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Analysis of Product Cost Calculations Based On the Joint Cost Method in the Framework of Profit Planning For Furniture Msmes in Leilem Village

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Abstract: *This research examines the calculation of the cost of production using the joint cost method to carry out profit planning for furniture MSMEs in Leilem Village. The aim of this research is to analyze and classify costs based on the behavior of furniture production costs to calculate the cost of production based on the joint cost method. With the results of the joint cost calculation, it can be continued by determining the margin selling price and profit planning so that the selling price can be determined based on the joint cost cost price as a form of profit planning.*

. The aim of this research is to analyze and classify costs based on the behavior of furniture production costs to calculate the cost of production based on the joint cost method. With the results of the joint cost calculation, it can be continued by determining the margin selling price and profit planning so that the selling price can be determined based on the joint cost cost price as a form of profit planning.

This research uses a qualitative descriptive method, where descriptive aims to provide an objective picture of a situation. This research method explains what events occur at the research object related to the problem being studied.

Based on the research results of calculating the cost of production, a cost allocation using the average method was obtained, for a 3-door cupboard of Rp. 20,849,595 and an office desk of Rp. 4,169,919. Based on cost allocation calculations using the selling price method, the 3 door cupboard is Rp. 21,754,467.4 and an office desk of Rp. 3,265,046.58.

MSMEs engaged in furniture production in Leilem Village have not implemented the (joint cost) method of calculating the cost of production for each type of product produced due to a lack of skills and knowledge in accounting, which has an impact on profit planning, so if more than one product is produced, it is better to use the method. joint cost because using the joint cost method can provide information regarding the allocation of costs for each product produced. So that selling price determination can be planned well.

Keywords: *Calculation, Cost of Goods Production, Joint Cost Abstrak*

Penelitian ini, mengkaji tentang perhitungan harga pokok produksi menggunakan metode joint cost untuk melakukan perencanaan laba pada UMKM Mebel di Desa Leilem. Tujuan penelitian ini untuk menganalisis serta mengklasifikasi biaya berdasarkan perilaku biaya produksi mebel untuk menghitung harga pokok produksi berdasarkan metode joint cost (Biaya Bersama). Dengan hasil perhitungan joint cost maka dapat dilanjutan dengan menentukan harga jual margin dan perencanaan laba sehingga dapat menetapkan harga jual berdasarkan harga pokok joint cost sebagai wujud dalam perencanaan laba

. Tujuan penelitian ini untuk menganalisis serta mengklasifikasi biaya berdasarkan perilaku biaya produksi mebel untuk menghitung harga pokok produksi berdasarkan metode joint cost (Biaya Bersama). Dengan hasil perhitungan joint cost maka dapat dilanjutan dengan menentukan harga jual margin dan perancanaan laba sehingga dapat menetapkan harga jual berdasarkan harga pokok joint cost sebagai wujud dalam perencanaan laba.

Penelitian ini menggunakan Metode deskriptif kualitatif, dimana deskriptif bertujuan untuk memberikan gambaran suatu keadaan secara objektif. Metode penelitian ini menjelaskan tentang peristiwa peristiwa apa saja yang terjadi pada objek penelitian terkait dengan masalah yang diteliti.

Berdasarkan hasil penelitian perhitungan harga pokok produksi, didapat alokasi biaya menggunakan metode rata-rata, untuk lemari 3 pintu sebesar Rp. 20.849.595 dan meja kantor sebesar Rp.4.169.919. Berdasarkan perhitungan alokasi biaya menggunakan metode harga jual didapat untuk lemari 3 pintu sebesar Rp. 21.754.467,4 dan meja kantor sebesar Rp. 3.265.046,58.

UMKM yang bergerak dalam produksi mebel di Desa Leilem belum menerapkan metode (joint cost) perhitungan harga pokok produksi untuk setiap jenis produk yang dihasilkan dikarenakan kurangnya skill dan pengetahuan dibidang akuntansi sehingga berdampak pada perencanaan laba sehingga jika produk yang dihasilkan lebih dari satu produk sebaiknya menggunakan metode joint cost karena penggunaan metode joint cost dapat memberikan informasi terkait alokasi biaya untuk setiap produk yang dihasilkan. Sehingga penentuan harga jual dapat di rencanakan dengan baik.

I. Introduction

Every business actor in the production sector needs to calculate the cost of production from various cost elements that occur in the production process. Based on the calculation of the cost of production, management can determine the desired selling price and profit. Calculating the cost of production by using the right method can determine the real cost of production. Where with information on real cost price data, the selling price that will be offered to consumers will not be lower than the production costs of the product so that losses will be avoided by MSME players, besides that this information can be used as a basis for management in profit planning.

Basically, the weakness of MSME players is the difficulty in calculating the cost of production which results in errors in determining adequate selling prices resulting in difficulties in planning profits for these business activities. This is because some MSME players do not yet have knowledge about cost management, in this case using the right method for calculating the cost of production in the context of profit planning.

MSME business activities in the production sector are several businesses that produce by managing one type of raw material in the same production process to produce two or more types of products. In these production activities, calculating the cost of production requires an appropriate calculation and allocation method for the costs that arise for each product.

Where production uses the same raw materials to produce a type of product, the basic price can be calculated which is called joint costs. According to Supriyono, 2011 joint costs are costs that arise as a result of joint product production while joint products are several types of products produced together. or simultaneously using one or several types of raw materials, labor and the same factory facilities and these inputs cannot be followed in each type of product.

One of the MSME businesses engaged in industry in North Sulawesi is the Furniture Business located in Leilem Village, Sonder District, Minahasa Regency which uses the same raw materials and labor to produce various types of products such as chairs, tables, wardrobes.

THEORETICAL BASIS

MSMEs

Micro, Small and Medium Enterprises (MSMEs) in Law Number 20 of 2008 are productive businesses owned by individuals and individual business entities that meet the criteria for Micro Enterprises, stand-alone productive economic enterprises, carried out by individuals or business entities that are not subsidiaries. company or non-branch company that is owned, controlled, or is part, either directly or indirectly, of a medium or large business that meets the criteria for a Small Business and a stand-alone productive economic business, carried out by an individual or business entity that is not a subsidiary or branch of a company owned, controlled,or be part, either directly or indirectly, of a small business or large business with total net worth or annual sales proceeds as criteria for a medium business

COST OF GOODS SOLD

Hongren et al, (2005:45) define Cost of Goods Production as the cost of goods purchased to be processed until completion, both before and during the current accounting period.

The cost of goods manufactured is the total costs incurred by a company in producing a product. Hansen and Mowen (2012) argue that the cost of production reflects the overall cost of products completed during the current period.

COST OF PRODUCTION METHOD

The method for determining the cost of production can be divided into two, namely the full financing method and the variable financing method. The full costing and variable costing methods are methods for determining the cost of a product. The main difference between the two methods lies in the treatment of production costs which behave consistently. Mulyadi (2009) the method for determining the cost of products is to calculate all elements of work costs in the cost of production. In calculating the cost elements in the cost of production, there are two approaches, namely the full costing method and the variable costing method.

SHARED COSTS

Joint costs are costs incurred from the time the raw materials are first processed until the identity of the various products can be separated. Mulyadi (2015) explains that joint costs can be interpreted as joint overhead costs which must be allocated to various departments, both in companies whose production activities are based on orders and those whose production activities are carried out on a mass scale. Meanwhile, according to Mursyidi (2010), joint costs or also known as joint production costs are production costs consisting of raw materials, direct labor and the same factory overhead costs in one production process producing various types of main product.

II. Research Method

The type of research used is qualitative descriptive research, where this method is used to calculate the cost of production as a basis for profit planning. This research uses a qualitative method approach which is based on phenomena and explored logically in accordance with scientific principles. This research uses a case study method, where this case study approach will make it easier for researchers to directly observe production activities related to calculating production costs to determine the cost of production in the context of profit planning in the Leilem MSME furniture business. This research will require interactive interaction between the researcher and the research object to understand the reality of what is happening.

This research was conducted in Leilem Village which is located in Sonder District, Minahasa Regency with the research object being a furniture business which operates in the production sector of wood-based craft products. Meanwhile, the research implementation period is estimated to be approximately 9 months starting from April January 2023 to December 2023.

The data used is primary data, namely data collected directly by the researcher from the source through interviews and observations of production activities carried out by the research object as well as the results of interviews with the research object such as sales data, raw material purchases and so on. Secondary data sources, namely data directly collected by researchers as support from first sources and reference sources such as journals, books or articles related to the problem being researched. It can also be said that data is arranged in the form of documents.

This research uses 3 data collection techniques, namely: Observation or field research, namely data collection techniques through direct observation of research objects, interviews, with the aim of obtaining direct information that can explain or answer the research problem in question objectively. In this research, interviews were conducted with research objects, namely furniture owners in Leilem Village, and documentation studies are data collection techniques that are not aimed directly at research subjects. Documentation studies are a type of data collection in the form of: proof of raw material purchases, proof of product sales and data on costs that can influence the determination of the cost of production in the production of wood-based products.

In analyzing the data in this research, there are stages carried out in connection with allocating joint costs for the main product in determining the cost of production. The stages of data analysis are:

1. Analysis of Cost Cost Calculation Joint Cost Method

	Total Cost (Rp.)
Raw material	
Direct labor costs	
Factory Overhead Costs	
Total Joint Cost of Product Production	

2. Allocation of Joint Costs Using the Joint Cost Method

a. Weighted Average Method

Product	Number of Products produced (1)	Weighing Figures (2)	Number of Products x A Weigher 3 = (1)x(2)	Shared Cost Allocation

b. Market Price Method or Relative Selling Value Method

Product	Amount Generated	Selling Price per piece (Rp.)	Selling Value (Rp.)	Sale value	Cost allocation	Cost of Joint Products Per Piece

3. Comparison of Calculation of Cost of Goods Production

Product	Quantity	MSMEs in Leilem Village		Weighted Average		*Market Value Method*	
		t of goods sold (Rp.)	ach unit (Rp.) (HP;10)	t of goods sold (Rp.)	Each unit (Rp.)	t of goods sold (Rp.)	er Unit (Rp.)

4. Calculation of Cost of Goods for Product Sales

a. Calculation of Profit and Loss Weighted Average Method

(1)	(2)	(3)	(4)	(5) =	(6) =	(7) = (5)-

Size	Units for Sale	Selling Price per piece (Rp.)	Basic Price per piece (Rp.)	(2)x(3) Number of Sales (Rp)	(2)x(4) Total Cost Price	(6) Gross Profit (Rp.)

b. Calculation of Profit and Loss Market Price/Relative Price Method

(1) Size	(2) Units for Sale	(3) Selling Price per piece (Rp.)	(4) Basic Price per piece (Rp.)	(5) = (2)x(3) Number of Sales (Rp)	(6) = (2)x(4) Total Cost Price	(7) = (5)-(6) Gross Profit (Rp.)

5. Comparison of Gross Profit on Product Sales

lculation Method	r of Sales (Rp.)	Cost Price (Rp.)	ss profit (Rp.)

III. RESULTS AND DISCUSSION

This furniture company was founded in 2014, by Mr. Frany Sela initially had limited business activities to the production of dining tables equipped with four chairs and wardrobes with two doors. In line with consumer demand for several sizes of dining tables and wardrobes as well as office (bureau) tables, the owner of this business is trying to meet consumer demand by adding several experts in the field of furniture manufacturing and preparing quality raw materials to maintain consumer trust. With the motivation and commitment of this business owner, this business experienced development before the pandemic due to the large number of requests from both individuals and the private sector and government. Even in the midst of a pandemic, this business is still running despite experiencing a decline in sales turnover. After the pandemic until now, this business is running well because there is a level of customer trust and an adequate business location for production and a place to store production results. Until now they produce dining tables, cupboards with 2 and 3 doors.

Analysis of Calculation of Cost of Goods Production Based on Joint Cost Method Raw Material Costs

Production of 3 door cupboards in a month produces 10 cupboards made from 1 cubic meter of red wood at a price of IDR 2,000,000, 20 pieces of triplex for IDR. 1,700,000 and block board Rp. 6,750,000 per 30 shares.

pe of Raw Material	Usage Quantity	Price Per Unit (Rp.)	al Cost (Rp.)
Redwood	1 Cubic	2,000,000	2,000,000
Triplex Block Board	30 Sheets	225,000	6,750,000
Triplex	20 Sheets	85,000	1,700,000
Total cost			10,450,000

Labor

In furniture production activities, Furniture MSMEs in Leilem Village employ 5 workers consisting of 1 head of somil and 4 craftsmen.

No	Labor	Labor costs		Amount (Day/product)	al cost (Rp)
		r day (Rp)	Per product (Rp)		
1	Chief Somil	150,000		26 Days	3,900,000
2	Craftsman		350,000	10 products	3,500,000
Total Wages					7,400,000

No	ypes of Labor	Type of payment		Amount (Day/product)	al cost (Rp)
		Per day (Rp)	Per product (Rp)		
1	Craftsman		250,000	4	1,000,000
2					
Total Wages					1,000,000

Factory Overhead Costs Fixed Factory Overhead Costs

Fixed overhead costs include depreciation of equipment owned by Furniture MSMEs in Leilem Village, in the form of scaping machines, drilling machines and grinders. The method used for depreciation is the straight line method with no residual value.

duction tools	uisition cost	nomic age	Year of Acquisition	epreciation per Year	epreciation per Month
Scap Machine	750,000	4 years	2019	187,500	15,625

Drilling machine	1,500,000	5 years	2020	300,000	25,000
Gurinda	500,000	3 years	2020	166,667	13,889

Cost component	Unit price	Number of units	Total cost
Scap Machine Shrinkage			15,625
Drill Shrinkage			25,000
Scap Machine Shrinkage			13,889
Drill bit	15,000	1	15,000
Total cost			69,514

Variable Factory Overhead Costs

Cost component	Unit price	nber of units	Total cost
Key	20,000	50 pieces	1,000,000
Hinge	25,000	24 boxes	600,000
Mowilex Paint	95,000	4 cans	380,000
Top Color	84,000	20 cans	1,680,000

Paint			
Tener	200,000	2 cans	400,000
2.5 inch nails	25,000	1 kg	250,000
2 inch nails	25,000	1 kg	250,000
1.5 inch nails	30,000	1 kg	300,000
3.5 inch nails	30,000	1 kg	300,000
Fox glue	30,000	2kg	60,000
Pull	15,000	50 pieces	750,000
Rail Ball	13,000	10 packs	130,000
Total cost			6,100,000

Joint Cost Calculation Using the Full Costing Method

After all production costs have been traced according to the cost classification, joint product production costs can be calculated using the full costing method. The full costing method was chosen because it is a method that calculates all costs in one product production activity, the full costs in question are raw material costs, direct labor costs and factory overhead costs, both fixed and variable.

	Total Cost (Rp.)
Raw material	10,450,000
Direct labor costs	8,400,000
Factory Overhead Costs	6,169,514
Total Joint Cost of Product Production	25,019,514

Allocation of Joint Costs Using the Joint Cost Method

Allocation of joint costs from joint product production activities can be carried out using 4 joint cost methods, namely the average unit method, the weighted average method, the physical unit method and the market price method. In this case, the allocation of joint costs is limited to using the weighted average method and market price method, because the average cost per unit method is to calculate each cost which is almost the same, whereas furniture MSMEs in Leilem Village have quite different costs at this time. production of 3 door cupboards and office tables. For the physical unit method, its use is limited to products produced from mining

activities or product production activities that utilize natural products. The following is a description of the calculation of joint cost allocation using 2 joint cost methods.

Weighted Average Method

In calculating the costs together with calculating all aspects of the costs incurred, it shows that the costs incurred for the production of 3 Door Cupboards and Office Desks amounted to Rp. 25,019,514

Product	Number of Products produced (1)	Weighing Figures (2)	Number of Products x A Weigher 3 = (1)x(2)	Shared Cost Allocation 4=(3)/25,019,514
3 Door Wardrobe	10	2	20	20,849,595
Office desk	4	1	4	4,169,919
	14		24	25,019,514

This weighted average production quantity method is first multiplied by a weighing figure for each product based on the amount of materials used, the difficulty of making the product, the time consumed and the different types of labor used for each type of product produced. This method is difficult to use because the basic selection of weighing factors in certain situations cannot use just one weighing factor, but must combine several other factors such as the use of raw materials and auxiliary materials, but because the value of the raw materials used is relatively small, determining the weighing value automatically will not be appropriate. and the resulting cost price cannot reflect the true value of the product.

Market Price Method or Relative Selling Value Method

The 3 door cupboard has a selling value of Rp. 4,000,000 / piece and while the selling price for office desks is IDR. 1,500,000 /piece. The allocation of shared costs to each furniture product is based on the total sales value of the furniture products produced multiplied by the ratio of shared costs to sales value.

Product	Amount Generate d	Selling Price per piece (Rp.)	elling Value (Rp.)	Sales Value ((3) : Rp. 46,000,00 0 * 100%	hared Cost Allocation (4) x 25,019,514	Cost of Joint Products Per Piece
3 Door Wardrob e	10	4,000,00 0	40,000,00 0	86.95%	21,754,467. 4	2,175,446.7 5
Office desk	4	1,500,00 0	6,000,000	13.05 %	3,265,046.5 8	816,261,645
	14		46,000,00 0			

Comparison of Calculation of Cost of Goods Production,

After the joint costs have been allocated to each product produced, it can then be compared between the cost of production per unit according to the joint cost allocation method and the cost of production per unit according to the assumptions of MSME Furniture in Leilem Village.

Product	Quantity	niture MSMEs in Leilem Village		Weighted Average		*Market Value Method*	
		Cost of goods sold (Rp.)	ch unit (Rp.) (HP;10)	Cost of goods sold (Rp.)	ch unit (Rp.)	Cost of goods sold (Rp.)	er Unit (Rp.)

3 Door Wardrobe	10	18,935,000	1,893,5000	20,849,595	2,084,959.5	21,754,467.4	2,175,446.75
Office desk	4	2,906,250	581,250	4,169,919	1,042,479.75	3,265,046.58	816,261,645
Amount							

Calculation of Gross Profit on Product Sales

Calculation of Profit and Loss Weighted Average Method

(1) Size	(2) Units for Sale	(3) Selling Price per piece (Rp.)	(4) Basic Price per piece (Rp.)	(5) = (2)x(3) Number of Sales (Rp)	(6) = (2)x(4) Total Cost Price	(7) = (5)-(6) oss Profit (Rp.)
3 Door Wardrobe	10	4,000,000	2,084,959.5	40,000,000	20,849,595	19,510,405
Office desk	4	1,500,000	1,042,479.75	6,000,000	4,169,919	1,830,081
Amount	14	5,500,000				

Calculation of Profit and Loss Market Price/Relative Price Method

(1) Size	(2) Units for Sale	(3) Selling Price per piece (Rp.)	(4) Basic Price per piece (Rp.)	(5) = (2)x(3) Number of Sales (Rp)	(6) = (2)x(4) otal Cost Price	(7) = (5)-(6) oss Profit (Rp.)
3 Door Wardrobe	10	4,000,000	2,175,446.75	40,000,000	21,754,467.5	18,245,532.5
Office desk	4	1,500,000	816,261,645	6,000,000	3,265,046.58	2,734,953.42
Amount	14	5,500,000				

Comparison of Gross Profit on Product Sales

alculation Method	r of Sales (Rp.)	Cost Price (Rp.)	ss profit (Rp.)
Furniture MSMEs	46,000,000	21,841,250	21.841.7050
Weighted Average Method	46,000,000	26,019,878	19,980,122
Market Value Method	46,000,000	25.019.514.1	20.980.485.9

Profit Planning

Break Even Points

Break Even Point Weighted Average Method

a) 3 Door Wardrobe

$$BEp = \frac{Rp.\ 18.919.514}{(40.0000.000 - 20.849.595)/40.000.000}$$

$$BErp = Rp.\ 39,517,731$$

b) Office desk

$$BEp = \frac{19.919.514}{(6.500.000 - 4.169.919)/6.500.000}$$

$$BErp = Rp.\ 52,777,925$$

Break Even Point Market Price/Relative Price Method.

a) 3 Door Wardrobe

$$BEp = \frac{Rp.\ 18.919.514}{(40.0000.000 - 21.754.467,4)/40.000.000}$$

$$BErp = Rp.\ 41,477,581$$

b) Office desk

$$BEp = \frac{19.919.514}{(6.500.000 - 3.265.046,58)/6.500.000}$$

$$BErp = Rp.\ 40,024,329$$

CONCLUSIONS AND RECOMMENDATIONS

Based on data and analysis of the calculation of the cost of production using the full costing method, it can be concluded that:

1. MSMEs engaged in furniture production in Leilem Village have not implemented the method of calculating the cost of production for each type of product produced due to a lack of skills and knowledge in accounting, which has an impact on profit planning.
2. In producing various kinds of products using the same raw materials and labor, it is necessary to trace all cost allocations for each type of product using the joint cost method.
3. Based on data on furniture production costs for MSMEs in Leilem village, the cost of production of furniture can be calculated using the full costing method, however, this method cannot be used to track costs and allocate appropriate costs to various types of products using the same raw materials. The application of the joint cost method can be used as a basis for determining product selling prices so that profit planning can be carried out.
4. The application of Joint Cost Allocation in a furniture business with 2 types of production, namely 3-door cupboards and office desks, shows the basic price calculation as follows: COGS for cupboards per unit is IDR 2,175,446.75 and the total for 10 units is IDR 21,754,467.5. For 4 units of office desk HPP, the total of 4 units is IDR 816,261.5 with a total cost price of IDR 3,265,046.58. The total cost allocation for the two types of products using the weighted average method is IDR 25,019,514.
5. Based on the cost price calculation, the gross profit comparison can be seen, namely:

A. MSME gross profit amounted to IDR 21,841,7050
B. Based on the joint cost method, the total gross profit is IDR 19,980,122
C. Based on the market value method, the amount is IDR 20,980,485.9

Of the three things mentioned above, the basic price calculation using the join cost method is lower than the MSME calculation (full costing) and the market value method because this joint cost method has allocated product costs to each production result, this of course affects the gross profit generated. obtained by MSMEs

6. Profit planning for the production of 3 door cupboard furniture and office desks can be calculated based on the results of calculating the cost of the product using BEP (break event point) analysis.

There are also suggestions that researchers can suggest as follows:

1. It would be best for furniture MSME players to take part in training on the concepts and techniques of calculating the cost of production.
2. To calculate the cost of production, it is best to allocate all cost components incurred during the production process.
3. When calculating the cost of production for MSMEs, it is best to use the Joint Cost method to track production costs / allocate costs for product variations that use the same raw materials. So it can help furniture MSMEs in determining product selling prices and also help in evaluating profits.
4. It is important to calculate the cost of products using the correct method so that the amount of the cost of goods can be known both per unit and in total.
5. MSMEs should be able to use the right method in calculating total gross profit from varied production.
6. For profit planning, MSME players should base it on BEP analysis.

BIBLIOGRAPHY

[1]. Mulyadi. 2012. Cost Accounting 5th Edition. Publishing and Printing Unit YKPN College of Management Science, Yogyakarta

[2]. Mulyadi. 2015. Cost Accounting Edition 5. UPP-STIM YKPN, Yogyakarta. Murshidi. 2010. Cost Accounting. Second printing. Refika Aditama, Bandung.

[3]. Pricilia., Jullie J. Sondakh and Agus T. Poputra. 2014. Determination of Cost of Production in Setting Selling Prices at UD. Martabak Mas Narto Manado. EMBA Journal, Vol. 2, no. 2, Pg. 1077-1088.

[4]. Supriyono. R. 2011. Cost Accounting, Cost Planning and Control and Decision Making.

[5]. BPFE, Yogyakarta.

[6]. Law Number 20 of 2008 concerning Micro, Small and Medium Enterprises.

[7]. Wuryansari. Anise. 2016. Analysis of Calculation of Cost of Goods Production Using the Full Costing Method as a Basis for Determining Selling Prices (Case Study at Yogyakarta Seraphine Farm). Thesis. Faculty of Economics. Sanata Dharma University. Yogyakarta