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Article

Analysis of the Calculation of Cost of Goods Produced to Determine the Selling Price of Gemilang Tempe Chips, Tunas Harapan Village, Rejang Lebong Regency

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Abstract: The purpose of this study is to determine how to calculate the cost of goods produced for determining the selling price at Keripik Tempe Gemilang. By using the full costing analysis method and setting the selling price using the cost-plus pricing method. Calculations made based on the results of interviews and documentation of sales results. From the results of the study, the calculations made by Keripik Tempe Gemilang. The cost of production of Keripik Tempe is IDR 52,333 per kg with a selling price based on the market price of IDR 60,000 per kg so as to obtain a profit of IDR 7,667. Based on the full costing method, the cost of goods produced by Keripik Tempe Gemilang in January-August 2024 was IDR 54,658 per kg with a production level of 648kg. with a selling price setting of 30% of the cost of production, the selling price of Keripik Tempe is IDR 71,055 per kg with a profit of IDR 16,397. There is a difference in the calculation of the cost of goods produced between the business owner and the full costing method due to costs that are not taken into account by the business owner.

Keywords: Production Cost, Determining the Selling Price

1. Introduction

Along with the progress of current economic development and also the increasingly intense competition in the business world, both companies and MSMEs. Everything is competing in improving product quality, this is done in order to get more consumers and a wider market. Production activities are an economic activity that supports economic activities (Lummi 2024). However, setting the selling price is one of the problems often faced by a company because setting this selling price is a critical decision to support success in sales. Miscalculation of the cost of production can result in a selling price that is too high or a selling price that is too low (Silva 2019). If the selling price is too high, it will result in a small number of enthusiasts for the product and make it not good for the sustainability of the company, while if the selling price is too low, the company will get a small profit and experience losses. Calculation of the cost of goods produced is something that needs to be considered in determining the selling price of a product. Cost of goods manufactured is the sum of raw material costs, direct labor costs and factory overhead costs to make a product. (Tarek et al., 2018:43)

Calculation of the correct and accurate cost of goods manufactured is something that needs to be done by every company, because without the calculation of the correct and accurate cost of goods manufactured, one of the very important factors to achieve this is to streamline production costs as low as possible so that it will increase profits. (Setiadi et al., 2014:71) By knowing the exact cost of production, it will make it easier to make

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policies in determining the cost of goods sold of a product in order to generate profits (Rossi 2024).

In running their business, companies that are included in business organizations try to achieve their main goal, namely profit. The definition of profit operationally is the difference between realized income arising from transactions during one period and the costs associated with that income. (Sujarweni,2024:51)

The definition of profit according to the excess of income over costs during one accounting period. Meanwhile, the definition of profit adopted by the current accounting structure is the difference between the measurement of income and costs. The size of profit as a measure of increase is highly dependent on the accuracy of the measurement of income and costs. (Irawan, 2016:15).

Production activity is an activity that greatly supports consumption activities. Without production activities, consumers will not consume the products they want. These production activities also require costs, these costs will also determine the cost of production. Cost of goods manufactured (COGS) is divided into three, namely raw material costs, direct labor costs and factory overhead costs. The cost of goods produced itself has an understanding, namely according to Muliati (2023:21) Cost of goods manufactured is all production costs incurred to produce a product or service during the period in question (Fakieh 2021).

Calculating production costs has a significant impact on the calculation of a company's profit and loss. One way to be able to make precise and accurate calculations is to use the *Full Costing* Method. According to Sujarweni (2024:28) The full costing method is a method for determining the cost of goods produced by charging all fixed and variable production costs to the products produced (Camp 2024).

Previous research conducted by Maulana (2018) shows the difference in the calculation of *Cost of Goods Manufactured with the Full Costing* Method and the calculation of Cost of Goods Manufactured applied by Tempe Mas Imam's business. Research conducted by Rizkiyah (2021) also shows differences in the results of the calculation of *Cost of Goods Manufactured* using the *Full Costing* method and the calculations applied by the Home Industry Wheat Crackers "Sumber Rejeki". Finally, previous research conducted by Roniansyah (2022) The calculation of the Cost of Goods Manufactured using the *Full Costing* Method and that applied to Mr. Muklis' Tempe Home Industry business also shows differences in the calculation results because there are several costs that are not taken into account as a whole (Pratiwi 2023).

This Gemilang Tempe Chips business calculates the cost of goods produced in the traditional way or according to the calculations of the business owner. The method of calculating the cost of goods produced by the business owner only takes into account the daily ingredients used to process his products without including the cost of other supporting equipment in the production process. So that the profit earned is not maximized to replace other costs that are taken into account (Callenbach 2024).

Based on the description above and considering the importance of determining the cost of production, the production business that will be the subject of research is the Gemilang Tempe Chips business in Tunas Harapan village, Rejang Lebong district in determining its production price. Tempe chips are savory snacks. Made from processed soybeans then into tempeh and processed into chips (Romero 2024). In this case, the author will help to calculate the correct cost of goods produced according to the existing theory, namely the *Full Costing* method because this process will clearly detail all the cost elements used. With this *Full Costing* method, it is hoped that it can calculate the correct cost of goods produced and the author will recommend a selling price with the right calculation so that the Gemilang Tempe Chips business can get maximum profit (Barus 2019).

Therefore, the author is interested in conducting research on "Analysis of the Calculation of Cost of Goods Produced to Determine the Selling Price of Gemilang Tempe Chips, Tunas Harapan Village, Rejang Lebong Regency".

2. Materials and Methods

The type of research in this study is Quantitative Descriptive research. The data collection methods used are interviews and documentation. In this study to determine the selling price using the *full costing* method. Full costing or often called conventional cost of goods is a method for determining the cost of goods manufactured, by charging all fixed and variable production costs to the products produced. The costs used as the basis for determination can be defined in accordance with the method of determining the cost of goods used (Sušková 2020).

3. Results

Analysis of the Calculation of Cost of Goods Produced at Gemilang Tempe Chips

A. Raw Material Cost

Table 1. Total Price of Raw Materials in January - August 2024

No.	Month	Total Raw Materials (Rp)
1.	January	IDR 1,100,000
2.	February	IDR 1,100,000
3.	March	IDR 1,100,000
4.	April	IDR 2,200,000
5.	May	IDR 1,100,000
6.	June	IDR 1,100,000
7.	July	IDR 1,100,000
8.	August	IDR 1,100,000
	TOTAL	IDR 9,900,000

Source: Research Results, Data processed 2024

Based on the table above, it is known that the cost of raw materials incurred during the production process of Gemilang tempeh chips in January-August 2024 amounted to Rp 9,900,000.

B. Direct Labor Costs

Table 2. Total Employee Wages of Gemilang Tempe Chips Business in August 2024

No.	Description	Unit	Wages Per Day	Total
1	Employee 1	1	50.000	6.800.000
2	Employee 2	1	40.000	4.160.000
	TOTAL			10.960.000

Source: Research Results, Data processed 2024

Based on the table above, we can know that the direct labor costs incurred by the owner of the glorious tempeh chips business in January-August 2024 amounted to IDR 10,960,000-. The wages are paid based on a day count.

C. Overhead Costs

a. Cost of auxiliary materials

Table 3. Total cost of auxiliary materials in January-August 2024

No.	Month	Total cost of auxiliary materials
1	January	IDR 928,000

2	February	IDR 928,000
3	March	IDR 928,000
4	April	IDR 1,856,000
5	May	IDR 928,000
6	June	IDR 928,000
7	July	IDR 928,000
8	August	IDR 928,000
	TOTAL	IDR 8,352,000

Source: Research Results, Data processed 2024

Based on the table above, it is known that the cost of auxiliary materials incurred during January-August 2024 amounted to IDR 8,352,000-.

b. Electricity and Water Costs

Table 4. Total Cost of Electricity and Water in January-August 2024

No.	Month	Total Cost of Electricity and Water
1	January	IDR 60,000
2	February	IDR 50,000
3	March	IDR 50,000
4	April	IDR 70,000
5	May	IDR 50,000
6	June	IDR 50,000
7	July	IDR 40,000
8	August	IDR 40,000
	TOTAL	IDR 410,000

Source: Research Results, Data processed 2024

Based on the table above, it is known that the costs incurred for electricity and water costs during January-August 2024 amounted to IDR 410,000-.

c. Telephone Costs

The telephone costs used during the production process are IDR 50,000 of these costs are charged to the production of Gemilang tempe chips at 75% of the telephone costs in January-August 2024 as follows:

$$75\% \text{ X Rp } 600{,}000 = 450{,}000/\text{year}$$

$$\frac{450.000}{12} = 37{,}500/\text{month}$$

$$= 37.500 \times 8 = 300.000$$

Based on the above calculations, it is known that the telephone costs incurred each month are IDR 37,500.

d. Firewood Cost

Table 5. Total Cost of Firewood in January-August 2024

No.	Month	Total Cost of Electricity and Water
1	January	IDR 60,000
2	February	IDR 50,000
3	March	IDR 50,000
4	April	IDR 70,000
5	May	IDR 50,000
6	June	IDR 50,000
7	July	IDR 40,000
8	August	IDR 40,000
	TOTAL	IDR 410,000

Source: Research Results, Data processed 2024

Based on the table above, the costs incurred for purchasing firewood for the production process during January-August 2024 amounted to IDR 2,160,000-.

e. Equipment Cost

Table 6. Total Equipment Cost in January-August 2024

No.	Month	Total Equipment Cost
1	January	342.000
2	February	215.000
3	March	240.000
4	April	430.000
5	May	240.000
6	June	215.000
7	July	240.000
8	August	215.000
	TOTAL	2.137.000

Source: Research Results, Data processed 2024

From the table above, the cost of equipment incurred during 2022 is IDR 2,137,000-.

f. Equipment Depreciation

Table 7. Total Equipment Cost in January-August 2024

No.	Description	Unit	Price	Total
1	Wok	2	300.000	600.000
2	Dandang	2	750.000	1.500.000
	TOTAL			2.100.000

Source: Research Results, Data processed 2024

Based on the table above, we can see that the equipment costs incurred are IDR 2,100,000- From the depreciation calculation above, we can know that the depreciation cost of the pan is IDR 33,332 / month, the depreciation cost of the dandang is IDR 58,333 / month.

Table 8. Total Cost of Goods Produced per Kilo in January-August 2024

Month	Production Quantity	Price	Cost of Goods Manufactured
January	72	4.025.498	55.909
February	72	4.000.498	55.562
March	72	4.025.498	55.909
April	144	7.223.498	50.163
May	72	4.025.498	55.909
June	72	4.000.498	55.562
July	72	4.015.498	55.770
August	72	3.990.498	55.423
TOTAL	648	35.418.984	
Cost per Kg			54.658

Average cost of goods produced per kg of tempeh chips in January-August 2024 = $\frac{35.418.984}{648} = 54.658$

Based on the above calculations, the cost of production for per kg of tempeh chips using the *Full Costing* method in January-August 2024 is IDR 54,658-.

Table 9. Calculation of Cost of Goods Manufactured using the *Full Costing* method

GLORIOUS TEMPEH CHIPS

CALCULATION OF *COST OF* GOODS MANUFACTURED (*FULL COSTING)*

Raw Material Cost		Rp 9,900,000
Direct Labor Cost		IDR 10,960,000
Variable Factory *Overhead* Costs:		
Support Cost	IDR 8,352,000	
Electricity and Water Costs	IDR 410,000	
Telephone Cost	IDR 300,000	
Firewood Cost	IDR 2,160,000	
Equipment Cost	IDR 2,137,000	
Fixed Factory Overhead Costs:		
Equipment Depreciation Cost	IDR1,199,984	
	IDR 14,558,984	
Production Cost		Rp 35,418,984

Source: Research Results, Data processed 2024

Based on the table above, the cost of goods produced using the *Full Costing* method during January-August 2024 is IDR 35,418,984-.

Analysis of Calculation and Determination of Selling Price at Gemilang Tempe Chips

In the tempeh chips business, the selling price set by the owner is IDR 60,000 per kg. in setting the selling price in the *cost plus-pricing* method with the formula used Selling Price = Total Cost + Margin with profit determination according to (Maulana 2018) by 30%. If the owner of the tempeh chips business wants a profit of 30%, the calculation of the selling price is as follows:

Selling Price = Rp 54,658 + 30%
= IDR 71,055

Based on the above calculations, the Gemilang tempeh chips business owner can sell tempeh chips at a price of IDR 71,055 with a profit of 30%. With a percentage of the selling price of 30%, the tempeh chips business owner gets enough profit to cover all the costs incurred during the production process.

4. Discussion

Comparison of Calculation of Cost of Goods Manufactured by *Full Costing* Method with Tempeh Chips Business

Description	Cost of goods	Selling Price	Net Profit
Determination Owner Price	52.333	60.000	7.667
Full Costing Method	54.658	71.055	16.397

Based on the results of the above research, it can be concluded that there are differences in calculations made by the tempeh chips business with calculations made by researchers. Where the calculation of the cost of goods produced by the owner is IDR 52,333 while the calculation of the cost of goods produced by the *Full Costing* method is IDR 54,658-.

The difference occurs because there are costs that are not calculated into the cost of goods produced such as electricity and water costs, telephone costs and equipment depreciation costs. The Gemilang tempeh chips business owner only takes into account the cost of raw materials, labor and auxiliary costs, causing the small profit earned by the business owner (Mardesci 2021).

In determining the selling price, there is a difference between the calculation made by the owner of the Gemilang tempeh chips business and the calculation made by the researcher. Because basically the selling price set by the owner still follows the market price. Meanwhile, researchers use the calculation of the cost of production of the *Full Costing* method by adding a percentage of 30%. So, the selling price set by the owner of the Gemilang tempeh chips business in January-August 2024 can sell at a price of IDR 71,055 per kg with a profit of IDR 16,397 per kg while the calculation made by the owner of the selling price based on the market price is IDR 60,000 per kg with a profit of IDR 7,667.

So, from the calculation of the cost of goods produced above, the determination of the selling price has a big influence, if it is determined by the business owner of Gemilang tempeh chips in getting more optimal profits. Setting the selling price with a profit of 30% is appropriate for use in selling Gemilang tempeh chips because it has covered all the costs used (Stennikov 2024).

5. Conclusion

From the results of research and calculations that have been carried out, it can be concluded that :

1. The calculation of the cost of production calculated by the owner of the tempeh chips business is IDR 52,333 per kg with a selling price of IDR 60,000 per kg so that the profit earned is IDR 7,667.
2. The results of the cost of goods produced by the Gemilang tempeh chips business in January-August 2024 using the *Full Costing* method amounted to Rp 54,658 per kg with a production level of 648 kg. by setting the selling price of tempeh chips at 30% of the cost of production, the selling price of tempeh chips is Rp 71,055 per kg with a profit of Rp 16,397.
3. The calculation of the cost of production can be used as a basis for setting the selling price by including the desired profit planning or in accordance with the public's buying interest in the products sold (Deringer 2024).

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