

FULL COSTING VS TRADITIONAL COSTING WHICH ONE IS BETTER FOR MANUFACTURING COMPANY



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Abstract

This study aims to determine and analyze the analysis of the calculation of cost of production using the full costing method in determining the selling price at PT. Sutrajaya Indahtama. This research uses a comparative descriptive method with a qualitative approach to compare the calculation of cost of goods produced between the traditional method and the full costing method at PT. Sutrajaya Indahtama. Data were collected through interviews, observations, and documentation. The analysis was conducted by identifying cost components, calculating total production costs, and comparing the efficiency and probability of each method through financial ratio analysis and operational cost efficiency. The results showed that the calculation of cost of goods manufactured (COGS) using the full costing method resulted in a higher figure than the traditional method used by PT. Sutrajaya Indahtama. The traditional method does not reflect the total cost as a whole because it does not include all indirect cost components. The application of the full costing method provides a more accurate picture of production costs, increases cost efficiency from the previous 43%, and helps companies identify and control waste. In addition, this method contributes to the improvement of the company's profitability, by preventing hidden losses due to underpricing and increasing the Return on Assets Value.

Keywords: Cost of Goods Manufactured, Full Costing, and Selling Price

INTRODUCTION

The development of an increasingly advanced era, every company is competing to improve the quality of the company in order to compete with others. Companies are required to use the most appropriate strategy and method of calculating the cost of production. The use of appropriate methods for a company also affects the products produced, so that they can compete with competitors. Profit has an important role for the company, because the success of a business and the increasing welfare of the company is measured by profit.

Profit is the revenue of a sale minus the costs incurred in producing or manufacturing a product. Calculation of all costs used in a production should be done in detail. Calculations made in detail make it easier for the company and help the company run well Pujihati et al., (2024). Information on the cost of goods manufactured calculated within a certain period of time will be useful for determining the selling price of the product, as well as helping to monitor the realization of production costs.

According to Mulyana et al., (2024) the cost of goods produced is the amount of production costs connected to the product or goods produced and measured in units of currency and in the form of cash paid or the value of services delivered and sacrificed, or debt incurred, or additional capital required by the company in the context of the production process both in the past and in the future. In determining the selling price of a product, the production cost of each unit is one of the information considered in addition to other cost information and non-cost information.

According to Febrianty & Muchlis (2020), the calculation of cost elements in production costs is carried out in two approaches, full costing and variable costing. Full costing is done by taking into account all elements of production costs in the production cost. Meanwhile, variable costing is an approach that takes into account variable production costs into the production cost. The full costing method has several advantages. First, it provides a complete picture of production costs, which includes allocating costs that include all production costs and understanding total costs as a form of allocating fixed costs to products so that the overall total costs required are understood by the company. Second, it helps with pricing which allows companies to determine prices that cover all production costs. Third, conformity to generally accepted accounting principles Generally Accepted

Accounting Principles (GAAP) according to international accounting standards International Financial Reporting Standards (IFRS). Fourth, long-term managerial decision information that assists companies in evaluating investment feasibility. As an illustration below is a description of the Cost of Goods Manufactured determined at PT Sutrajaya Indahtama:

Table 1.
Cost of Goods Sold PT. Sutrajaya Indahtama

No.	Year	Material Cost	TKL Cost	Overhead Cost	HPP
1.	2019	996,209,496	1,073,706,252	2,299,157,304	4,369,073,05
2.	2020	1,079,925,209	1,240,275,809	2,488,528,765	4,799,729,78
3.	2021	1,167,308,477	1,258,993,113	2,710,695,056	5,136,996,64
4.	2022	1,295,712,409	1,302,333,474	3,013,787,325	5,611,833,20

5.	2023	1,470,633,584	1,376,424,350	3,427,275,420	6,274,333,35
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Source: PT. Sutrajaya Indahtama, 2024

Table 1 of the cost of production of PT Sutrajaya Indahtama shows the cost of raw materials, direct labor costs (TKL) consisting of employee salaries, production staff salaries, BPJS, and PPh 21 employees, overhead costs, and cost of production. PT Sutrajaya Indahtama is a company engaged in manufacturing to produce textile materials such as yarn dyeing and coloring. Where during the process of implementing the calculation of the cost of goods manufactured does not use the full costing or variable costing calculation method and only uses the calculation method agreed upon.

Given the importance of the suitability of determining the cost of goods produced for the company, therefore the authors conducted research by analyzing the calculation of the cost of goods produced at PT. Sutrajaya Indahtama using the full costing calculation method. The researcher chose to conduct research at PT. Sutrajaya Indahtama because there was a company restructuring and the company could not define including what method the calculation of cost of goods manufactured was carried out.

Based on the background that has been described, the problem formulation in this study is focused on three main aspects related to the application of the full costing method at PT Sutrajaya Indahtama. First, this research wants to know how the comparison of the calculation of the cost of goods produced that has been used by the company with the calculation using the full costing method, Second, this study aims to analyze how the application of the full costing method can assist companies in improving cost efficiency.

Third, this study also examines the extent to which the full costing method can contribute to increasing company profitability. With more accurate cost calculations, companies are expected to be able to set selling prices more rationally and optimize profit margins, which in turn have a positive impact on business sustainability.

REVIEW OF LITERATURE

Accounting Cost

Cost accounting is used to collect detailed information about the costs associated with the production and sale of finished goods. Cost accounting is a management tool for planning, organizing, and supervising a company to achieve its goals (Kholmi, 2019). Mandagi (2019) stated that cost accounting is used to calculate the sacrifice of input values so as to produce information for management. One of the benefits of cost accounting is that it can determine whether business activities generate profit or residual results of operations.

Production Cost

Production cost is the total expenditure required to produce a good or service. According to Sugiharto (2019) Production costs are costs incurred to process raw materials to become finished products that are ready for sale. Examples include the cost of depreciation of machinery and equipment, the cost of raw materials, the cost of auxiliary materials, and the cost of salaries of employees who work in parts both directly and indirectly related to the production process.

Cost of Goods Manufactured

Cost of goods manufactured is the total economic cost incurred to convert raw materials into a product. Costs incurred in the production process will affect changes in the cost of goods manufactured. The costs that then affect the production process are raw material costs, labor costs, and factory overhead costs. According to Mulyadi (2017) the objectives of cost of goods manufactured are:

1. Seeing the realization of planned production costs
2. Determine the selling price
3. Calculating profit/loss in a certain period
4. Determine the cost of finished and work-in-process product inventories presented in the financial statements step by step

The Full Costing Method is a method of determining production costs to calculate the cost elements that exist in production costs into production costs consisting of raw material costs, direct labor costs, and variable or fixed factory overhead costs (Nasution & Sahlina, 2023). Therefore, the calculation of the cost of goods manufactured according to the full costing method is as follows:

Direct materials cost	xx
Direct labor cost	xx
Fixed factory overhead cost	xx
<u>Variable factory overhead cost</u>	+
Cost of Goods Manufactured	xx

Selling Price

Price fixing is the establishment of a common price for goods and services by a group of suppliers acting in concert, as opposed to suppliers setting their own prices freely (Tuatfaru, 2022). Price can be defined as the amount of money received by the seller as a result of selling goods or services. Here's how the selling price is calculated (Meredith Hart, 2022):

$$\text{Selling Price} = \text{Production Cost} + (\text{Profit Percentage} \times \text{Cost Production})$$

RESEARCH METHOD

This research uses a comparative descriptive approach with a qualitative method, which aims to describe and compare the calculation of cost of goods manufactured between the traditional method used by the company and the full costing method. The research object is PT Sutrajaya Indahtama, a manufacturing company, which was chosen to be analyzed based on its production cost calculation system. Data collection techniques were carried out through interviews with company parties related to production costs, direct observation of the production process, and documentation in the form of cost data on raw materials, direct labor, factory overhead, and other elements used to determine the selling price. All data obtained is primary data that is relevant and valid to the research focus. Data analysis was conducted through qualitative descriptive techniques with steps including identification and evaluation of production cost components, preparation of cost

calculations using the full costing method, and comparison with traditional methods used by the company. The results of this analysis aim to show whether the full costing method can improve the company's cost efficiency and profitability compared to the previous method.

RESULTS AND DISCUSSION

Determination of The Company's Cost of Goods Manufactured

Calculation of Materials Cost

Table 2.
Materials Cost PT. Sutrajaya Indahtama

No.	Materials Cost	Unit Price	Quantity	Amount
1.	Yarn (cotton)	Rp 7,000,000	50 ball	Rp 350,000,000
Total				Rp 350,000,000

(Source: Data processed)

Based on the data described in Table 2, it is known that the main raw material owned by the company in production activities is yarn as much as 50 balls with an amount equal to Rp 350.000.

Calculation of Direct Labor Cost

Table 3.
Labor Cost PT. Sutrajaya Indahtama

No.	Cost Description	Labor	Amount
1.	Production staff salary	40	Rp 458,000,000
2.	BPJS	18	Rp 37,000,000
Total			Rp 495,000,000

(Source: Data processed)

Based on the data described in Table 3, it can be seen that the number of workers included in the production section is 40 people, and 18 people are registered with BPJS, with a total cost of Rp 495.000.000.

Calculation of Overhead Cost

Table 4.
Overhead Cost PT. Sutrajaya Indahtama

No.	Cost Description	Quantity	Amount
1.	Fuel Consumption	10 ton	Rp 285,000,000
2.	Support Materials (cones, plastic)	2.000 pieces, 100kg	Rp 355.000.000
3.	Electricity	82.500 watt	Rp 172,000,000
4.	ABT (underground water borehole)	2 pieces	Rp 4,000,000
5.	Coarse Salt	12 sak	Rp 4,900,000
6.	Building Maintenance	3.000 m ²	Rp 8,300,000
7.	Machine Maintenance	15 unit	Rp 67,000,000

Total	Rp 869,000,000
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Based on the data described in Table 4, it can be seen that PT Sutrajaya Indahtama's factory overhead costs consist of the use of fuel, the use of supporting materials, electricity, ABT, coarse salt, building maintenance, and machine maintenance at a cost of Rp 869.000.000.

Calculation Cost of Goods Manufactured

In its calculations, the company does not include the cost of depreciation of machine tools. The details of the calculation of the cost of goods manufactured by the company are described in the table below Table 5.

Table 5.
Calculation Cost of Goods Manufactured PT. Sutrajaya Indahtama

No.	Cost Description	Amount
1.	Material Cost	Rp 350,000,000
2.	Labor Cost	Rp 495,000,000
3.	Overhead Cost	Rp 869,000,000
Cost of Goods Manufactured		Rp 1,714,000,000

(Source: Data processed)

Cost of Goods Manufactured Calculation According to Researcher Depreciation of Machinery

Table 6.
Depreciation of Machinery PT. Sutrajaya Indahtama

No.	Machine Tools	Historical Cost	Economic Life (Year)	Residual Value	Depreciation (Year)	Depreciation (Month)
1	Production Machine (Up)	2,020,000,000	10	202,000,000	181,800,000	15,150,000
2	Production Machine (Down)	1,680,000,000	9	168,000,000	168,000,000	14,000,000
3	Soft Machine	1,360,000,000	8	136,000,000	153,000,000	12,750,000
4	Wending Machine	720,000,000	5	72,000,000	129,600,000	10,800,000
5	Roll Machine	485,000,000	4	48,500,000	109,125,000	9,093,750
			TOTAL		741,525,000	61,793,750

The calculation of depreciation of Machine Tools are using by formula:

$$\text{Historical cost} - \text{Residual Cost} \div \text{Economic Life (Year and Month)}$$

Cost of Goods Manufactured of Factory

In determining the selling price, PT Sutrajaya Indahtama uses calculations which are finally determined based on considerations from the owner. Based on these considerations, the selling price is higher than competitors because among several companies in the same field, PT Sutrajaya Indahtama has used production machines and oven machines. In contrast to competitors who are still producing limited home industry.

Cost of Goods Manufactured of Theory

The decision to determine the selling price is very important for the company because it can affect the profits achieved by the company and the survival of the company. According to Kotler and Keller (2020), the selling price is the amount of money charged for a product or service, or the amount of value that consumers exchange for the benefits of owning or using the product or service. The calculation of the selling price is usually done using the cost-plus pricing method or full cost by adding production costs, both variable costs, and fixed costs with the desired profit margin or can be calculated using the following formula:

$$Selling\ Price = Production\ Costs\ or\ Full\ Cost + Profit\ Margin$$

Analysis of Research of Calculation of Costs of Goods Manufactured and Selling Price of PT. Sutrajaya Indahtama

The calculation of the cost of goods manufactured at PT Sutrajaya Indahtama is carried out by calculating and summing up all costs incurred in the production process. The costs incurred in one production period were Rp 1,714,000,000. The biggest cost incurred by PT Sutrajaya Indahtama is factory overhead costs of Rp 869,000,000. The amount of these costs is due to the high use of fuel, large use of electric power and maintenance of machinery and buildings.

The selling price is the amount of cost charged to customers to obtain goods or services by considering the profit to be obtained. The selling price set by PT Sutrajaya Indahtama is determined by calculation:

$$Selling\ Price = Raw\ Material\ Cost\ (yarn) + OH + 25\%.$$

OH: overhead

Determination of the calculation of the selling price at the price of yarn raw materials follows the market price which results in an increase in the selling price if the price of yarn raw materials is rising and will decrease if the market price is falling. Results of Analysis of Cost of Goods Produced and Selling Price:

Cost of Goods Manufactured

In the process of calculating process of calculating the cost of production, the calculation of raw material costs and direct labor costs has been carried out appropriately, while the calculation of factory overhead costs hasn't been carried out appropriately because there are costs that are not included. This can be seen through the calculations in Table 7.

Table 7.
Cost of Goods Manufactured and Comparison

No.	Cost Production Description	PT. Sutrajaya Indahtama	Full Costing
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1.	Material Cost	Rp 350,000,000	Rp 350,000,000
2.	Labor Cost	Rp 495,000,000	
3.	Overhead Cost:		
	Fuel consumption	Rp 258,000,000	Rp 258,000,000
	Support materials	Rp 355,000,000	Rp 355,000,000
	Electricity	Rp 172,000,000	Rp 172,000,000
	ABT	Rp 4,000,000	Rp 4,000,000
	Coarse salt	Rp 4,900,000	Rp 4,900,000
	Building maintenance	Rp 8,300,000	Rp 8,300,000
	Machine maintenance	Rp 67,000,000	Rp 67,000,000
	Machine depreciation	-	Rp 741,525,000
	TOTAL	Rp 1,714,000,000	Rp 2,455,525,000
	Cost of Goods Manufactured	Rp 1,714,000,000	Rp 2,455,525,000

(Source: Data processed)

There is a difference between the two calculations of the cost of goods manufactured. The difference in the calculation is because the company has not used the full costing method in the calculation process. Based on these two calculations, it can be said that the company should have earned more revenue than it actually did.

Selling Price

Setting the selling price will affect the profit that will be obtained by the company. The company will experience a profit if the selling price is higher than the cost of production, otherwise the company will experience a loss. The calculation of the selling price according to the company with full costing is presented in Table 8.

Table 8.

Comparison of The Selling Price

No.	Description	Traditional	Full Costing
1.	Cost Product	Rp 1,714,000,000	Rp 2,455 525,000
2.	Margin	25%	25%
3.	Selling Price Total	Rp 2,142 500,000	Rp 3,069,406,250
	TOTAL	Rp 2,143,000,000	Rp 3,070,000,000

(Source: Data processed)

Based on the two selling price calculations, the total revenue that the company will receive if it uses the traditional method is Rp 2,143,000,000, while if the company uses the full costing method, the total revenue it will receive is Rp 3,070,000,000. In other words, the use of the traditional method is calculated too low, making the company lose potential revenue (actual revenue), and using the full costing method will experience more profits.

Discussion

Financing is one of the vital components in the company's operations, especially the manufacturing sector. The accuracy and effectiveness in calculating and managing

financing appropriately affects the company's profitability. Choosing the right method will have an impact on financial statements, determining selling prices, profit margins, and business strategies in general. This research was conducted at PT Sutrajaya Indahtama, which is a manufacturing company that produces various kinds of yarn, which until now still uses the traditional method in determining COGS.

According to Harahap (2020), Financing is the use of financial resources for productive activities in order to generate income. Full costing method, according to Carter & Usry (2015) is a costing approach that covers all elements of production costs, both fixed and variable, including depreciation of fixed assets, indirect costs, and production administration costs. This method provides more accurate and comprehensive cost information. Profitability is the company's ability to generate profits from its business activities. The indicator of profitability that is often used is usually Return on Assets (ROA).

Significant differences between the calculation of cost of goods manufactured (COGS) using the traditional method and the full costing method were found. Based on the calculation of COGS, a difference of Rp 741,525,000 was found which came from indirect costs such as depreciation of assets and other production overheads that had not been taken into account by the company as a whole. This difference in production costs has a direct impact on the product selling price setting strategy. Currently, the selling price set by the company is only Rp 2,143,000,000, whereas based on full costing calculations and the addition of a 25% profit margin, the ideal selling price should be Rp 3,070,000,000. This creates a potential hidden loss of Rp 927,000,000,000, indicating that the profit recognized by the company is artificial. This pricing inaccuracy has the potential to have a serious impact on cash flow and business sustainability if not immediately corrected by applying a more accurate calculation method.

This study produces results that are in line with several previous studies that discuss the importance of using the full costing method in presenting accurate cost information. Daur et al (2024) emphasized that the full costing method provides more comprehensive and realistic information in determining product selling prices. The similarity of this research lies in the emphasis on the risks that arise if indirect costs are ignored in the calculation and the visible difference in the object of research, if Daur examines the food industry, then in this research focuses on the yarn product industry.

Yumiawati et al (2023) provides insight into the urgency of accurate cost information, especially in strategic planning and decision-making. This research shares the view that the full costing method is very important as a basis for healthy and efficient business management. However, the focus of Yumiawati's research lies in the automotive manufacturing industry, while the context of this research is in the yarn production sector. The different characteristics of this industry add value to the comparison and expand the scope of application of the full costing method in various sectors as shown in Table 9.

Table 9.
Method Comparison

Cost Component	Traditional Method	Full Costing Method
Material Cost	✓	✓

Labor Cost	✓	✓
Direct Cost	✓ (some)	✓ (full)
Indirect Overhead (miss machine depreciation)	✗	✓
HPP Accuracy	Low	High
Margin prediction capability	Weak	Strong
Decision-making Support	Limited	Optimal

Based on the results of the analysis conducted, it can be concluded that the traditional method that has been applied by PT Sutrajaya Indahtama has not been able to reflect the overall production costs as a whole, because it ignores a number of important components such as indirect costs. This condition causes errors in setting selling prices and calculating profits, which in turn risks misleading management in making strategic decisions. In contrast, the full costing method is proven to provide a more comprehensive and realistic picture of the cost structure, allowing the company to accurately calculate the cost of production and set a more appropriate selling price.

CONCLUSION

It can be concluded:

1. The calculation of COGS using the traditional method at PT Sutrajaya Indahtama shows lower results compared to the full costing method. The traditional method only includes direct costs and some overhead, while the full costing method includes all cost elements, including indirect costs such as machine depreciation and overhead that have not been included. This difference resulted in a difference of seven hundred and forty-one million, indicating that the traditional method does not reflect the total production costs thoroughly and may cause errors in setting the selling price.
2. The full costing method provides a more accurate and comprehensive picture of costs, so that companies can know the real production cost structure. By understanding all cost components, management can identify inefficient sources and take strategic steps to control them. This has a direct impact on cost efficiency, which previously only reached 43%, and shows that the application of the full costing method can be the basis for evaluation to improve resource utilization more effectively.
3. The full costing method contributes to increasing company profitability by presenting accurate cost information for the basis of setting realistic selling prices. In the case of PT Sutrajaya Indahtama, the current selling price is lower than it should be based on full costing calculations, resulting in a potential hidden loss of nine hundred twenty-seven million. By applying full costing and setting the appropriate selling price, the company can avoid false profit recognition and increase the Return on Assets value more optimally. Therefore, this method is an important tool in creating sustainable profits.

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