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Analysis Of Joint Cost Calculation In Determining Cost Of Production Cv. Alfar Bakery

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ABSTRACT
The purpose of writing this thesis is to determine the calculation and knows the amount of profit/loss earned by the company. In this study using the relative selling value method, the authors conclude that: in calculating the allocation of joint costs at CV. Alfar Bakery generates a total cost of Rp 44.132.130. That it can be estimated that the total joint cost generated are 10% to the CV. Alfar Bakery revenue results. So that this company can determine the selling price of its products precisely and accurately, in the sense that it is neither too low nor too high.
Keywords: Joint Costs, Cost of Production, Profit

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Introduction

Economic development is increasing rapidly, so that people's needs also increase. Lots of business people are starting to show creativity or ideas to create something new in their business, so that it arises which makes competition increase. Determination of the cost of production is also very necessary, so that there will be no loss because the selling price offered to customers is not lower than the costs incurred. The problem of joint cost products in determining the total production costs that have been incurred starting from raw materials to products charged. The problem that arises in this study is the difficulty of determining the cost of production for each product.

According to pomalingo et al, regarding the Allocation of Joint Costs in Determining Production Costs at UD. Martabak Mas Narto. The results showed that the calculation of the cost of production by allocating joint costs using the relative selling price method or the market price method obtained the result that the amount of the COGS of each product was much lower than the selling price set by the company.

This analysis was conducted to determine the calculation of the cost of production of CV. Alfar Bakery uses cost accounting calculations and knows the amount of profit/loss earned by the company. This research is expected to help companies determine the selling price of their products precisely and accurately

Research Method

Object of research

This research was conducted at CV. Alfar Bakery which is a business whose activities are producing sandwiches with various flavors and are marketed by traveling around the Leles area using motorbikes.

Research data

Data Types and Sources

Sources of data used in this study are primary data & secondary data. Primary data in the form of data obtained directly from original sources related to the problem under study. Secondary data obtained from journals or books.

The type of data used is qualitative data, namely data in the form of numbers whose data can be calculated. These data include:

CV production data. Alfar Bakery April 2022
Raw Material Cost Data in April 2022
Direct Labor Cost Data in April 2022
Factory Overhead Data in April 2022

Data collection technique

In this study, the data collection technique obtained was an interview technique, a process of communication or interaction to collect the information needed in this study by way of a question and answer session between the researcher and the company owner.
Research variable
Free variable
In this study, the independent variable is joint costs. Joint costs are costs incurred in production activities such as raw material costs, labor costs, the same factory overhead costs to produce several products.
Bonded fees
In this study, the dependent variable is the cost of production. The cost of production is all direct and indirect costs incurred to produce several products during a certain period.
Data analysis method
The analytical method used in this study is a quantitative descriptive method. According to (Prof, Drs. Sugiyono, 2018) the descriptive research method is a study conducted to determine the value of the independent variable without making comparisons or connecting with other variables.
The data analysis process in this study is:
Observing the location of CV bread production. Alfar Bakery
Analyzing product costs in bread production at CV. Alfar Bakery
Collect data on product costs including: raw material costs, direct labor costs, factory overhead costs, non-production costs, etc.
Calculating production costs after the split off point so that joint cost allocations can be identified
Calculating joint cost allocation using the relative selling point method because it is the most logical way to allocate joint costs
Determining the cost of production using the variable costing method, using this method is useful for taking short-term decisions
Perform calculations of profit / loss that has been obtained by the company
Provide results and recommendations from this study to the owner of the CV. Alfar Bakery

Result
Company Production Process
For bread making, CV. Alfar Bakery uses ingredients in its production process, including:
Wheat
Milk
Sugar
Salt
Butter
Egg
Yeast
Water
For the equipment used for the manufacture of bread, namely:
Mixer (dough mixer)
Bread pan
Oven (toaster)
Then the stages in making bread as follows:
dough
Put the bread ingredients into the dough mixer machine or according to the dosage to be produced. After the dough is well mixed then wait ± 30 minutes until the dough starts to expand.
Formation
After the dough has expanded, it is then cut into several pieces to make it easier to form. Dough that has been cut into pieces and then formed into a round.
Bread filling

Then enter the bread filling with a variety of different flavors. The fillings for the bread include chocolate, strawberry, blueberry, coconut and cheese flavors. Then it is formed into a round again so that it looks neat, and stored in a bread tin.

Baking

If you have done the process of forming and filling the bread, the next process is to put the bread dough in the oven or toaster.

Packaging

After the bread is cooked and removed from the oven, the next process is to wait a while for the cooling process so that the bread does not evaporate on the plastic packaging. If it's cold then the packaging process was carried out.

Calculation of costs incurred

In determining the cost of production of CV. Alfar Bakery does not carry out detailed calculations or does not use a special method.

Table 1. Bread production data CV. Alfar Bakery April 2022

No	Jenis roti	Produksi/hari	Jumlah hari	Produksi/bulan
1	Roti cokelat	300	26	7.800
2	Roti keju	300	26	7.800
3	Roti strawberry	300	26	7.800
4	Roti kacang	300	26	7.800
5	Roti abon	300	26	7.800
6	Roti cappucino	300	26	7.800
Total		1.800		46.800

Source: CV. Alfar Bakery

From the data above, it can be seen that during April 2022 CV. Alfar Bakery can produce 1,800 loaves of bread every day and produces six flavors, namely chocolate, cheese, strawberry, peanut, shredded and cappuccino. Every day CV. Alfar Bakery produces 300 loaves of bread for one flavor variant. So in April the bread produced by CV. Alfar Bakery as many as 46,800 loaves of bread, consisting of 7,800 loaves of bread for each flavor variant:

Production cost

Raw Material Costs

The initial stage in bread making is the dough. By entering all the raw materials into the dough machine (mixer). The following are raw materials and costs incurred in making bread at CV. Alfar Bakery in a month

Table 2. April 2022 Raw Material Costs

No	Bahan baku	Jumlah (kg)	Harga satuan	Jumlah (Rp)
1	Terigu	1.500	8.000	12.000.000
2	Gula pasir	445	15.000	6.675.000
3	Mentega	120	20.000	2.400.000
4	Telur	60	20.000	1.200.000
5	Garam	7	12.000	84.000
6	Ragi	10	25.000	250.000
	Total Biaya Bahan Baku			Rp. 22.609.000

Source: Processed data

The raw material for flour in a month requires 1,500 kg at a price of IDR 8,000/kg so that the total cost of flour in a month is IDR 12,000,000. The raw material for granulated sugar in a month requires 445 kg at a price of IDR 15,000/kg so that the total cost of granulated sugar in a month is IDR 6,675,000. Then for egg raw materials in a month it requires 60 kg at a price of IDR 20,000/kg so the total cost of eggs in a month requires IDR 1,200,000. For butter raw materials in a month requires 120 kg at a price of IDR 20,000/kg so that the total cost needed in a month is IDR 2,400,000. And for yeast raw materials in a month requires 10 kg at a price of IDR 25,000/kg so the total cost of yeast incurred in a month is IDR 250,000.

So it is known that the total cost of all raw materials CV. Alfar Bakery for April 2022 is IDR 22,609,000 for six types of bread. Each type of bread produced costs IDR 3,770,000.

If the dough is finished, the second stage is forming the dough, by cutting the dough into several parts and then forming them round. The purpose of rounding the dough is to make it easier in the next stage. Then the next stage after forming then the dough is filled with various flavors of chocolate, cheese, strawberry and nuts. The following are additional costs for bread fillings incurred by CV. Alfar Bakery during April 2022:

Table 3. Additional Bread Contents for April 2022

No	Jenis bahan	Jumlah	Harga/kg	Jumlah (Rp)
1	Coklat	65	30.000	1.950.000
2	Keju	39	28.000	1.092.000
3	Strawberry	26	25.000	650.000
4	Kacang	26	30.000	780.000
5	Abon	13	45.000	585.000
6	Cappuccino	13	30.000	390.000
	Total Biaya Tambahan Isi Roti			Rp. 5.447.000

Source: Processed data

The table above is the cost incurred for the cost of filling bread in April 2022. To buy chocolate, cheese, strawberries, nuts, shredded and cappuccino. Requires a total cost of IDR 5,447,000. Within a month CV. Alfar Bakery requires 65 kg of chocolate at a price of IDR 30,000/kg, so the cost for chocolate is IDR 1,950,000. For cheese needed in a month as much as 39 at a price of IDR 28,000/kg, so the cost incurred for cheese is IDR 1,092,000. Then for strawberries it takes 26 kg with a unit price of IDR 25,000, so the costs incurred for strawberries are IDR 650,000. Then 26 kg of peanuts are needed with a unit price of IDR 30,000, so the cost incurred for peanuts is IDR 780,000. For shredded meat it takes 13 kg with a unit price of IDR 45,000, so the cost needed for shredded is IDR 585,000. And for cappuccino it requires 13 kg with a unit price of IDR 30,000, so the cost incurred for cappuccino is IDR 390,000. After the process of kneading and forming the dough, further processing takes place after the split off point. Where is CV. Alfar Bakery performs its split point process, namely filling bread with flavor variants. So it requires additional costs to buy the ingredients for the bread.

Direct labor costs

Table 4. Direct Labor Costs April 2020

Karyawan	Jumlah	Gaji	Jumlah (Rp)
Karyawan produksi	6	1.500.000	9.000.000
Total Biaya Tenaga Kerja Langsung			Rp 9.000.000

It is known that CV. Alfar Bakery in April 2022 incurred a direct labor cost of IDR 9,000,000. of this amount will be allocated to the four bread variants produced. Then each loaf requires direct labor costs of IDR 1,500,000.

Factory Overhead Cost

Table 5. April 2022 Factory Overhead

No	Jenis biaya	Jumlah (Rp)
1	Biaya penyusutan	395.000
2	Biaya listrik	338.130
3	Biaya gas	1.144.000
	Total Biaya *Overhead*	Rp 1.877.130

It is known that CV. Alfar Bakery in April 2022 incurred factory overhead costs of IDR 1,877,130. Of this amount, it will be allocated to the four bread variants produced. Then each loaf requires a factory overhead cost of IDR 312,855.

Non-Production Costs

Marketing costs

Table 6. April 2022 Non-Production Costs

No	Biaya pemasaran	Jumlah (Rp)
1	Biaya penyusutan kendaraan	46.000
2	Biaya tenaga kerja tidak langsung (karyawan pemasaran)	8.000.000
3	Biaya bensin	2.600.000
Total Biaya Non-Produksi		Rp 10.646.000

Source: Processed data

For non-production costs, there are marketing costs. CV. Alfar Bakery has marketing costs which consist of vehicle depreciation costs, gasoline costs, and indirect labor costs (marketing employees). In a month issued for vehicle depreciation costs of IDR 46,000. Then for the cost of gasoline, which is IDR 2,600,000 and for indirect labor costs (marketing employees) IDR 8,000,000.

So the total non-production costs are the cost of installing CV. Alfar Bakery in April which cost IDR 10,646,000. If the total cost is allocated to each bread flavor variant, then the non-production costs incurred are IDR 1,775,000

Table 7 Shared Costs

Biaya produksi			Biaya Non-Produksi	Total Biaya Bersama
BBB	BTKL	BOP	Biaya Pemasarran	
22.609.000	9.000.000	1.877.130	10.646.000	Rp 44.132.130

You can find out the joint costs from CV. Alfar Bakery consists of production costs which consist of Raw Material Costs with an amount of Rp. 22,609,000, then Direct Labor Costs with an amount of Rp. 9,000,000, and Overhead Costs with an amount of Rp. 1,877,130. Then added the non-production costs, namely Marketing Costs with a total of IDR 10,646,000. Then the total joint costs that have been calculated are IDR 44,132,130.

Determination of Cost of Production
Table 8. April 2022 Cost of Production

Jenis Roti	Harga Jual/unit	Unit yg diproduksi	Jumlah Penjualan	Biaya Split off	Nilai Jual Hipotesis	Nilai Jual Hipotesis Relatif	Biaya Bersama	Alokasi Biaya Bersama	Harga Pokok/Unit
			(1)*(2)		(3)-(4)	(5)/Σ(5)		(6)*biaya bersama	(7)/(2)
	1	2	3	4	5	6	7	8	9
Roti Cokelat	2.500	7.800	19.500.000	5.720.000	13.780.000	15%	44.132.130	6.838.190	877
Roti Keju	2.500	7.800	19.500.000	4.862.000	14.638.000	16%	44.132.130	7.263.964	931
Roti Strawberry	2.500	7.800	19.500.000	4.420.000	15.080.000	17%	44.132.130	7.483.302	959
Roti Kacang	2.500	7.800	19.500.000	4.550.000	14.950.000	17%	44.132.130	7.418.791	951
Roti Abon	2.500	7.800	19.500.000	4.355.000	15.145.000	17%	44.132.130	7.515.558	964
Roti Cappucino	2.500	7.800	19.500.000	4.160.000	15.340.000	17%	44.132.130	7.612.325	976
∑			117.000.000		88.933.000	100%		44.132.130	

With this calculation above, it can be seen that the cost of the product obtained is smaller than the selling price set by CV. If you look at the difference in the company's selling price with each bread that has been calculated using cost accounting calculations, the results are very far away. It can be seen that the cost of production of brown bread is 6,838,190 (15% * 44,132,130), then the cost per unit can be obtained at Rp. 877 (6,838,190 / 7,800 units). Then for the cost of production of cheese bread which is equal to 7,263,964 (16% * 44,132,130), so that a cost per unit can be obtained of IDR 931 (7,263,964 / 7,800 units). The cost of production of strawberry bread is 7,483,302 (17% * 44,132,130), obtaining a cost per unit of Rp. 959 (7,483,302 / 7,800 units). Then the cost of production of peanut bread is 7,418,791 (17% * 44,132,130), so that the cost per unit is IDR 951 (7,418,791 / 7,800 units). The cost of production of shredded bread is 7,515,558 (17% * 44,132,130) so that the cost per unit is IDR 964 (7,515,558 / 7,800 units). Whereas the cost of production of cappuccino bread is 7,612,325 (17% * 44,132,130) so that the cost per unit is IDR 976 (7,612,325 / 7,800 units).

Calculation of Profit/Loss by Company
Table 9. Calculation of April 2022 Profit/Loss

Keterangan	Cokelat	Keju	Strawberry	Kacang	Abon	Cappucino	Jumlah
Hasil penjualan: 7.800*2.500	19.500.000	19.500.000	19.500.000				

7.800*2.500				19.500.000	19.500.000	19.500.000	117.000.000
7.800*2.500							
7.800*2.500							
7.800*2,500							
Jumlahpenjualan HPP							
-biaya bersama	6.838.190	7.263.964	7.483.302	7.418.791	7.515.558	7.612.325	
-biaya pengolahan tamahan	5.720.000	4.862.000	4.420.000	4.550.000	4.355.000	4.160.000	72.199.130
Jumlah HPP							
Laba	Rp6.941.810	Rp7.374.698	Rp7.596.698	Rp7.531.209	Rp7.629.442	Rp7.727.675	Rp44.800.870

Source: Processed data

It can be seen that the calculation of the profit obtained for each type of bread, that the profit generated from the sale of brown bread is Rp. 6,941,810, the profit generated from the sale of cheese bread is Rp. 7,373,698, then the profit generated from the sale of strawberry bread is Rp. 7,596 .698, the profit from the sale of peanut bread is Rp. 7,531,209, the profit from shredded bread is Rp. 7,629,442, while the profit from cappuccino bread is Rp. 7,727,765. Then the total gross profit obtained from all types of sandwiches produced by CV. Alfar Bakery in April 2022, which is IDR 44,800,870.

Conclusion

After calculating the joint cost allocation using the relative sales value method, the authors conclude that:

In calculating the allocation of joint costs on the CV. Alfar Bakery generates a total cost of IDR 44,132,130. From the joint allocation calculation, the cost of the product is obtained, for brown bread Rp. 877, cheese bread Rp. 931, strawberry bread Rp. 959, peanut bread Rp. 951, shredded bread Rp. 964, and for cappuccino bread Rp. 976. So with thus the cost of the product obtained is smaller than the selling price set by CV. Alfar Bakery.

In calculating profit using the relative selling price method, it produces a gross profit of Rp. 44,800,870, which consists of profit for brown bread of Rp. 6,941,810, cheese bread of Rp. 7,374,698, strawberry bread of Rp. 7,596,698, peanut bread IDR 7,531,209, shredded bread IDR 7,629,442, and cappuccino bread IDR 7,727,675. So that you can know the gross profit in CV. Alfar Bakery using this calculation.

Refrence

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