

## Analysis of Production Cost Calculations Using The Full Costing Method of Mantahukan Fish on Ud. Kerupuk Ikan Kembar

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### ABSTRACT

*Abstract : This research was conducted at UD Kerupuk Ikan Kembar which operates in the Mantahukan fish cracker product industry, with the aim of knowing the calculation of the cost of production at UD Kerupuk Ikan Kembar and to analyze the application of the full costing method for calculating the cost of production at UD Kerupuk Ikan Kembar. This type of research uses quantitative descriptive research. Data was collected using documentation, interviews, and data analysis methods in the form of descriptive analysis. The research results show that UD Kerupuk Ikan Kembar still uses a simple production cost calculation method by adding up production costs consisting of raw material costs, direct labor costs, and supporting costs. Application of the full costing method by detailing all production costs that occur, including raw material costs.*

### INTRODUCTION

To manage a business that is directly related to the production of goods, information on production costs is needed. Production costs are used by companies to set their profit targets and become the company's benchmark in determining product selling prices. So, if a company makes a mistake in calculating production costs, there will be an error in calculating profit or loss. On the other hand, if the company calculates production costs carefully and correctly, it can determine the correct profit target and selling price (Batubara, 2013). This research uses the full costing method to calculate production costs at UD Kerupuk Ikan Kembar.

According to Mulyadi (2015), cost accounting has three main objectives, namely: determining the cost of products, controlling costs, and making decisions. To achieve the goal of determining the cost of products, cost accounting records, classifies, and summarizes the costs of producing products or providing services. Production costs are a collection of costs incurred to obtain and process raw materials into finished products. The perception of production costs is largely determined by the method of production, namely production based on orders and mass production. According to Maghfirah and Syam (2016), most micro, small, and medium enterprises (MSMEs) only have very minimal knowledge of calculating production costs and do not even use the right methods. The method for calculating production costs is still very simple, generally only calculating direct raw material costs and direct labor costs. The calculation of factory overhead costs, both fixed and variable, has not been taken into account in detail so that production costs do not reflect actual costs, thus having an impact on determining the selling price and profit objectives desired by the motivation for carrying out this research was to provide input to UD Kerupuk Ikan Kembar, a small business located in Jelapat District. South Hamlet, South Barito Regency, and Buntok, especially in terms of calculating production costs. The researchers hope that these small business actors can determine the appropriate method for calculating production costs. If the cost calculation is done correctly, it can have an impact on determining a fair selling price. In this way, it does not harm producers but also does not burden consumers and is able to compete with similar entrepreneurs. If the methods that have been determined can be implemented well, it is hoped that the existing industry can survive by using the potential of its natural resources and creating jobs for the local community.

Based on the description of the background and motivation for conducting this research, several questions were formulated as follows: Firstly, how is the calculation of production costs currently applied to UD Kerupuk Ikan Kembar? Second, how do you calculate the production costs of UD Kembar Fish Crackers using the full costing method? With the aim of analyzing the production costs of Mantahukan fish carried out by UD. Kerupuk Ikan Kembar and calculating production costs using the full costing method.

This research contributes to small, micro, and medium businesses in calculating production costs,

as well as enriching the literature regarding cost calculations using the full costing method. This research also shows examples of small businesses in Jelapat, Dusun Selatan District, and Buntok that calculate costs simply and have an impact on determining selling prices. In particular, this research contributes to UD Kerupuk Ikan Kembar, which carries out research on cost calculations in order to determine the right selling price for products.

## **LITERATURE REVIEW**

### **Understanding Costs**

The definition of taking a toll in a wide sense is the giving up of financial assets that can be measured in units of cash in an effort to get something to realize certain objectives, whether those that have as of now happened or are recently arranged.

The limit definition of fetch is the giving up of financial assets in units of cash to get resources (Sujarweni, 2019). According to Mulyadi (2015), in a wide sense, costs are penances of financial assets, measured in units of money, that have happened or will happen for certain purposes. In the meantime, according to Krismiaji and Aryani (2011), Kos, or costs, are cash or cash equivalents sacrificed to buy merchandise or services that are expected to supply benefits to the company as of now or within the future.

Costs that are measured and assigned to products, departments, projects, and activities are called cost objects. To assign costs to a cost object, the costs are first collected in the accounting system used, then the costs are charged. Accurately allocating costs to cost objects is critical. According to Mulyadi (2015), costs can be classified as follows:

1. Generalized toll classification, which comprises generation costs and non-production costs
2. Grouping costs according to when they happen, comprising intermittent costs and item costs
3. Classifying costs according to their destinations, which comprises costs based on the goals of planning outside monetary reports, evaluating taken a toll behavior in reaction to changes in movement, doling out costs to taken a toll objects, and making choices.

Cost classification may be the process of methodically gathering the costs of all cost elements into certain, more brief bunches to supply more brief and imperative data (Bustami and Nurlela, 2013). In the meantime, agreeing to another conclusion, the figures alluded to as costs can be classified as follows :

1. Based on a fetched gathering
  - a. Factory/production costs
    - Material crude materials are costs brought about to buy the most crude materials used to deliver merchandise.
    - Direct labor is the toll taken to pay the most workforce, which is straightforwardly related to items delivered from crude materials to wrapped up products.
    - Factory overhead costs Costs caused to deliver merchandise other than crude materials and coordinate labor costs
  - b. Commercial costs
    - Marketing costs Costs incurred to carry out marketing or product promotion activities
    - Administrative costs Costs incurred to coordinate and control product production and marketing activities
2. Based on cost behavior
  - a. Variable costs. Costs vary, but changes are proportional to changes in production and sales volume.
  - b. Fixed cost. Costs that do not change in size even though the amount produced or sold changes within normal capacity
  - c. Semi-variable costs. Costs vary according to changes in quantity, and there are fixed rates.
  - d. Tiered fees. The costs incurred must remain within the production range.
3. Based on decision-making

- a. Relevant costs Costs must be arranged in development since this will impact the company's decision-making in the future.
  - b. Cost is irrelevant. Costs that are no different from existing alternative actions.
  - c. These costs will not influence decision-making and will remain the same regardless of the alternative chosen.
4. Based on something that is financed
- a. The classification of costs according to the things financed is divided into 2, namely:
  - b. Direct costs are costs whose benefits can be straightforwardly distinguished within the item being made.
  - c. Indirect costs are costs whose benefits cannot be known to the product being made.
5. Opportunity Cost  
Benefits that will be obtained if one alternative is chosen from several existing alternatives Or, in other words, income that is not obtained because of choosing one alternative from several available alternatives (Sujarweni, 2019).

### **Understanding the Cost of Goods Production**

Hansen and Mowen (2009) say, "The fetch of merchandise fabricated reflects the entire fetch of merchandise completed within the current period." According to Bustami and Nurlela (2013), "generation costs are a set of generation costs that incorporate coordinated crude materials, direct labor costs, and manufacturing plant overhead costs, plus product stock within the introductory preparation and short item stock within the last prepare. Mulyadi (2015) states that data on the toll of generation calculated over a certain time period is valuable for administration to :

1. Determine the offering cost of the item. Mass-generation companies handle their items to meet stock levels in distribution centers. Hence, generation costs are calculated over a certain period of time to create data on generation costs per unit of item.
2. Monitor the realization of generation costs. On the off chance that it has been chosen to actualize a generation arrangement for a certain period, then management needs data with respect to the real generation costs brought about to execute the arrangement. Hence, toll bookkeeping is utilized to gather data with respect to generation costs brought about during a certain period in order to control whether the generation handle devours the entire generation costs that have already been calculated.
3. Calculate the intermittent benefit or misfortune. To discover out whether the company's generation and promotion exercises in a certain period are able to create net benefits or result in net misfortunes, administration needs data with respect to the production costs brought about to deliver items within a certain period of time.
4. Determine the fetched of wrapped up products and the stock of merchandise in advance, which are displayed within the adjust sheet.

### **Method of Determining the Cost of Goods Production**

According to Sujarweni (2019), the total costing strategy could be a calculation strategy that can be utilized to decide the essential cost of an item by apportioning all generation costs, both settled and variable, to the products or products delivered. This method is often known as absorption or ordinary costing.

According to Mulyadi (2015), the complete costing strategy could be a strategy of deciding generation costs that takes into consideration all parts of the generation costs of an item, including fabricating preparation, counting crude fabric costs, generation costs, coordinating labor, and manufacturing plant overhead costs, both settled costs and overhead costs, factory, variable. Generation costs based on the complete fetched strategy comprise of generation-fetched components counting crude fabric costs, coordinating labor costs, and production line overhead costs. Deciding the taken toll of an item utilizing the complete taken toll strategy incorporates the taken toll of crude materials, which are generation costs. the costs of crude materials that will be utilized to create an thing; labor costs, namely the costs utilized to pay individuals who work to prepare a product; and overhead costs, specifically non-costs, labor, and crude fabric costs. To calculate the components of generation costs, there are two approaches (Iryanie, 2019), specifically

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1. Full-cost strategy Full costing may be a strategy of deciding the fetched of generation that takes into consideration all components of generation costs, counting crude fabric costs, labor costs, and manufacturing plant overhead, both variable and settled, as well as non-production costs (promoting, organization, and overhead costs). fetched).
2. Variables are calculated using a toll calculation strategy (variable costing). Variable costing may be a strategy of deciding the fetched cost of generation that, as it were, takes into consideration variable generation costs within the taken toll of generation, which incorporate crude fabric costs, labor costs, and variable overhead costs. From the manufacturing plant. Variable costing strategies ought to be isolated by behavior and movement. Generation costs utilizing the variable costing strategy incorporate crude fabric costs, coordinated labor costs, and variable manufacturing plant overhead costs. Settled production line overhead costs are calculated as period costs and charged within the period in which they are brought about, not as generation costs.

### **Understanding the Selling Price**

The selling price is an effort to balance the desire to obtain maximum profits from high income with a decrease in sales volume if the selling price charged to consumers is too expensive (Krismiaji and Anni in Negeri (Henri Slat, 2013)). Price is also the amount of money (plus some products, if possible) required to obtain a certain combination of goods and services.

### **METHODS**

In this inquiry, quantitative expressive inquiry was utilized. Quantitative examination may be an investigation strategy based on the logic of positivism (Sugiyono, 2016). According to Sugiyono (2016), "population could be a generalized region consisting of objects or subjects that have certain amounts and characteristics decided by analysts to be examined and, after that, conclusions drawn. The populace utilized is the UD Kerupuk Ikan Kembar generation, which took a toll report for Eminent 2023. The test taken is information relating to crude fabric costs, coordinated labor costs, and manufacturing plant overhead costs for Eminent 2023. Information was gotten from documentation on recording UD generation costs at Kerupuk Ikan Kembar. The following calculation is used to perform the depiction examination :

a.	Cost of Production, Full Costing		
1)	Raw Material Costs	IDR	xx
2)	Direct labor costs	IDR	xx
3)	Factory Overhead Costs	IDR	xx
	Total Production Costs	IDR	xx
	Production Quantity (Ball)	IDR	xx
	HP Production Per Ball	IDR	xx
b.	Selling price		
1)	HP Production	IDR	xx
2)	Gross profit (30%)	IDR	xx
	Selling price	IDR	xx
	Production (Ball)	IDR	xx
	Selling Price Per Ball	IDR	xx



Figure 1. Materials, equipment and tools used

## RESULTS

### Mantahukan Fish Cracker Production Costs

In this research, the data used is data on the use of production costs incurred by UD Kerupuk Ikan Kembar in August 2023 by setting an expected profit of 30%, which can be seen in Table 1 below:

Table 1 Calculation of Production Costs for Mantahukan Fish Products

No	Description	Need	Unit Price (IDR)	Value (IDR)
1	Mantahukan Fish	24 Kg	65,000	1,560,000
2	Flour	6 Kg	11,000	66,000
3	Starch	66 Kg	15,000	990,000
4	Spices	12 Package	40,000	480,000
5	Food coloring	1 Bottle	5,000	5,000
6	Refill the gallon water	12 Gallon	5,000	60,000
7	Production employee salaries per production	12 time	20,000	240,000
8	Plastic gloves	2 Wrap	10,000	20,000
9	Size 10 plastic ice cubes	1 Wrap	8,000	8,000
10	½ kg plastic packaging	1 Wrap	10,000	10,000
11	Stamp for labels, paper, stamping pads, ink	1 Package	40,000	40,000
12	Refill 3 kg LPG gas	4 Fruit	30,000	120,000
13	Neat rope	1 Wrap	5,000	5,000
	Total Production Costs			3,604,000
	Expected profit 30%			1,081,200
	Selling price			4,685,200
	Mantahukan Fish Production Amount			72 kg
	Selling Price Per Kg			65,000

Source : Data obtained from UD Ikan Kembar and processed by researchers

Table 1 shows that to produce 72 kg of Mantahukan UD Ikan Kembar dry crackers, the production cost is IDR 3,604,000. Of this amount, the selling price is set at IDR 65,000/kg. This is based on the custom of determining the selling price based on the quantity required. plus the expected profit divided by the amount of production.

### Full Costing Method

As in calculating the cost of production, the elements of production costs are separated, namely raw material costs, direct labor, and factory overhead. The calculation of the cost of production using the full costing method in August 2023 for a 72 kg product is as follows:

Table 2 Raw Material Requirements

No	Description	Need	Unit Price (IDR)	Value (IDR)
Total production is 72 kg of Manahukan fish crackers				
1	Mantahukan Fish	24 Kg	65,000	1,560,000
2	Flour	6.0 Kg	11,000	66,000
3	Starch	66 Kg	15,000	990,000
4	Spices	12 Package	40,000	480,000
5	Food coloring	1 Bottle	5,000	5,000
6	Refill gallon water	12 Gallon	5,000	60,000
Total Raw Material Costs				3,161,000

Source: Processed data results

In table 2 of the sorting of production cost data, the direct raw material needed to produce 72 kg of Mantahukan fish crackers is IDR 3,161,000.

Table 3 Direct Labor Needs

No	Description	Need	Unit Price (IDR)	Value (IDR)
Total production is 72 kg of Manahukan fish crackers				
1	Salary of 1 production employee per production	12 time	20,000	240,000
Total Direct Labor Costs				3,161,000

Source : Processed data results

In Table 3, it is shown that the direct labor requirements used to produce 72 kg of Mantahukan fish crackers are carried out by 1 worker, namely workers who work directly in the production process of processing fish crackers for 12 production times worth IDR 240,000.

Table 4 Factory Overhead Costs

No	Description	Need	Unit Price (IDR)	Value (IDR)
Total production is 72 kg of Manahukan fish crackers				
1	Plastic gloves	2 Wrap	10,000	20,000
2	Size 10 plastic ice cubes	1 Wrap	8,000	8,000
3	½ kg plastic packaging	1 Wrap	10,000	10,000
4	Stamp for labels, paper, stamping pads, ink	1 Package	40,000	40,000
5	Refill 3 kg LPG gas	4 Fruit	30,000	120,000
6	Neat rope	1 Wrap	5,000	5,000
7	Manual cutting tool	1 Fruit		200,000
8	Cost of depreciation			50,000
Total Factory Overhead Costs				453,000

Source: Processed data results

Table 4 shows the actual factory overhead costs required for the production of 72 kg of Mantahuka fish crackers worth IDR. 453,000, which are used for plastic, fuel, packing, and shrinkage.

After sorting the elements of production costs using the full costing method, the cost of production and selling prices are calculated as follows:

Cost of goods sold		
1	Raw Material Costs	IDR 3,161,000
2	Direct labor costs	IDR 240,000
3	Factory Overhead Costs	IDR 453,000
	Total Production Costs	IDR 3,854,000
	Production quantity (Kg)	72
	Cost of Production per Kg	IDR 54,000
Selling price		
1	HP Production	IDR 3,854,000
2	Gross profit (30%)	IDR 1,156,200
	Selling price	IDR 5,010,200
	Production Quantity (Ball)	72
	Selling Price per Kg	IDR 70,000

## Discussion

### Calculation of Raw Material Costs

Material Raw materials are materials that are an inseparable part of the finished product and can be physically and easily traced to the product. Raw materials are integral to the company's finished product and can be traced easily. In this case, the entrepreneur has calculated the cost of raw materials correctly by multiplying the raw materials used by the purchase price. In this research, the total raw material costs incurred were IDR. 3,161,000 to produce 72 kg of Mantahukan fish crackers.

### Direct Labor Cost Calculation

Direct labor is also called manual labor (touch labor) because direct labor does manual work on the product during the production process. Direct labor costs are costs that can be easily traced to the finished product. The calculation of direct labor costs carried out by UD Kerupuk Ikan Kembar is correct; these costs are detailed and calculated carefully. The wages earned by workers are adjusted to the results of their work. The total direct labor costs incurred in August 2023 are IDR 240,000, paid to 1 worker who works directly in the production process.

### Factory Overhead Cost Calculation

The amount of factory overhead costs can be known after the goods have been produced. Overhead costs are the most complex costs and are not easily identified in finished products. UD Kerupuk Ikan Kembar charges overhead costs for each product produced. In his calculations, the owner has not recorded all overhead costs related to the product, so the recording is still incomplete and inaccurate for calculating the cost of producing fish crackers. There are several costs that have not been taken into account by UD Kerupuk Ikan Kembar, including tools and depreciation costs. In fact, these costs are still related to the product and need to be calculated.

Table 4 shows that the actual factory overhead costs are IDR453,000 to produce 72 kg of Mantahukan fish crackers, obtained from the sum of all existing overhead costs.

### Calculation Comparison

The process of calculating the cost of production of fish crackers carried out by UD. Kerupuk Ikan Kembar It is still relatively simple, namely by adding up all the costs incurred, such as raw material

costs, labor costs, and other supporting costs. The use of this method is aimed at determining the minimum selling price in accordance with market conditions in order to achieve maximum profit. So far, UD Kerupuk Ikan Kembar has not paid much attention to recording and calculating the cost of products because the product selling price set is considered to have provided an appropriate profit, so this calculation is not considered important. When examined from an accounting perspective, calculating the correct cost of goods will give the company its actual profit or loss. According to accounting, calculating the cost of production can be done using several methods, one of which is the full costing method. In this method, all elements of production costs are calculated into the cost of production, which consists of raw material costs, direct labor costs, and factory overhead costs. Recording using the full costing method is very suitable for small and medium businesses that are still relatively simple.

The following is a comparison of the calculation of the cost of production of Mantahukan fish crackers at UD. Kerupuk Ikan Kembar using the full costing method in the following table :

Table 5 Comparison of Calculation of Cost of Production and Selling Price

No	Description	UD. Kerupuk Ikan Kembar (IDR)	<i>Full Costing Method</i> (IDR)	Difference (IDR)
A	Cost of goods sold			
1	Production cost	3,604,000	3,854,000	(250,000)
2	Production quantity (kg)	72	72	0
	Cost of goods sold	50,000	54,000	(4,000)
B	Selling price			
1	Production cost	3,604,000	3,854,000	(250,000)
2	Gross Profit 30%	1,081,200	1,156,200	(75,000)
	Selling price	4,685,200	5,010,200	(325,000)
3	Production quantity (kg)	72	72	0
	Selling Price Per kg	65,000	70,000	(5,000)

Based on Table 5, differences were found in the results of calculating the cost of production according to the entrepreneur method and the full costing method. In the total production costs, there is a difference in value of IDR. 250,000. This difference occurs because UD Kerupuk Ikan Kembar does not take into account and include the costs of purchasing cracker cutting equipment and the depreciation costs of the equipment, so that the full costing method is greater than the costs calculated by UD. Kerupuk Ikan Kembar. So there is a difference of less than IDR 4,000 in the cost of production.

In terms of sales, with an expected profit of 30%, the selling price determined by UD Kerupuk Ikan Kembar is smaller than the calculation using the full costing method, resulting in a difference of less than IDR 5,000 per kg. The difference that occurs can affect the profits obtained by the company; if the quantity of products produced increases, it is not impossible that the company will experience losses.

This difference is because, by using the full costing method, all costs incurred are clearly detailed. Meanwhile, when calculating the cost of production using the method used by the company, it is not clearly detailed, and not everything spent is taken into account.



## CONCLUSION

UD. Kerupuk Ikan Kembar In calculating the cost of production using the UD method, Kembar Fish Crackers produces a lower cost of production compared to using the full costing method. This difference is because UD Kerupuk Ikan Kembar does not specify the costs incurred and does not take into account equipment maintenance costs and equipment depreciation costs.

The selling price of Mantahukan Fish Crackers has an expected profit level of 30%, which is calculated using a full costing approach, so the selling price is IDR 70,000 per kg.

The assignment of production costs to products is based on the actual costs incurred. This means that production costs can only be calculated after the production process takes place.

At UD Kerupuk Ikan Kembar, the cost of the product is used as the basis for determining the selling price by taking into account the cost of production, which consists of raw material costs, labor costs, and factory overhead costs. After preparing the cost of production, the selling price can be determined or applied.

The calculation of the cost price really determines the selling price and the products produced.

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