

ANALYSIS OF COST OF GOOD MANUFACTURED (COGM) CALCULATION USING FULL COSTING METHOD ON SME 'X'

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Abstract:

Micro, Small, and Medium Enterprises (MSMEs) play an essential role in the Indonesian economy, contributing 61.07% of the GDP and 96.9% of employment. Taking into account the importance of the role of MSMEs, special attention is needed to overcome one of the main problems often faced by MSME actors, namely errors in calculating the Cost of Production (COGM). One of the suitable methods for calculating COGM is the full costing method. This study uses a descriptive research method with a qualitative approach. The focus of this research is the analysis of the calculation of the Cost of Production using the full costing method. This research uses primary and secondary data sources, interview data collection techniques, observation, and documentation. Furthermore, we are testing the data using qualitative methods, which is the triangulation technique. This study aims to analyze the calculation of the COGM for peanut cookies according to the calculation of SMEs 'X', a pastry producer, and the COGM calculation using the full costing method. Based on the research results, the COGM calculation results according to SMEs 'X' are IDR 31,000 per jar, and according to the full costing method IDR 36,800 per jar, the difference is IDR 8,500 per jar. This significant difference in COGM understatement certainly impacts SMEs 'X' business finances. We hope that the results of this research can be used by SMEs 'X' to determine the selling price of the cookies so that it can increase the profitability of its business.

Keywords: Full Costing, Cost of Production, SMEs, Cost Accounting

1.0 INTRODUCTION

MSMEs are one of the critical pillars in the nation's economy, as explained by Limanseto (2021) from Coordinating Ministry for Economic Affairs, data compiled from the Ministry of Cooperatives and SMEs showing the number of MSMEs in May 2021 reached 64.2 million, with a contribution to Indonesian GDP of 61.07 % or equivalent to IDR 8,573.89 trillion. Includes the ability to absorb 6.9% of the total available workforce and collect 60.4% of the total investment. Data obtained from the Ministry of Cooperatives and SMEs in 2019 shows that micro businesses still dominate the composition of MSMEs, with a percentage of 98.67% of the total 65.4 million MSMEs in Indonesia. Small businesses follow them at 1.22% and medium businesses at 0.1%. Furthermore, according to data from the 2016 economic census published by the Central Statistics Agency (BPS), the business sector that dominates MSMEs in the non-agricultural MSMEs business sector are wholesale, retail, repair, and maintenance of cars and motorbikes with a percentage of 46.27 %. Then, followed by the accommodation and consumption sector with 19.93%, and the manufacturing industry sector with 16.65%.

Paying attention to the importance of the role of MSMEs, it is necessary to pay special attention to overcome the problems in the MSME business. Srikandi and Setyawan (2004) said one of the problems that MSME actors often face is business financial management, which includes determining the COGM (Cost of Good Manufactured), the selling price, and the break-even

point. The second one is preparing financial reports such as the income statement, balance sheets, statements of cash flows, and statements of changes in equity. Finally, the analysis of Financial Statements also becomes a central problem of MSMEs. Edraras (2010) has also supported the finding of Srikandi and Setyawan (2004). He argues that good MSME financial management will positively impact the business run by MSMEs. This research focuses on the calculation of COGM. Then, Krisdiatiwi (2018) explains that MSMEs still need a better understanding of finance and accounting, especially in calculating COGM as the basis for determining selling prices.

Furthermore, Maghfirah and Fazli (2016) proposed an appropriate method for calculating COGM using the full costing method. As explained by Mulyadi (2005), full costing is a method of determining production costs consisting of raw material costs, direct labor costs, and factory overhead costs. This method will charge all overhead costs (variable and fixed) to the products produced. In addition, this method is intended to avoid errors in calculating COGM, which can make MSMEs lose the expected profit potential.

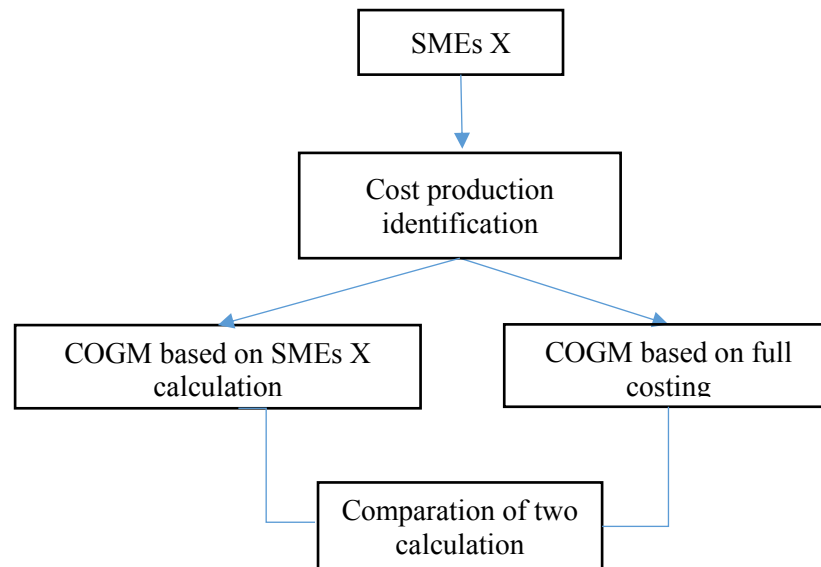
SME 'X' is a micro business actor producing various cookies such as cheese, chocolate, peanut, and assorted cookies. Researchers are interested in making SME 'X' an object of research because the financial condition of its business was experiencing problems. The problem is the net profit of his business was far below the estimated target, while in terms of volume, the number of jars of cookies sold continued to increase. The research then focused on calculating the COGM after the initial interviews revealed that SME X only considered raw materials and direct labor as components of the cost of producing cookies. Meanwhile, the overhead costs had not been taken into account.

This study aims to analyze the differences in COGM calculation. The analysis will compare COGM calculation by the SME 'X' and full costing method. It is hoped that the results of this study can be used by SME 'X' to determine the COGM correctly. The correct COGM calculation can prevent mistakes in setting the selling price, which can reduce the financial profitability of the business.

2.0 LITERATURE REVIEW

This research departs from the framework (Maghfirah, 2016), as can be seen in figure 1.

Figure 1: The research framework



Source: Developed by the author based on Maghfirah (2016)

2.1 Cost Accounting

Syam (2016) explains that, in general, SMEs do not know how to calculate the correct COGM. This ignorance is understandable because, ideally, to calculate COGM correctly and precisely, it is necessary to be equipped with knowledge that is part of cost accounting and management accounting in the academic world. According to Wasilah (2012), cost accounting can obtain information related to production costs so that it is beneficial for planning, making decisions about determining selling prices, giving discounts to resellers and end consumers, as well as marketing strategies related to price competition with competitors. The mistake that often occurs in calculating COGM is that SMEs usually only include the cost of raw materials and labor, while not considering factory overhead in detail. It is necessary to identify the total cost of production of cookies that have been incurred by SME X so that the COGM can be calculated correctly. Supriyono (1999) explains that cost is the price obtained or sacrificed to obtain income and is treated as a deduction from the income to determine the amount of profit or loss.

2.2. Cost Behavior Pattern

Bustami and Nurlela (2006) categorize costs based on cost behavior patterns:

1. Variable costs

Variable cost is a cost (which is within a specific production period), the total cost changes depending on the volume of units produced, and the cost per unit is fixed.

2. Fixed costs

Fixed costs is the fixed total costs within a particular production period, but the cost per unit changes depending on the size of the production volume within that period.

3. Mixed costs

Mixed costs is a cost that contains elements of variable cost and fixed cost.

2.3. Cost of Good Manufactured (COGM)

According to Lasena (2013), production costs or COGM consist of 3 (three) components. If associated with the production of cookies, these costs are as follows:

1. Direct raw materials, consisting of raw material costs, such as flour, sugar and butter. Including direct material costs are discounts on the purchase of raw materials, shipping costs and costs for storing raw materials, and other costs directly related to raw materials.
2. Direct labor, includes the entire cost of employee wages that are directly related to the production process of raw materials into cookies.
3. Factory or production house overhead costs, are all costs incurred in producing cookies besides direct raw material costs and direct labor costs. After the production costs are identified, the next step is to determine the amount of the COGM.

Mursyidi (2010) states that there are two methods of determining COGM (Cost of Production):

- 1) The full costing method

With this method, the cost of production takes into account all components of production costs, namely raw material costs, direct labor costs, and FOH both fixed and variable.

- 2) Variable costing method

The cost of production is calculated only from the variable costs.

According to Maghfiroh (2016) the most appropriate method for calculating COGM for MSMEs that produce culinary delights is the full costing method.

3.0 RESEARCH METHODOLOGY

This study uses a descriptive research method with a qualitative approach. The focus of this research is the analysis of the Cost of Production (COGM) calculation using the full costing method.

3.1 Data Source

The location of this research was carried out in the City of South Tangerang. The data sources in this study following Lofland in Moleong (2007), divided into:

a. Primary Data

This data is obtained directly from business financial records and other business-related information submitted directly by SME X.

b. Secondary Data

Data is obtained from the Ministry of Cooperatives and SMEs, the Central Bureau of Statistics, literature study, books and articles in online media.

3.2 Data collection technique

Data collection is executed by these method:

1) Interview

Interviews were conducted at SME X which produces cookies.

2) Observation

Observations were made on SME X's business activities and financial records.

3) Documentation

Arikunto (2006) explains that documentation is a record and record of events that have occurred before. Documentation in the form of hardcopy and softcopy related to business finance and photographs at the SMES X production house.

3.3 Data Validity Test

To test the validity of the data, source triangulation and technique triangulation was carried out. Sugiyono (2012) states that technical triangulation means using different data collections to obtain data from the same data source. Researchers use observation, interviews, and documentation for the same data source. Source triangulation means getting data from different sources using the same technique.

3.4 Data analysis

This study uses theoretical data analysis from Miles Huberman in Sugiyono (2012), which includes:

1. Data reduction

2. Data Presentation

3. Drawing Conclusion

4.0 RESEARCH ANALYSIS AND FINDING

Calculation of COGM according to SME X (home banking industry), which produces various types of cookies. The information obtained from the interview results revealed that the financial condition of SME X's business was experiencing problems, namely the net profit of the business was far below the estimated target, while in terms of volume the number of cookie

jars sold continued to increase. After conducting further research on the financial records of SME X's business, it was discovered that the determinant of the COGM for cookies only took into account the cost of raw materials and direct labor.

The research then focused on calculating the COGM (Cost of Production) according to SME X and according to full costing analysis. By calculating the COGM according to the full costing method, it can be seen how much the COGM should be charged or calculated by SME X. In discussing this study, the researchers focused on estimating the COGM on peanut cookies, which is one of the best-selling products (best seller). The average production of peanut cookies per month is 500 jars.

4.1 Direct material costs

Raw materials for making peanut cookies are flour, refined sugar, cooking oil, ground peanuts, and eggs. Next, we do use jar for packaging the cookies so jar will also be raw material. The calculation for direct material cost can be seen on Table 1. Table 1 shows the calculation of direct material costs for 3 (three) jars cookies. Thus, all the materials will be calculated for 3 jars cookies which need 500 gram flour, 250 ml cooking oil, 250 gram grounded peanuts, 250 gram sugar, one egg and three jars. Based on the calculation in Table 1, the direct raw material cost per jar for peanut cookies is IDR 19.000.

Table 1: Direct Material Costs per Dough (for 3 Jars)

Raw Materials	Quantity	Price (IDR)	Total Cost (IDR)
Flour	500 gr	14.000	7.000
Cooking oil	250 ml	24.000	8.000
peanut	250 gr	28.000	7.000
Sugar	250 gr	24.000	6.000
Egg	1	2.000	2.000
Jar	3	8.000	24.000
Other			3.000
Total (for 3 jars)			57.000
Raw material cost per jar			19.000

Source: Processed by the author based on interview with SME X

4.2 Direct labor costs

SME X sets the standard time needed to complete a jar of peanut cookies which is 1.2 hours and the wages given to employees are IDR 10,000.00 per hour. The information from SME X that average production per month is 500 jars. Thus, we calculated direct labor cost per jar which as can be seen on Table 2.

Table 2: Direct labor costs 500 Jars of Peanut Cookies

Total Production	500 jars
Time standart	1,2 hr /jar
Total time consuming	600 hr
Hourly wages	IDR 10.000/hr
Total direct labor wages (500 jars per month)	IDR 6.000.000-
Direct labor wages per jar	IDR 12.000,-

Source: Processed by the author based on interview with SME X

Based on Table 2 we found the direct labor wages per jar is IDR 12.000. This cost then will be used to calculate COGM or cost of production.

4.3 COGM calculation according to Full Costing

Based on the calculation of the cost of direct materials and direct labor, the COGM according to SMES X can be seen on Table 3.

Table 3: Cost of Production according to SMES X for 500 Jars of Peanut Cookies

Cost	Total (IDR)
Direct raw materials IDR 19,000 x 500 jars	9.500.000
Direct labor wages	6.000.000
COGM for 500 jars	15.500.000
COGM per jars	31.000

Source: Processed by the author based on interview with SME X

Based on Table 3 above, it can be seen that the cost of production or COGM, according to the calculation of SME X, is IDR 31,000 per jar.

4.4 COGM calculation according to Full Costing

The calculation of COGM (Cost of Production) considers all components of production costs, namely raw material costs, direct labor costs, and overhead costs. Direct material costs and direct labor costs according to full costing are the same as according to the calculation of SME X, so what is needed next is to calculate the amount of overhead costs incurred by SMES X:

Table 4: Overhead Costs according to Full Costing per month

Cost	Total (IDR)
Indirect wages	1.000.000
Additional ingredients	500.000
Maintenance of tools	300.000
Maintenance of tools	350.000
Transportation and internet	500.000
Depreciation of tools	250.000
Total	2.900.000
Total Overhead cost per jar	5.800

Source: Processed by the author based on interview with SME X

Thus, the calculation of COGM according to the full costing method is as follows:

Table 5: COGM according to Full Costing for 500 Jars of Peanut Cookies

Cost	Total (IDR)
Direct raw materials	9.500.000
Direct labor wages	6.000.000
Overhead costs	2.900.000
COGM for 500 jars	18.400.000
COGM per jar	36.800

Based on the explanation above, it is known that the COGM, according to SME X is IDR 31,000 per jar and according to the full costing method is IDR 36,800 per jar. The difference is IDR 5,800 per jar, a significant difference (18.7%). Analysis of COGM calculations according to SME X and the full costing method above, can explain why MSME X's business finances are problematic. It is because the expected profit is not as expected. Incorrectly setting the COGM can have an impact on setting the selling price incorrectly, determining marketing strategies such as giving discounts to consumers or resellers as well as sales promos where all of these things certainly significantly affect business profits/losses.

In addition, the negative impact of the understatement of the COGM calculation according to SME X has an effect on mistakenly cash flow planning and management. For example, SME X receives money from the sale of cookies, but does not allocate it for maintenance expenses for ovens, stoves, mixers and other equipment. As a result, when these tools are damaged, there is no reserve fund for servicing costs, so they are forced to take funds from posts that should have been allocated for other purposes. In fact, the worse condition is that SME X is forced to go into debt to finance the servicing of the damaged equipment.

In conclusions, we trust that SME X can re-determine the selling price according to the COGM based on full costing method. Then, it is expected that SME X will obtain better profitability, make the right business decisions and manage a better cash flow.

5.0 CONCLUSIONS

Based on research analysis and findings, the following conclusions are obtained:

1. Calculating the COGM peanut cookies based on SME X only costs raw materials and direct labor as components of production costs with a COGM value of IDR 31,000 per jar.
2. Calculating the COGM of peanut cookies according to the full costing method takes into account direct raw material costs, direct labor costs and overhead costs so that the COGM of chocolate cookies is IDR 36,800 per jar.
3. The difference between the COGM calculation according to SME X and the full costing method is IDR 5,800 per jar. The results of this analysis can explain why the achievement of profits is not as expected.

Furthermore, we suggest to SME X make a significant change in his business to use SME X should use the full costing method to determine the COGS for cookies and should re-specify their selling price to achieve better profits.

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