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ANALYSIS OF COST OF GOODS PRODUCED AS A DETERMINANT OF SELLING PRICE USING THE *FULL COSTING* METHOD AT TAWABANG MSMES IN JOMBANG

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Abstract

This study aims to analyze the cost of goods produced using the full costing method in an MSME, namely TawaBang in Jombang. This research also identifies cost components that must be calculated using the full costing method and compares the total production costs between the full costing method and the calculation results of the method currently used by TawaBang MSMEs. This research uses a descriptive qualitative approach. Primary data was obtained through interviews and direct observation with MSME owners at the place of business, while secondary data was obtained from raw material purchase records. The results showed that the full costing method resulted in a higher calculation of total production costs compared to the MSME method, thus providing a more accurate picture of the cost of production. It is hoped that this research will provide more accurate information about calculating the cost of production using the full costing method, so that it can help TawaBang MSMEs and other MSMEs in setting a more appropriate and profitable selling price.

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

Introduction

Indonesia's economy cannot be separated from the important role of Micro, Small and Medium EnteIDR rises (MSMEs). MSMEs not only contribute to job creation, but also become the backbone of the regional economy by utilizing local resources and meeting the needs of local communities. According to Krisna and Nuratama (2021), problems in regional economic development are related to the availability of resources or factors of production and the allocation of their distribution in relation to other regions. They point out that regional economic development should focus on developing local resources to meet the needs of the local community and demand from other regions. Therefore, a fundamental breakthrough is needed, one of which is by empowering the MSME sector.

UMKM TawaBang in Jombang is one of the micro, small and medium enterprise rises that produces processed frozen food, namely frozen tahu walik. This frozen food product has a large market potential and a long shelf life. Setting the selling price of a product is one of the important aspects of running a business, especially for MSMEs such as TawaBang. Therefore, MSMEs need to set the right selling price to ensure business sustainability and profitability.

In determining the selling price of a product, we need to first identify what cost components are involved in the production process. Accuracy in identifying these production cost components will help accuracy in the calculation of the cost of goods manufactured. Cost of goods manufactured is all the cost components incurred during the production process in order to convert materials into finished products or services. The components that make up the cost of goods manufactured consist of several large groups, namely raw material costs, direct labor costs, and overhead costs.

Iryani and Handayani (2019) define the full costing method as an approach in determining the cost of goods manufactured that includes all components of production costs including raw material costs, direct labor costs, and factory overhead costs, both variable and fixed. In his book, Mulyadi (2016) states that calculating product costs using the full costing method includes production costs such as raw material costs, direct labor costs, variable and fixed factory overhead costs, as well as additional costs other than production costs such as marketing costs, administrative and general costs. These costs will have a significant effect on the profitability of a business. Thus, it can be seen that the advantage of using the approach of determining the cost of production using the full costing method lies in its ability to present a more detailed picture of total production costs so that it can be used as a more appropriate and profitable basis for setting selling prices.

This study aims to analyze the calculation of the cost of goods produced at TawaBang MSMEs in Jombang, as well as identify all cost components involved in the production process to calculate total costs, then compare the results of the calculation of the cost of goods produced between the full costing method and the estimation method that has been used by TawaBang MSMEs. It is hoped that this research will provide more accurate information about calculating the cost of goods produced using the full costing method, so that it can help TawaBang MSMEs and other MSMEs in setting a more appropriate and profitable selling price.

Research Method

This research uses a qualitative method with a descriptive approach to analyze the cost of production as a determinant of selling price using the full costing method at TawaBang MSMEs in Jombang. The descriptive approach was chosen because it allows researchers to describe in detail and systematically the components of production costs and the impact of these costs on determining the selling price. Qualitative methods provide flexibility in data collection and allow researchers to gain deeper insights through direct interaction with research subjects.

Primary data for this study was obtained through in-depth interviews with the owners of TawaBang MSMEs. These interviews were designed to gather detailed information regarding various components of production costs, including raw material costs, labor costs, overhead costs and other relevant costs. The interview technique was chosen because it allows researchers to explore information that may not be recorded in written documents and to understand the perspectives of MSME owners directly. In addition, interviews allow researchers to clarify and deepen understanding of the data obtained.

Direct observations were conducted at the TawaBang MSME business location to understand the production process thoroughly and identify cost components that may have been missed in the interviews. This observation includes observing the production flow, raw material usage, and labor activities. The observation technique helped validate the data obtained from the interviews and provided a broader context of the production process in the MSME.

Secondary data was collected from raw material procurement records and other relevant documents. This documentation technique is important to ensure that the data used in the analysis is accurate and complete. This secondary data is used to complement and verify information obtained through interviews and observations, as well as provide a more comprehensive picture of production costs in TawaBang MSMEs.

The research procedure included four stages: preparation, data collection, data analysis, and reporting. In the preparation stage, researchers developed a research plan, including determining research subjects, designing interview instruments, and arranging observation schedules. Data collection was carried out through interviews and direct observations with MSME owners at the place of business, and collection of documents. relevant. The collected data is then analyzed to calculate the cost of production using the full costing method. The total production cost analysis is calculated by considering all cost components involved. The results of this analysis are reported in the hope that it can be a source of information and recommendations for TawaBang MSMEs and other MSMEs in applying the full costing method to determine the accuracy of a more profitable selling price.

Result and Discussion

The accuracy of determining the cost of goods produced is crucial for every business actor, including TawaBang MSMEs. The goal is for business owners to gain a clear understanding of all cost components involved in the production process, and to be able to set the right selling price in an effort to achieve optimal profits. In interviews with the owners of TawaBang SMEs, they said they had not calculated costs in detail every day due to limited accounting knowledge in determining production costs. Currently, the SMEs set the product selling price at IDR 11,000 per pack, which contains 10 pcs of walik tahu and 1 cup of sambal petis.

The following is a comparison of the calculation of raw material costs using the method applied by UMKM TawaBang and the full costing method:

Table 1
Calculation of Raw Material Costs Based on the MSME Method

No.	Description	Needs	Price (IDR)
1	Ground mackerel	5 kg	200.000
2	Salted tofu	1000 *pcs*	200.000

3	Tapioca flour	6 kg	60.000
4	Wheat flour	2 kg	20.000
5	Eggs	0.5 kg	13.500
Total Raw Material Cost			**493.500**

Source: TawaBang MSME, 2024.

Table 2
Calculation of Raw Material Costs Based on the Full Costing Method

No.	Description	Needs	Price (IDR)
1	Ground mackerel	5 kg	200.000
2	Salted tofu	1000 *pcs*	200.000
3	Tapioca flour	6 kg	60.000
4	Wheat flour	2 kg	20.000
5	Eggs	0.5 kg	13.500
Total Raw Material Cost			**493.500**

Source: Processed by the author, 2024.

From the two tables above, it can be seen that the total cost of raw materials calculated both by the MSME method and the full costing method is the same, namely IDR 531,500. This shows that in the context of calculating raw material costs, TawaBang MSMEs are correct in identifying and calculating the cost of production raw materials. This cost is the main component of the product so it is easy to identify because the amount is relatively large. In one production, TawaBang MSMEs employ two workers who are directly involved in production activities in the kitchen. This means that every time UMKM TawaBang produces tawa walik, there are two employees who work directly in the kitchen to produce tawa walik ensure that the production process runs smoothly and effectively.

Table 3
Calculation of Direct Labor Costs MSME Method

No.	Description	Total	Salary per day (IDR)	Amount (IDR)
1	Employees	2 people	50.000	100.000
Total Direct Labor Cost				**100.000**

Source: TawaBang MSME, 2024.

Table 4
Calculation of Direct Labor Costs Full Costing Method

No.	Description	Total	Salary per day (IDR)	Amount (IDR)
1	Employees	2 people	50.000	100.000
Total Direct Labor Cost				**100.000**

Source: Processed by the author, 2024.

Based on the calculations of the two tables above, the MSME method and the full costing method show the same calculation results. Both methods show that TawaBang MSMEs employ two people per day for production with a daily wage of IDR 50,000 per person with a total direct labor cost of IDR 100,000 per production per day.

Variable factory overhead costs are an important component in calculating production costs at TawaBang MSMEs. These costs include various types of expenses that are not directly related to the production process, but still need to be accounted for. considered to support smooth production, because it has a proportional influence on changes in production volume.

Table 5
Calculation of Variable Factory Overhead Costs MSME Method

No.	Description	Needs	Price (IDR)
1	Petis	1.5 kg	45.000
2	Garlic	0.5 kg	17.500
3	Leeks	200 grams	10.000
4	Cayenne pepper	200 grams	10.000
5	LPG gas	1 tube	19.000
6	*Vacuum* plastic	1 pack	47.000
7	*Thinwall cup*	2 pack	26.000
8	*Sticker*	100 pcs	50.000
Total Variable Factory *Overhead* Costs			**224.500**

Source: TawaBang MSME, 2024.

Table 6
Calculation of Variable Factory Overhead Costs Full Costing Method

No.	Description	Needs	Price (IDR)
1	Seasoning the dough: Garlic Salt Ground pepper Flavoring	 0,5 kg 1 *pcs* 4 *pcs* 8 *pcs*	 17.500 2.500 4.000 4.000
2	Leeks	200 grams	10.000
3	Sambal petis: Petis Cayenne pepper Sugar	 1,5 kg 200 grams 100 grams	 45.000 10.000 1.750
4	LPG gas	1 tube	19.000
5	V*acuum* plastic	1 *pack*	47.000
6	*Thinwall cup*	2 *pack*	26.000
7	*Sticker*	100 *pcs*	50.000
8	Electricity cost	1 day	10.000
9	Water cost	1 day	1.700
10	Tool maintenance costs	1 day	4.000
Total Biaya *Overhead* Pabrik Variabel			**457.900**

Source: Processed by the author, 2024.

It can be seen that there is a significant difference in the two tables of variable factory overhead cost calculation results. The MSME method in Table 5 shows a total variable factory overhead cost of IDR 224,500, while the full costing method in Table 6 shows a higher calculation result of IDR 457,900. The difference is due to the presence of additional cost components, namely the cost of auxiliary raw materials which include the cost of garlic, salt, pepper powder, flavoring, leek paste, cayenne pepper, and sugar, as well as other costs such as electricity costs, water costs, and equipment maintenance costs that are not included in the calculation of variable factory overhead using the MSME method.

During the research process, it was found that MSMEs in Tawabang previously only calculated variable factory overhead costs, but did not calculate fixed factory overhead costs such as equipment costs.

Table 7
Calculation of Fixed Factory Overhead Costs

No	Description	Total	Price per Unit (IDR)	Economic Value (IDR)	Age (year)	Depreciation (IDR)		
						Per year	per bulan	per hari
1	Machine *vacuum sealer*	1	350.000	350.000	3	116.667	9.722	323
2	Gas stove	1	535.000	535.000	8	66.875	5.574	183
3	*Freezer box*	2	4.300.000	8.600.000	10	860.000	71.667	2.366
4	Basin	2	18.000	36.000	3	12.000	1.000	33
5	Sodet plastic	2	2.000	4.000	3	1.333	111	4
6	Pots steamer	1	445.000	445.000	5	89.000	7.417	242
7	Pots	1	125.000	125.000	5	25.000	2.083	68
8	Irus	1	13.500	13.500	3	4.500	375	12
9	Knife	2	17.000	34.000	3	11.333	944	31
10	Teaspoon	2	1.250	2.500	5	500	42	1
11	Cutting Board	1	6.000	6.000	5	1.200	100	3
12	Cobek	1	17.500	17.500	5	3.500	292	10
13	Ulekan	1	7.000	7.000	5	1.400	117	4
14	Trays	3	25.000	75.000	3	25.000	2.083	68
Total Biaya *Overhead* Pabrik Tetap						**1.218.308**	**101.527**	**3.348**

Source: Processed by the author, 2024.

Based on Table 7, the total fixed factory overhead cost for TawaBang MSMEs is IDR 1,218,308 per year, or approximately IDR 101,527 per month and IDR 3,348 per day. This cost includes the depreciation of various equipment such as vacuum sealer machines, gas stoves, freezer boxes, basins, plastic sodets, steamer pans, saucepans, irus, knives, teaspoons, cutting boards, cobek, ulekan, and trays. Depreciation is calculated based on the economic life of each piece of equipment, which varies between 3 to 10 years.

Table 8
Comparison of Calculation of Cost of Goods Manufactured Based on MSME and Full Costing Methods

Description	MSME Method	*Full* Method *Costing*	Difference
Raw material cost	IDR 493,500	IDR 493,500	-
Direct labor costs	IDR 100,000	IDR 100,000	-
Variable factory *overhead* costs	IDR 224,500	IDR 457,900	IDR 233,400
Fixed factory *overhead* costs	-	IDR 3,348	IDR 3,348
Total Production Cost	**IDR 818,000**	**IDR 1,054,748**	**IDR 236,748**
Production quantity per day	100	100	-
Cost of Goods Manufactured per Unit	**IDR 8,180**	**IDR 10,547**	**IDR 2,367**

Source: Processed by the author, 2024.

Based on Table 8, the raw material and direct labor costs of both methods show the same calculation results, which amount to IDR 493,500 for total raw material costs and IDR 100,000 for total direct labor costs. Significant differences exist in both variable and fixed factory overhead costs. Variable factory overhead costs, the MSME method recorded IDR 224,500, while the full costing method recorded IDR 457,900, with a difference of IDR 233,400. Fixed factory overhead costs amounted to IDR 3,348, which was not calculated in the MSME method.

As a result, the total production costs between the two methods are different, namely the UMKM method of IDR 818,000 and the full costing method of IDR 1,054,748, showing a total difference of IDR 236,748. It also resulted in differences in the cost of goods produced per unit for 100 units of product between the two calculation methods. The MSME method shows a calculation result of IDR 8,180, while the full costing method is IDR 10,547, with a difference of IDR 2,367 per unit.

Determining the selling price of products is a crucial step for TawaBang MSMEs to ensure that the business remains profitable and competitive in the market. In their research, Nabilah, Tajidan, Fernandez, and Halil (2023) stated that the selling price must be sufficient to cover all costs and achieve the expected profit. Therefore, a comparative analysis of product selling prices based on the TawaBang MSME method and the full costing method was conducted which can help in understanding how each method affects the selling price and expected profit.

Table 9
Comparison of Product Selling Prices Based on MSME and Full Costing Methods

Description	MSME Method	*Full Costing* Method
Production cost	IDR 818,000	IDR 1,054,748
Expected profit 30%	IDR 245,400	IDR 316,424
Total cost	IDR 1,063,400	IDR 1,371,172
Production quantity per day	100	100
Selling price per unit	**IDR 10,634**	**IDR 13,712**

Source: Processed by the author, 2024.

With an expected profit of 30%, the total cost to be borne by the MSME method is IDR 1,063,400, while the full costing method is IDR 1,371,172. The number of production per day is the same for both methods, which is 100 units. The selling price per unit with the MSME method is IDR 10,634, while with the full costing method is IDR 13,712. The difference in selling price is due to several additional cost components included in the full costing method, thus providing a more accurate and detailed picture of total production costs.

Conclusion

Based on the results of the analysis of the cost of production at TawaBang MSMEs in Jombang, there are significant differences in the calculation of both variable and fixed factory overhead costs. The MSME method does not calculate in detail all components of its production costs, there are several additional cost components that are not calculated in the calculation of variable factory overhead costs, namely the cost of auxiliary raw materials which include the cost of garlic, salt, pepper powder, flavoring, leek paste, cayenne pepper, and sugar, as well as other costs such as electricity costs, water costs, and equipment maintenance costs. In addition, TawaBang MSMEs also do not calculate fixed factory overhead costs, including equipment depreciation per day for one production, which contributes to the difference in total production costs.

The calculation results show that the total production cost using the full costing method is higher than the MSME method. The production cost per unit using the full costing method is IDR 10,547, with a selling price of IDR 13,712, which includes a 30% profit. Meanwhile, the production cost per unit using the MSME method is IDR 8,180, with a selling price of IDR 10,634 which is then rounded up by MSMEs to IDR 11,000 to achieve a profit of 30%. This difference is caused by additional cost components in the full costing method.

This study suggests that TawaBang MSMEs calculate the cost of goods produced using the full costing approach. This will allow TawaBang MSMEs to obtain more complete and detailed information

about the components of production costs, so that it can be used as a basis for determining a more competitive product selling price to increase profits and business sustainability.

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