

CALCULATING COST OF PRODUCTION AT UMKM (MSMES) UD MURNI THROUGH *MODIFIED ACTION RESEARCH APPROACH*

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ABSTRACT

This study aims to compile a method of calculating the cost of production at UD Murni, a micro entity engaged in petis manufacturing. The method used in this study is a modified action research, a research that aims to introduce a new policy that has never been done in a Company to improve the effectiveness of its work. The results of this study indicate that UD Murni can use process costing as a method of calculating cost of goods manufactured.

Keyword: production, umkm, action research approach

INTRODUCTION

MSMEs sector has a great potential as a contributor to state revenues. In addition to contributing to the Gross Domestic Product of MSMEs is also an economic sector that can be a solution to reduce unemployment. In the period of 2009 to 2013, the contribution of MSMEs in the formation of Gross Domestic Product (GDP) reached 57.6%, in 2015 the MSME sector contributed significantly in the sector with export value of Rp 192.5 trillion, in addition to contributing significantly to PDB UMKM also played a role in the absorption of manpower, in 2002 the sector of MSMEs could absorb the workforce to 88% of the total number of working-age population of the workforce (Bappenas, 2016; Pramana and Hakim, 2013), the same thing was also conveyed by Ningtyas (2017) in his research in Pekalongan who found that the MSMEs sector has absorbed about 80% of the workforce in the region, while Suci (2017) stated that until 2012 MSMEs has absorbed 85 up to 107 million workers. As an industrial sector that has resistance to crisis (Badria and Diana, 2018, Suci, 2017) and industrial sector with big economic potential, MSMEs industry has fundamental deficiencies in various fields including; capital, human resources, law, and accountability (Bank Indonesia, 2015). Human resources and poor understanding of financial reporting are the main obstacles found in the management of MSMEs (Muchid, 2015). The inability to maintain adequate bookkeeping will have an impact on the limited capital resources of MSMEs, as access to financing through other banking or financial institutions requires sound financial reporting. The financial statements serve as a tool to analyze financial performance that can provide information about the financial position, performance and cash flow, so it can serve as the basis for economic decision-making (Putra, 2012). This constraint is faced by UD Murni, a petis factory in Sidoarjo city, the inability to understand the preparation of financial statements make them unable to calculate the cost well making their financial performance results unknown, whether the Company is experiencing a loss or profit. Based on this phenomenon then this research will take the theme about preparation of calculation of cost of production at UD Murni for corporate financial reporting purposes.

LITERATURE REVIEW

a. Financial Statements

Financial statement is a set of financial information used to communicate financial conditions in order to make economic decisions (Suh, 2017, Talpas, 2015). In the type of financial statements generated through an accounting cycle of an entity will at least result in two financial statements namely balance and profit / loss statement, profit / loss statement is intended to calculate the income received by the

company and to analyze the performance of the Company during one period, while the financial balance sheet provides information on security indications and risks to financial position (Mourik, 2010). The need for financial information on an entity becomes so important to measure its performance over a period as well as its sensitivity to possible financial risks, therefore the ability of an entity to produce a financial report has become a necessity even if it is a business of MSMEs, in Europe itself the demands on accounting standards for MSME business has been surfaced since 2013 (Talpas, 2017), while in Indonesia per 2018 has a financial accounting standard for MSME but due to the lack of socialization, the awareness to use accounting to produce its financial statements (Badria and Diana, 2018).

b. Cost of Goods Sold

Cost of production is a collection of expenses incurred to process raw materials into finished goods. The calculation of the correct cost of goods manufactured, will lead to the determination of the correct selling price as well, thus later able to generate profits as expected (Lambajang, 2013). The cost itself is defined as a sacrifice of economic resources measured in units of money, to obtain goods or services expected to provide benefits in the present or future (Daljono, 2004). The components of the main cost of production in general are; direct labor, direct raw materials, and factory overhead.

A production activity has a process in it, whereby in the process the costs will be absorbed and used until the finished goods are available as ending inventory. CIMA defines the process of cost absorption in process costing as a method applicable to goods or services generated through a continuous and recurrent process or process stages, the cost is expressed as the average unit charged to each output over a period (Thompson, 2006). In addition to using the costing process costing method can be done with Job Order Costing, if process costing is used in the manufacturing process for similar goods then Job Order Costing is more appropriate to use in the manufacturing process that produces goods and services with a variety of many (William, 2017).

c. UMKM (MSMEs)

Based on the Law of the Republic of Indonesia No. 20 CHAPTER I Article 1 Micro, Small and Medium Enterprises is a productive economic enterprise owned by a person and / or individual business material which is not a subsidiary or not a branch of a company owned, controlled, or a part, directly or indirectly from Medium or Enterprises that meet the criteria of small business. (1) The criteria for a micro-enterprise is to have a net worth of Rp 50,000,000 (fifty million rupiahs), excluding land and building of business premises or having annual sales of not more than Rp 300,000,000 (three hundred million rupiahs) (2) The criterion of a small business is to have more net worth than Rp 50.000.000,- (fifty million rupiah) up to a maximum of Rp 500.000.000, - (five hundred million rupiah) excluding land and building of business premises or having annual proceeds of more than Rp 300,000,000 (three hundred million rupiahs) up to unmost Rp 2.500.000.000 (two billion five hundred million rupiah). (3) Medium Business Criteria is to have net assets of more than Rp 500,000,000, - (five hundred million rupiah) up to a maximum of Rp 10,000,000,000 (ten billion rupiah) excluding land and building of business premises or having sales proceeds annual basis of more than Rp 2.500.000.000 (two billion five hundred million rupiah) up to a maximum of Rp 50,000,000,000 (fifty billion rupiahs)).

According to the Central Bureau of Statistics the number of MSMEs workers is less than 100 persons, with the following categories of categories: household and micro enterprises comprising 1-4 workers, small enterprises consisting of 5-19 workers, medium enterprises comprised of 20-99 workers work, and large businesses have a workforce of 100 or more workers.

RESEARCH METHODS

a. Modified Action Research

This action research model is a research approach that works like a cycle that continuously produces a new point of view, converts that viewpoint into action, then analyzes the results of the activity (Kong, 2017), while Korb and Wagner (2016) explains that Action research is a research approach that focuses on understanding the problem and creating practical solutions to the problem. Greenwood et al. (2003) and Tripp (2005) defined it as a social experiment by introducing a new policy by monitoring its effects. Action research is a joint effort to determine or improve the performance of a

process to be more effective (Farhan, 2017), thus in relation to this research action research is a method used to reconstruct cost calculation method at Petis Company in Sidoarjo

In each methodology certainly it has a certain stage to do, as well as on this action research. Tripp (2005) describes at least five stages: 1) identification of problems, 2) planning solutions, 3) implementation, 4) monitoring, and 5) evaluation. But in this study the whole stages are not used. In this study the stages in a research action research is modified. The meaning of modification which the researcher intends in this research is more on the simplification of the action research stage and the use of the term planning is modified into a proposed idea, this refers to Tripp's opinion (2005) that the stages or research patterns that are carried out in this action research may differ due to the need and different problems in individuals or institutions, in relation to this study the modifications are made because of the third stage and so there must be agreements with the Petis Company Sidoarjo to apply the proposed ideas put forward by the researcher, of course this also will require time that can not be predicted settlement. It takes a long time to arrive at the stage of receiving the proposed proposals by researchers in the form of action-taking, in addition to understanding the problem of cost of goods sold calculation needs to have an adequate thinking base so that this modification is required. Thus, the stages of research modified action research are:

1) Diagnose (diagnosing), that is identifying the basic issues that exist to be the basis for the organization to make changes in a better direction with the approach of Ibn Khaldun thought.

2) Creating action plans (action planning), Researchers and participants together understand the subject matter that is then followed by preparing the right action plan to solve existing problems.

3. 2. Data Source

Primary data is a source of research data obtained directly from the original source (Indriantoro, 1999). Primary data can be subject opinion either individually or in group, observation result, and test result (Indriantoro, 1999). Lofland (1984) in Moleong (2010) says that in qualitative research the primary data source are words and actions. Thus, in this study the primary data source is the opinion, actions and understanding of the informant, in this case the manager who is also the owner of UD Murni Mr. Hasan who plays an informant.

Discussion

As explained in the methodology chapter that in the modified action research the step of analysis is done through two stages of diagnose and action plan, so in this chapter of discussion anaitis steps will also be done like that.

1) Diagnosing

Sebagai sebuah perusahaan perorangan berbentuk UD, UD Murni tidak memiliki pencatatan serta perhitungan sama sekali tentang usahanya.

“So here there is no such bookkeeping record keeping , we'd jus call them an ko a Just run it by habit.”

Similarly when asked about the sale price determination the owner claimed to set it only based on experience and habits that have been done daily during the work producing petis.

“Yes ever since last night for example sugar price per kilo is ten thousand multiplied by 50 kg, what about the fuel, and the workforce, then again the raw materials that equals to 3.8 ton and just take a look at how many times we've done this work .”

Although not costly systematically, Mr. Hasan as the owner has understood simply the concept of cost of production, yet he still does not understand how to calculate the cost systematically more in the process of production it turns out UD Murni has the material produced again because it is damaged in the production process previously. “Kshrimp head is now 800 to 1,000 kilo, so if a production is done, 1.2 to 1.3 tons one time cook.”

“So, if 1.3 ton enters then it will produce 350 kg it is about 2 quintal, and the shrimp's head is about 1,3 millin, the workforce salary is like wholesale, in average it is 120 thousand per day and they will not be paid if they are absent.”

"The obstacle in making petis is when coating process because if the heat is not right then the petis will smell, while this is categorized as failed petis it will be reproduced in the next production, for example a ton of fails later on will be taken little by little for the new production , taken 1 quintal,

as well as petis that has been moldy on it because it is stored only on it a moldy mildew taken the rest is used again to enter production.”

“I have the plan to add more power from 5.000 kwh to 10.000 kwh, for the thing to warm the shrimp’s head using dinamo, because up to this day we still use diesel.”

From the explanation given by Mr. Hasan as the owner, it can be concluded that two main problems faced by the Company in relation to cost of goods sold; calculate the cost of production systematically and calculate the cost of reproduction of damaged goods.

In the process of production UD Murni Requires the head of shrimp, sugar and salt as their raw materials while in the cooking process they need labor, fuel and electricity as the owner said

“The raw material is the head of shrimp, sugar, salt, the salt is only two ounces and the sugar is 50% shrimp. First it's the shrimp head, it is boiled in the afternoon, then processed the next day until milled, then we the waste is put aside, then the water is boiled until is is like a jelly. Just like coconut the dregs are discarded. But we sell them again for cattle feed mix.”

“The process of coagulation takes almost six hours, we cook using firewood. Now we use machine previously we stirred the dough manually earing hands, now there are four engines that keep the machine for four people. our shrimp heads can be from cold storage.”

2) Action Plan

It is understood together that UD Murni only produces one type of product ie petis thereby the production process undertaken by UD Murni does not involve raw materials and processes other than that, besides in the process UD Murni does not involve any other activity outside activities related to the manufacture of petis, because the nature of production that produces homogeneous goods and production activities are interrelated then the process of cost calculation can be done by Process Costing namely the process of calculating the cost through charging to each unit is determined by dividing the total cost to the cost center (production unit) (Carter, 2009; Thompson, 2006), but before that is done first must determine in advance the cost components that make up the production cost at UD Murni is also the production process running, so that the allocation of cost calculated at each stage of the process can be done appropriately. The three components of the cost can be defined as follows; direct raw materials are all raw materials that form an integral part of the finished product and are entered explicitly in the calculation of product costs, direct labor is a direct labor that converts raw materials into finished goods, and factory overhead costs are all manufacturing costs or expenses except direct raw materials and direct labor that can be traced directly through production output (Carter, 2009)

In the calculation of cost of goods manufactured, costs are grouped into three main categories; direct materials, labor and factory overhead rates, as explained by the owner of the factory, Mr. Hasan that the composition of petis ie shrimp, sugar, and salt, then we can group these three items into the group of direct ingredients, while the cooking process which requires electricity and firewood can be categorized into factory overhead costs and workers as direct labor costs.

Mr. Hasan explained that in one production the factory requires about 1,300 kg of shrimp head, 2 quintals of sugar and 200 grams of salt, to process it Mr. Hasan requires 8 labours who make it costing Rp.120.000 per person per day, and during the cooking process it lasted approximately 12 hours divided into 6 hours to obtain shrimp broth through the process of cooking and smelting and 6 hours for the process of thickening to become petis he needs electricity and firewood as processing energy we can make a simulation of Pak Hasan's production needs into an equivalent unit. The electricity that needed by the Mr Hasan for one cycle of production is 5.000 kwh, while the firewoods need is around 200 kg:

<u>Raw Materials</u>	<u>Workforce</u>	<u>Overhead Electric</u>	<u>Overhead Firewood</u>
1.300	8	5.000	200
200			
0.2	+	+	+
1.500,02	8	5.000	200

The equivalent unit is the smallest unit of each component of the cost of production, since each cost component has a different measuring variable then it is not called into its unit of measure. 1,500.02 on raw material components is calculated in kilos, while labor is called people, and electric overhead uses kwh, firewood overhead uses kilos.

Raw Materials Workforce Electrical Overhead Firewood Overhead

Total Cost	Rp.1.503.000	Rp.960.000	Rp. 1.000.000	Rp. 200.000
Divided by per unit				
Equivalent	$\frac{1.500,02}{8}$	$\frac{8}{200}$	$\frac{5.000}{200}$	$\frac{200}{200}$
Cost per unit	Rp. 1.002	Rp. 120.000	Rp. 20.000	Rp. 100

Thus it appears that per unit cost incurred by UD Murni in one production with an output of 350-400 kg petis is Rp. 141,102 or approximately Rp 353 per kilogram.

The problem faced by UD Murni next is the residual or damaged goods that are added to the production process, the inability to estimate the costs of the addition of the failed product can make UD Murni not anticipate the increase in production costs due to the process addition, therefore it should also get attention . If the addition of a failed product into the production process is about 100 kg from the final finished product average of 400 kg then we can estimate the cost of production to be:

	<u>Bahan Baku</u>	<u>Tenaga Kerja</u>	<u>Overhead Listrik</u>	<u>Overhead Kayu Bakar</u>
Total Cost	Rp.1.503.000	Rp.960.000	Rp. 1.000.000	Rp. 200.000
Process Cost				
Previously(25%)	<u>Rp. 375.750</u>	<u>Rp 230.000</u>	<u>Rp. 250.000</u>	<u>Rp. 50.0000</u>
	Rp.1.878.750	Rp.1.160.000	Rp. 1.250.000	Rp. 250.000
Divided by per unit				
equivalent	$\frac{1.500,02}{8}$	$\frac{8}{200}$	$\frac{5.000}{200}$	$\frac{200}{200}$
Cost per Unit	Rp. 1.252	Rp. 145.000	Rp. 250	Rp 1.250

With the addition of a failed product into the production process has increased the total cost per unit to Rp 147,752 thus the failure of a product can lead to an increase in production costs in UD Murni, while changing the selling price of their products becomes so difficult because of the high sensitivity of the customers to the price this was delivered by Mr. Hasan

“It’s hard for us to raise the price, even Rp 5.000 per quintal is the best price we can sell.”

CONCLUSION

UD Murni should use the process costing method as a step to calculate the cost of production, given the nature of production activity and the loading of the cyclical and homogeneous. UD Murni should also consider additional items of collateral as an additional cost into the production process.

Implication

This study shows that the cost of goods sold can be done easily if the business actor understands the concept of cost and production process of the business being executed, by understanding it then the pricing and operational strategy will be more effective to do.

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