96.9% of the workforce, and account for 15.69% of non-oil and gas exports (KPPN Purwakarta, 2023).

Despite playing a vital role, MSMEs still face various challenges regarding financial management. Common issues include unclear financial record-keeping, a lack of separation between business and personal accounts, failure to set aside profits, irregular cash flow, and the absence of budget planning. Most MSME owners still determine selling prices based on market rates, estimated costs, or competitor pricing. These issues can hinder MSME owners in managing operational costs, controlling expenses, determining profits, and effectively planning their business finances.

Effective cost management serves as the foundation for business sustainability, particularly for MSMEs. A key instrument in cost management is the calculation of the Cost of Goods Sold (COGS). Accurate COGS calculation provides information on the total costs incurred to produce goods for sale, thereby serving as a basis for setting appropriate selling prices, calculating profit margins, and evaluating sales profitability. Research indicates that the systematic application of COGS calculations helps MSMEs enhance their competitiveness through more competitive pricing while simultaneously maintaining business profitability (Ernawati et al., 2024; Fahriani et al., 2024). Consequently, accuracy in calculating COGS is crucial to ensure that selling prices are determined based on actual cost data rather than mere estimates (Romadhon et al., 2025). However, these benefits can only be realized if business owners actually implement COGS calculations in their business operations.

This situation is evident at Warung Cahaya, a culinary MSME that sells food and beverages. In its operations, Warung Cahaya incurs various costs, ranging from raw material purchases to other operational expenses such as electricity, gas, and rent. However, preliminary observations indicate that the calculation of these cost components has not been carried out systematically or in detail. Consequently, the business owner does not know the exact costs incurred to produce the goods or the profit margins achieved. This reflects a common issue among MSMEs, where selling prices are often not based on accurate calculations of the Cost of Goods Sold (COGS) (Ernawati et al., 2024; Fahriani et al., 2024; Romadhon et al., 2025).

Given this situation, analyzing the Cost of Goods Sold (COGS) at Warung Cahaya is crucial for understanding total expenditures and realized profits. Setiawan et al. (2024) indicate that calculating COGS by incorporating all cost elements yields more accurate information for setting selling prices. Therefore, a COGS analysis is essential to evaluate the costs and pricing of products sold at Warung Cahaya. This study aims to analyze the COGS at the MSME Warung Cahaya by identifying cost elements, calculating the COGS, comparing it with the offered prices, and determining the profit earned. The findings are expected to serve as a basis for cost control and the determination of selling prices.

2. Literature Review

2.1. Micro, Small, and Medium Enterprises

Micro, Small, and Medium Enterprises (MSMEs) is a general term referring to productive economic ventures owned by individuals or business entities. According to L. Sulastri (2016:12), the term "Small and Medium Enterprises" abbreviated as UMKM refers to a type of small business

that is independently operated and possesses net assets of no more than IDR 200,000,000, excluding the land and buildings used for business operations.

According to Law No. 20 of 2008, MSMEs (Micro, Small, and Medium Enterprises) are defined as trading businesses managed by individuals or business entities specifically productive economic enterprises that meet the criteria established by the said Law. The detailed definitions are as follows:

1. A Micro Enterprise is an individual business entity that meets the criteria set forth in Law Number 20 of 2008.
2. A small business is an independent, productive economic enterprise whether owned by an individual or a group that does not operate as a branch of a larger parent company. It is controlled and owned by, and constitutes a direct or indirect part of, a medium-sized enterprise.
3. A medium-sized enterprise is a productive economic business that is not a branch or subsidiary of a parent company and is directly or indirectly linked to small or large enterprises, with a total net worth as stipulated by statutory regulations.

2.2. Cost

Cost is defined as the sacrifice of economic resources, measured in monetary terms, that has been or is likely to be incurred to achieve specific objectives within a business activity (Mulyadi, 2018). In business operations, the accumulation of all cost elements incurred to prepare a product for sale constitutes the Cost of Goods Sold (COGS). COGS represents the total direct costs associated with goods sold during an accounting period (Weygandt et al., 2019). Proper cost classification is essential to ensure that all product-related cost components are calculated precisely, thereby yielding an accurate COGS figure.

2.2.1. Direct Material Costs

Direct material cost refers to the cost incurred to acquire the primary materials used directly in the production of goods ready for sale (Blocher et al., 2019). In the culinary business, direct material costs encompass all key food and beverage ingredients processed into finished products. This component is a primary element of inventory and the largest contributor to the determination of the Cost of Goods Sold (COGS).

2.2.2. Direct Labor Costs

Direct labor cost refers to the expenditure incurred as compensation for personnel directly involved in the product manufacturing process (Mulyadi, 2018). In the culinary business, this cost encompasses the wages and salaries of workers performing tasks ranging from ingredient preparation and processing or cooking to product finishing (such as packaging or plating). All such direct labor costs are capitalized and accounted for as a component of the product's Cost of Goods Sold (COGS).

2.2.3. Overhead Cost

Overhead costs encompass all supporting expenses related to inventory operations and product preparation, excluding raw material and direct labor costs (Horngren et al., 2018). In the culinary business, overhead costs include the use of auxiliary materials, utilities (gas, electricity, and water), kitchen equipment depreciation, and other operational support expenses. All these overhead components must be allocated to the Cost of Goods Sold (COGS) calculation to ensure the COGS figure reflects the actual total cost of goods available for sale.

2.3. Cost of Goods Sold (COGS)

Cost of Goods Sold (COGS) represents cost information associated with products sold during a specific period. Information regarding cost is essential for determining the costs charged to sold products and for ascertaining the profit earned by the company. Mulyadi (2015) explains that cost information is necessary for determining product costs and the cost of goods sold; therefore, incurred costs must be accurately classified and recorded. Regarding cost calculation, Mulyadi (2015) outlines a classification of costs based on the company's primary functions: production costs, marketing costs, and administrative and general costs. For production costs, the elements associated with the product include raw material costs, direct labor costs, and factory overhead costs. Such cost categorization is necessary to ensure that the costs charged to products are calculated accurately.

The calculation of COGS is influenced by beginning inventory, purchases (or the cost of goods available for sale), and ending inventory. Consequently, the COGS calculation must be performed precisely so that the product costs allocated to sales reflect actual conditions. In general, the formula for the Cost of Goods Sold can be expressed as follows:

$$COGS = \text{Beginning Inventory} + \text{Net Purchases} - \text{Ending Inventory}$$

$$\text{Net Purchases} = \text{Purchases} + \text{Freight} - \text{in} - \text{Purchase Returns} - \text{Purchase Discounts}$$

$$\begin{aligned} \text{Goods Available for Sale} &= \text{Beginning Inventory} + \text{Net Purchases} \\ &= \text{Goods Available for Sale} - \text{Ending Inventory} \end{aligned}$$

2.4. Selling Price

The selling price is the value determined by business owners for the products they offer to customers. The process of setting the selling price must take the Cost of Goods Sold (COGS) into account; if the price is set too low, profits may fall short of expectations, whereas a price that is too high will affect the product's competitiveness. Fahriani et al. (2024) indicate that the strategy for determining COGS is directly linked to pricing and the competitiveness of MSMEs, making cost-related information crucial to the process of establishing the selling price.

Sudarmawanti et al. (2024) also found that a lack of understanding among MSME operators regarding the calculation of the Cost of Goods Sold (COGS) can lead to a simplistic pricing process that fails to accurately reflect actual costs. More accurate COGS calculations can assist entrepreneurs in determining selling prices and increasing their revenue.

2.5. Profit Margin

Profit margin is an indicator used to assess how effectively a business generates profit from its sales. In analyses involving the Cost of Goods Sold (COGS), a key metric to understand is the gross profit margin, which represents the ratio of gross profit to total sales. Gross profit is derived by subtracting the Cost of Goods Sold from total sales revenue; consequently, a higher proportion of COGS relative to sales results in a lower gross profit margin. A study by Ernawati et al. (2024) on Cilok MSMEs in Wonogiri demonstrates that calculating the cost of production and the Cost of Goods Sold serves as a basis for setting selling prices and evaluating sales profitability. This research employs a descriptive quantitative method and highlights the critical importance of cost information in analyzing the profits earned by MSMEs.

Furthermore, Fahriani et al. (2024) revealed that the strategy for determining the Cost of Goods Sold (COGS) for MSMEs should take into account several factors, including costs, market demand, and competitive dynamics. Findings from this study indicate that accurate COGS determination enables MSMEs to maintain competitive selling prices while simultaneously increasing profit margins. Research conducted by Fitriyani and PS (2024) at Regina Florist Medan also emphasizes that COGS calculation provides more precise cost data, which can serve as a

basis for setting selling prices that effectively boost business profitability. This demonstrates that accuracy in calculating COGS has a significant impact on a business's capacity to generate profit.

Based on the relationship between sales, COGS, and gross profit, the profit margin in this study is calculated using the gross profit margin (GPM). The formula used is:

$$\begin{aligned} \text{Gross Profit per Product} &= \text{Selling Price} - \text{COGS per Product} \\ \text{Profit Margin} &= ((\text{Selling Price} - \text{COGS}) / \text{Selling Price}) \times 100 \end{aligned}$$

2.6. Previous Research

Several previous studies have addressed the calculation of the Cost of Goods Sold (COGS) and the determination of selling prices for MSMEs, particularly in the food and beverage sector. These studies are categorized according to the following topics. Pelawi et al. (2023) examined the determination of the cost of goods manufactured using the full costing method at the Ecomoda Ecoprint MSME in Deli Serdang. This quantitative descriptive study employed interviews, observation, and documentation to gather data on raw material, labor, and overhead costs. The calculated cost of production was approximately Rp970,262 per piece of fabric; applying a 30% cost-plus pricing strategy resulted in a selling price of Rp1,261,000.

Ernawati et al. (2024) studied a cilok MSME in Wonogiri to determine the impact of production costs and the cost of goods sold (COGS) on profit. The study utilized primary and secondary data from 2022 and employed quantitative descriptive analysis; specifically, it calculated production costs using the full costing method serving as the basis for setting the selling price to ascertain the MSME's profit. Anggraini (2026) calculated the COGS for three flagship products of Luxie Café, a food and beverage micro-enterprise in Sidoarjo, using the full costing approach. The results indicated that raw material costs constituted the largest component, accounting for 69.23%-77.14% of the COGS. Based on target markups of 45%, 55%, and 75%, the actual selling prices of the three products were lower than the recommended selling prices with a variance of 5.13%-13.75% with the largest discrepancy observed in the juice product. The study recommends formal recording of COGS and adjustments to selling prices.

Musyarrofah et al. (2021) compared the full costing and variable costing methods at MR. Teto Restaurant in Yogyakarta and found that the selling price based on the company's method was lower than the cost-plus price derived from full costing, as not all costs were accounted for. Wagiyo et al. (2019) studied the Meychan Serba Sepuluh Ribu restaurant in Pringsewu, where the owner struggled to set a selling price because production costs did not align with the revenue generated. Using a quantitative descriptive analysis, the study calculated the cost of goods manufactured using full costing and determined the selling price via cost-plus pricing. The calculated selling prices were Rp10,647 (at a 10% margin) and Rp11,615 (at a 20% margin), whereas the price actually applied Rp10,000 yielded a margin of only 4.72%. Fahriani et al. (2024) conducted a case study on the MSME Sekar Mulya in Sidoarjo a producer of belimbing wuluh (bilimbi) fruit juice and found that a pricing strategy based on production cost analysis, market demand, and competition could increase profit margins while maintaining a competitive selling price. Romadhon et al. (2025) employed a qualitative approach to examine the impact of cost-based pricing strategies on MSME business sustainability. Analysis of data from two informants indicated that cost-plus pricing could have adverse implications, such as raising the selling price; consequently, additional strategies are required to ensure accurate pricing without compromising customer loyalty.

Safrida et al. (2026) conducted a community service program with the MSME Nisa Bakso using a participatory approach. The activities included training on simple cost accounting to help the partner implement financial record-keeping and accurately calculate the Cost of Goods Sold (COGS), as well as guidance on using a vacuum sealer to improve packaging efficiency. The

results demonstrated an improvement in the partner's ability to calculate production costs and maintain consistent financial records, along with greater confidence in setting selling prices.

These studies demonstrate that a Cost of Goods Sold (COGS) figure failing to include all cost components or a selling price not based on COGS can result in a selling price lower than it should be; this was observed in the cases of Luxie Café, Rumah Makan MR. Teto, and Rumah Makan Meychan. However, most of these studies focused on a single product type or a few flagship products from a specific business. This study applies a similar analysis to Warung Cahaya which sells both food and beverages focusing on cost identification, COGS calculation, a comparison of COGS against selling prices, and profit margin analysis. A summary of these studies is presented in Table 1.

Table 1. Summary of Previous Research

No	Research (year)	Object	Method	Main Result
1	Pelawi et al. (2023)	Ecomoda Ecoprint MSME, Deli Serdang	Quantitative descriptive; full costing; cost-plus pricing	Cost of goods sold (COGS) is approximately Rp970,262 per unit; selling price is Rp1,261,000 (30% markup).
2	Ernawati et al. (2024)	Wonogiri Cilok MSME	Quantitative descriptive; full costing	Production costs are calculated as the basis for the selling price to determine profit.
3	Anggraini (2026)	Luxie Café	Quantitative descriptive; full costing; cost-plus pricing	Raw materials account for 69.23%- 77.14% of the cost of goods sold; actual prices are 5.13%-13.75% lower than recommended prices.
4	Musyarrofah et al. (2021)	Rumah Makan MR. Teto Yogyakarta	Full costing vs variable costing	The company's selling price is lower because not all costs are accounted for.
5	Wagiyo et al. (2019)	Meychan Everything Ten Thousand Eatery, Pringsewu	Quantitative descriptive; full costing; cost-plus pricing	A selling price of Rp10,000 yields a margin of only 4.72%, falling below the price points of approximately Rp10,647 (10%) and Rp11,615 (20%).
6	Fahriani et al. (2024)	Sekar Mulya MSME, Sidoarjo	Case Study	Strategies based on production costs, demand, and competition increase margins while keeping prices competitive
7	Romadhon et al. (2025)	MSMEs (two informants)	Qualitative; comparative, descriptive, thematic (NVivo 12)	Cost-plus pricing has adverse implications, necessitating additional strategies.

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|---|---|--|
| 8 Safrida et al. Nisa Bakso MSME Participatory (2026) | community service; training and mentoring | Skills in calculating costs and recording finances have improved; partners are more confident in setting selling prices. |
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2.7. Conceptual Framework

The research's conceptual framework outlines the process of analyzing the Cost of Goods Sold (COGS) at Warung Cahaya. Cost components comprising raw materials, labor, and overhead (such as electricity, gas, and rent) are identified and calculated to determine the COGS. The COGS is then compared against the prevailing selling price to ascertain the profit and profit margin for each product. These results serve as the basis for evaluating selling prices and formulating cost control recommendations for Warung Cahaya. The framework is structured as follows: Direct Material Costs + Direct Labor Costs + Overhead Costs -> Cost of Goods Sold (COGS) -> Comparison with Selling Price -> Profit / Margin -> Evaluation and Recommendations.

3. Methods

3.1. Research Design

This study employs a descriptive approach using the case study method. The descriptive approach is used to describe and explain the production cost conditions at the MSME Warung Cahaya based on data obtained directly from the field. The case study method is utilized because the research focuses on a single subject specifically the MSME Warung Cahaya with a particular emphasis on analyzing the Cost of Goods Sold (COGS) for selected products.

This study focuses on analyzing the Cost of Goods Sold (COGS) to determine the costs incurred in producing goods at Warung Cahaya. The costs analyzed include raw material costs and overhead costs associated with the production process. The data obtained is used to calculate the COGS per portion and compare it with the selling price established by the business owner.

The objective of this study is to determine the Cost of Goods Sold (COGS) for nasi ayam penyet at the MSME Warung Cahaya and to analyze the alignment between the COGS and the applied selling price. Thus, this study is expected to provide insight into the production costs and profits associated with the analyzed product.

3.2. Data Analysis Techniques

The data analysis technique employed in this study is quantitative descriptive analysis. The analysis was conducted by identifying and categorizing the costs associated with the production process of smashed fried chicken with rice at the MSME Warung Cahaya. Data obtained from observations, interviews, and documentation were subsequently analyzed to determine the product's cost of goods sold (COGS). The data analysis stages in this study include:

3.2.1. Calculation of Direct Material Costs

Raw material costs are the costs incurred to acquire the materials needed for the production of smashed fried chicken with rice. These costs are calculated based on the quantity of materials used in the production process.

$$\text{Direct Material Cost} = \text{Quantity of Materials Used} \times \text{Unit Cost}$$

3.2.2. Identification of Labor Costs

Labor costs are the costs incurred for the workforce involved in the production process. If there is no specifically paid workforce, labor costs are recorded in accordance with the conditions found at the research site.

$$\text{Labor Costs} = \text{Size of the Work force} \times \text{Wages per Worker}$$

3.2.3. Identification of Overhead Costs

Overhead costs are production costs other than raw material and labor costs. In this study, overhead costs include expenses for electricity, water, gas, and packaging associated with the production process. Costs shared by multiple product types may be allocated based on the proportion of production volume.

$$\begin{aligned} \text{AllocationPercentage} &= (\text{ProductProductionVolume} / \text{TotalProductionVolume}) \times 100 \\ \text{ProductOverheadCosts} &= \text{TotalOverheadCosts} \times \text{AllocationPercentage} \end{aligned}$$

3.2.4. Calculation of Total Production Costs

Once the costs of raw materials, labor, and overhead have been determined, they are summed to obtain the total production cost.

$$\text{TotalProductionCosts} = \text{DirectMaterialCosts} + \text{LaborCosts} + \text{OverheadCosts}$$

3.2.5. Calculation of Cost Price per Portion

The cost price per portion is calculated by dividing the total production cost by the quantity of products produced.

$$\text{COGSperPortion} = \text{TotalProductionCosts} \div \text{QuantityofProductsProduced}$$

3.2.6. Comparison of Cost of Goods Sold (COGS) with Selling Price

Once the cost of goods sold (COGS) per portion is determined, that value is compared with the product's selling price to identify the difference between production cost and selling price.

$$\text{ProfitperPortion} = \text{SellingPriceperPortion} - \text{COGSperPortion}$$

3.2.7. Profit Margin Calculation

Profit margin is used to determine the percentage of profit earned from product sales relative to the selling price.

$$\text{Profit Margin} = (\text{Profit per Portion} / \text{Selling Price per Portion}) \times 100$$

4. Results and Discussion

4.1. Results

Production cost data for the MSME Warung Cahaya was obtained through a single in-depth interview with the business owner, supplemented by direct field observations and documentation of the food preparation process. Warung Cahaya operates regularly for 30 days a month, with average sales of smashed fried chicken with rice totaling 20 portions per day, or 600 portions per month.

4.1.1. Direct Material Costs for Smashed Fried Chicken

Direct raw material costs include all primary ingredients used specifically to prepare a portion of smashed fried chicken with rice. A breakdown of the costs is presented in Table 2.

Table 2. Monthly direct material details for smashed fried chicken with rice (ayam penyet)

No	Direct Material	Amount per Day	Month	Cost
1	Rice	0.75 kg	× 30	Rp613,650
2	Chicken	1 kg	× 30	Rp1,115,700
3	Cooking Oil	0.5 liter	× 30	Rp347,130
4	Cayenne Pepper	125 gram	× 30	Rp229,350
5	Green Chili	250 gram	× 30	Rp495,900
6	All Purpose Flour	1 wrap	× 30	Rp371,910
7	Flour	250 gram	× 30	Rp99,168
8	Soy Sauce	38.5 gram	× 30	Rp61,980
9	Cucumber	0.25 kg	× 30	Rp80,580
10	Eggplant	0.5 kg	× 30	Rp123,975
11	Tempe	1.5 stem	× 30	Rp185,940
12	Red Onion	0.25 kg	× 30	Rp743,820
13	Garlic	150 gram	× 30	Rp185,940
Total Direct Material Costs				Rp4,655,043

4.1.2. Direct Labor Cost

Based on interview findings, the operations of Warung Cahaya are carried out by the business owner and her husband; there are no employees receiving specific wages or salaries for the production of smashed fried chicken with rice. Consequently, in calculations based on actual cash expenditures, the recorded direct labor cost is Rp0 per month.

4.1.3. Overhead Costs

Overhead costs include the use of LPG for frying chicken, water and electricity consumption, and the cost of dish soap. The breakdown is presented in Table 3.

Table 3. Breakdown of monthly overhead costs for smashed fried chicken with rice (nasi ayam penyet)

No	Overhead	Monthly Amount
1	Electricity	Rp200,000
2	Water	Rp100,000
3	Gas	Rp1,035,000
4	Dish Soap	Rp100,000
5	Packaging	Rp510,000
Total Overhead Costs		Rp1,945,000

4.1.4. Total Cost Calculation Summary

Once the costs for raw materials, labor, and overhead have been determined, the total production cost for smashed fried chicken with rice is calculated.

$$\text{Total Production Cost} = \text{Direct Material Costs} + \text{Labor Costs} + \text{Overhead Costs}$$

$$\text{Total Production Cost} = \text{Rp}4,655,000 + \text{Rp}0 + \text{Rp}1,945,000 = \text{Rp}6,600,000$$

Thus, the total cost incurred to produce 600 portions of smashed fried chicken with rice over the course of a month is Rp6,600,000.

4.1.5. Calculation of Cost of Goods Sold (COGS)

Based on the methodology used in the study, the cost of goods sold (COGS) per portion is calculated by dividing the total costs associated with the product by the quantity of product produced.

$$\text{COGS per Portion} = \text{Total Cost} \div \text{Number of Products}$$

$$\text{COGS per Portion} = \text{Rp}6,600,000 \div 600 = \text{Rp}11,000$$

Thus, based on the study's calculations, the Cost of Goods Sold for a serving of smashed fried chicken with rice is Rp11,000. This result indicates that each serving of smashed fried chicken with rice incurs a cost of Rp11,000, based on the cost components calculated in the study.

4.1.6. Comparison of Cost of Goods Sold (COGS) and Selling Price

The selling price for of smashed fried chicken with rice at Warung Cahaya is Rp13,000 per portion. Given that the cost of goods sold (COGS) is Rp11,000 per portion, the difference between the selling price and the COGS can be calculated as follows:

$$\text{Profit per Portion} = \text{Selling Price} - \text{COGS}$$

$$\text{Profit per Portion} = \text{Rp}13,000 - \text{Rp}11,000 = \text{Rp}2,000$$

Thus, there is a difference of Rp2,000 for each portion of smashed fried chicken with rice. If 600 portions are sold in a month, then:

$$\text{Profit} = \text{Rp}2,000 \times 600 \text{ portions} = \text{Rp}1,200,000 \text{ per month}$$

4.1.7. Profit Margin Calculation

To determine the profit percentage relative to the selling price, a profit margin calculation is used.

$$\text{Profit Margin} = (\text{Profit per Portion} / \text{Selling Price}) \times 100$$

$$\text{Profit Margin} = (\text{Rp}2,000 \div \text{Rp}13,000) \times 100$$

Thus, the profit margin for smashed fried chicken with rice derived from the study's calculations is 15.38%.

4.1.8. Recapitulation of Cost of Goods Sold (COGS) Calculation

The results of the calculations above are recapitulated in Table 4.

Table 4. Recapitulation of cost of goods sold (COGS) calculation

Information	Amount
Direct Material Costs	Rp4,655,000
Labor Costs	Rp0
Overhead Costs	Rp1,945,000
Total cost	Rp6,600,000
Production/Sales Volume	600 portions

Cost of Goods Sold per Portion	Rp11,000
Selling Price per Portion	Rp13,000
Profit per Portion	Rp2,000
Profit Margin	15.38%
Estimated Profit for 600 Portions	Rp1,200,000

4.2. Discussion

Based on the analysis, the calculation of the Cost of Goods Sold for of smashed fried chicken with rice at Warung Cahaya shows that the total cost incurred to produce 600 portions per month amounts to Rp6,600,000. This figure comprises raw material costs of Rp4,655,000 and overhead costs of Rp1,945,000; there are no separate labor costs, as the owner and her husband carry out all business operations themselves.

Raw material costs constitute a significant element of the total cost calculation. Out of a total cost of Rp6,600,000, raw materials account for Rp4,655,000. This indicates that controlling raw material usage is a crucial aspect for Warung Cahaya; inefficient usage or rising material prices can drive up costs and, ultimately, impact the Cost of Goods Sold (COGS).

In addition to raw material costs, overhead costs also contribute to the Cost of Goods Sold (COGS). The total overhead cost of Rp1,945,000 comprises expenses for electricity, water, gas, dish soap, and packaging. Gas represents the largest component of the overhead costs, amounting to Rp1,035,000 per month. Calculations indicate that the COGS for a serving of nasi ayam penyet is Rp11,000, while the selling price set by Warung Cahaya is Rp13,000 per serving. Consequently, there is a margin of Rp2,000 per serving. If sales reach 600 servings in a month, this margin yields a profit of Rp1,200,000, prior to accounting for other costs not included in the scope of this study.

A profit margin of 15.38% indicates that the selling price remains higher than the calculated Cost of Goods Sold (COGS). Consequently, the selling price of Rp13,000 still allows for a profit margin for the business. Nevertheless, Warung Cahaya needs to implement periodic cost controls. Fluctuations in raw material prices particularly for high-cost items—can alter the COGS. Additionally, increases in the costs of gas, electricity, packaging, and other operational expenses can also impact the cost per portion.

The results of this study also highlight the importance of more systematic cost recording. Routinely recording costs for raw materials and overhead, as well as production and sales volumes, will help business owners track changes in the Cost of Goods Sold (COGS) and determine selling prices more accurately.

5. Conclusions

Based on the research findings and discussion regarding the Cost of Goods Sold (COGS) at the MSME Warung Cahaya specifically for the smashed fried chicken with rice product it can be concluded that:

1. The total cost used to calculate the Cost of Goods Sold (COGS) for smashed fried chicken with rice is Rp6,600,000 per month. This amount comprises raw material costs of Rp4,655,000, labor costs of Rp0, and overhead costs of Rp1,945,000.
2. Based on an average production and sales volume of 600 portions per month, the Cost of Goods Sold (COGS) is Rp11,000 per portion. This figure is derived by dividing the total cost of Rp6,600,000 by 600 portions.

3. Warung Cahaya sets the selling price for smashed fried chicken with rice at Rp13,000 per portion. With a cost of goods sold (COGS) of Rp11,000 per portion, there is a margin of Rp2,000 per portion.
4. Based on the difference between the selling price and the cost of goods sold (COGS), the estimated profit is Rp1,200,000 per month if sales reach 600 portions. The profit margin achieved is approximately 15.38%.
5. Research findings indicate that controlling raw material and overhead costs is crucial for Warung Cahaya, as both components influence the Cost of Goods Sold (COGS). Maintaining more systematic cost records can also assist the business owner in determining the cost per portion and setting an appropriate selling price.

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CRedit Author Contribution Statement

Maisyaroh Br Sirait: Conceptualization; methodology; formal analysis; investigation; validation; supervision; project administration; writing - original draft; writing - review & editing; visualization. Diana Annisah: Data curation; resources; investigation; software; validation; formal analysis; writing - review & editing. Junita Arisandi Simbolon: Data curation; investigation; resources; writing - review & editing. Iskandar Muda: Supervision; writing - review & editing.

Conflict of Interest

There is no conflict of interest.

Supporting Information

Not applicable.

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The authors used AI-assisted technology to support language editing and improve the clarity of the manuscript. The authors reviewed and verified the revised text and take full responsibility for the final content. No images were manipulated using AI.

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