

The Influence of Raw Materials and Direct Labor Costs on Profit Margin Ratio in UMKM Agan Cibinong, Bogor Regency

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ABSTRACT

Micro, Small and Medium Enterprises or known as UMKM have many roles in eradicating poverty, reducing unemployment, and increasing people's income so that they can be independent in supporting their economy. UMKM actors must be able to develop and survive in line with intense business competition. The ability to compete in trade is important so that the Indonesian economy remains strong, especially in the face of the Asean Economic Community (AEC). Therefore, the government continues to strive so that UMKM in various regions can develop so as to support the economy of small communities by providing various facilities both in terms of funding, marketing, licensing and other supporting facilities. The presence of the industrial revolution 4.0 has the impact of intense competition, UMKM must be able to overcome this challenge creatively, product innovation, marketing, product packaging, human resource development and technology. The UMKM empowerment strategy can be pursued through the role of the Government in issuing fiscal and non-fiscal policies, the role of universities in carrying out services to educate and prosper the community and the role of stakeholders in encouraging UMKM to be more independent and innovative.

INTRODUCTION

Indonesia is currently experiencing an increase in economic growth after successfully recovering from pressure over the last few years due to *Covid-19*. This increase in the Indonesian economy was driven by increased performance in exports, household consumption, investment, and government consumption. In addition, the manufacturing industry has contributed the most to the increase in economic growth. The manufacturing industry is an industry that dominates companies listed on the Indonesia Stock Exchange (IDX). The number of companies in the industry, as well as the current economic conditions have created intense competition among manufacturing companies. Competition in the manufacturing industry makes each company increasingly improve its performance so that its goals can still be achieved. Companies engaged in manufacturing in their activities carry out production activities to convert raw materials into finished goods, which will produce a product that has a sale value.

Production activities are carried out from the process of purchasing raw materials, paying labor wages and also incurring other costs to obtain other supporting materials, so that they can become a product that can generate profits. Then part of the profit earned from each sale will be used again for company activities. The company is said to get a profit or profit when sales are higher than the costs incurred. Company profits can simply be measured by the difference between total sales and total costs. To achieve maximum profit, we need a good sales strategy. In this case the company must be able to produce quality products according to the tastes and needs of consumers but the selling price of these products is in accordance with fair market prices. The effort that needs to be done to obtain a reasonable selling price is to control production costs. This cost control is very important for companies where production costs are an element in the formation of the cost of production which will be used as the basis for determining the cost of goods sold of the products produced. Production costs are costs incurred to process raw materials into finished products that are ready for sale (**Mulyadi, 1995:14**). Broadly speaking, production costs are divided into three elements, namely: raw material costs, direct labor costs, and factory overhead costs.

These three costs are product costs related to things that can generate revenue for the company. " Direct raw material costs are all raw materials that form an integral part of the finished product and are included explicitly in the calculation of production costs" (**Carter, 2009: 40**). Raw material costs consist of direct and indirect raw material costs. Both are materials needed in the production process to create a kind of finished product that is ready to be marketed. Labor costs are also of two types. Namely, direct and indirect labor costs. Direct labor costs according to **Salman (2013: 26)** are costs that must be incurred to pay workers who are directly related to the production process to produce finished products. Meanwhile, indirect labor costs, where the workforce is not involved in the production process, are usually included in factory overhead costs. Companies that have good control will budget the standard production costs to make it a reference so that expenses in the

company can be controlled. The application of this standard cost can also encourage companies to increase production effectiveness so that the company's margin profitability increases. To be able to see the effectiveness and efficiency of achieving a company's profits can use an analytical tool in the form of financial ratios. Financial ratios are measuring tools that can be used to see a company's financial performance. The ratio used is the profitability ratio, one of which is to obtain profit quantitatively using the profit margin ratio. The profit margin ratio is the comparison between operating profit and sales. With a certain number of operating expenses (operating costs) the profit margin can be enlarged by increasing sales or with a certain amount of sales (sales) the profit margin can be enlarged by suppressing or reducing operating expenses (operating costs).

LITERATURE REVIEW

Cost Accounting

Cost accounting has an important role for company management, in order to have an understanding in determining the selling price of the product or products produced. Cost accounting includes the sections of management accounting and financial accounting on how cost information can be collected and analyzed. This cost accounting places more emphasis on controlling and determining costs, especially those related to production costs. Following are some definitions of cost accounting according to experts. Mulyadi (2018: 7) Cost accounting is the process of recording, classifying, summarizing and presenting costs, making and selling products or services, in certain ways, and interpreting them. The object of cost accounting activity is cost. Lestari *et al.*, (2018: 6) Cost accounting is a branch of accounting which is a tool for management to systematically monitor and record cost transactions, as well as present cost information in the form of cost reports. Riwayadi (2016: 24) Cost accounting is a process of identifying, defining, measuring, reporting, and analyzing various elements of direct costs and indirect costs associated with the process of producing and marketing products. Based on the above definition, the authors can conclude that cost accounting is the process of measuring, calculating, recording and classifying costs to determine the cost of production and to determine the selling price of goods and services.

Cost

To be able to generate profits as desired, the management of a company must be able to manage expenses to a minimum. In order to do this, it is necessary to understand the costs for management. Here are some definitions from experts. Hernanto (2017:22) "Cost (*cost*) is the amount of money expressed from (economic) sources sacrificed to get something or achieve a certain goal. As a sacrifice of resources to get something or achieve a certain goal, the term cost is sometimes considered synonymous with the cost price and expense of something or a particular goal. Sasongko *et al.*, (2018: 23) "Costs are expenditures or sacrifice values to obtain goods or services that are useful for the future, or have benefits that exceed one annual accounting period. Expenses

are usually reflected in the statement of financial position as company assets." Based on the definition above, it can be concluded that costs are all the sacrifices that need to be made for a production process, expressed in units of money according to the prevailing market prices, both those that have occurred and those that will occur.

Production Cost

Production costs or *Manufacturing costs* or *production costs* according to Raiborn *et al.*, (2011: 42) are related to making or obtaining products or providing services that directly generate income for a company. Production costs are also referred to as inventory costs (*inventoryable costs*) and include direct costs (direct material costs and direct labor costs) as well as indirect costs (*overhead*).

1. Direct Material Costs

Dunia and Abdullah (2012:23) "Acquisition costs and all direct materials that become an integral part that forms finished goods (*finished goods*)". Carter (2014:40) "Direct material costs are all raw materials that form an integral part of the finished product and are included explicitly in the calculation of production costs." Based on the definition above, Raw Material Costs are costs used to obtain all raw materials that will be used for the production process and can be calculated directly into production costs. Raw materials are materials that become part of the finished product and can be physically and conveniently traced to that product. The amount of raw material costs is determined by the cost of acquisition, namely from the purchase to the costs that can be used in the production process.

2. Direct Labor Costs

Carter (2014:40) "Direct Labor Costs are labor that converts raw materials directly into finished products and can be properly assigned to certain products." The world and Abdullah (2012:23) "Direct Labor Costs are the wages of all direct labor that specifically uses both hands and machines to participate in the production process to produce a product." It can be concluded that Direct Labor Costs are costs incurred for direct labor users in processing a product from raw materials to finished goods. Direct Labor Cost includes compensation for all labor that can be traced to a cost object in an economical way.

3. Factory *Overhead* Cost

Carter (2014: 42) namely: Factory Overhead Costs are also called manufacturing overhead, manufacturing expenses, or factory expenses consist of all manufacturing costs that are not traced directly to a particular output, factory overhead usually includes all manufacturing costs except direct materials and labor live. Dunia and Abdullah (2012:23) "Factory Overhead Costs are all costs for producing a product other than direct materials and direct labor". It can be concluded that factory overhead costs are all manufacturing costs that cannot be classified as raw material costs or direct labor costs and which cannot be traced to individual production units. Raw material costs and indirect labor costs are the main costs of a product, but factory overhead costs

must also be incurred to make a product. Factory overhead costs include all production costs that are not included in direct materials and direct labor.

Cost of Goods Sold

Cost of production (HPP) according to Hasen and Mowen (2009; 06) "Cost of production reflects the total cost of goods completed during the current period. The costs assigned only to goods completed are direct material, labor, and overhead costs. Another definition put forward by Mulyadi (2009; 17) "The cost of production is the costs incurred in processing raw materials into a product." Ahmad (2009; 42) "The understanding of the cost of production (*manufacturing costs*) are costs that are directly related to production, namely: direct material costs and direct labor." From the statement above it can be concluded that Cost of Production (HPP) are costs used during the production process where these costs consist of direct material costs, direct labor costs, and BOP.

Benefits of Determining Cost of Production

The calculation of the cost of production for a certain period of time is very useful for the management to determine every policy to be taken. Mulyadi (2015: 65) in general production companies, the benefits of determining the cost of production are:

1. Determining the selling price of products Production companies aim to process their products to meet inventory in the warehouse, thus production costs are calculated for a certain period of time to produce information on production costs per product. Production cost per unit is one of the data considered to determine the selling price of the product.
2. Monitor the realization of production costs Information on production costs incurred within a certain period of time is used to monitor whether the production process consumes the total production costs in accordance with what was previously calculated. In this case, production cost information is used to compare planning with realization.
3. Calculating periodic profit or loss Gross profit or loss is calculated by comparing the selling price of the unit's product with the unit's production cost. Information on gross profit or loss is needed to determine the product's contribution in covering non-production costs and generating profit or loss.
4. Determine the cost of inventory of finished products and products in the process presented in the balance sheet when management is required to make periodic accountability, management must present financial reports in the form of a balance sheet and inventory profit and loss report in which there is information on the cost of inventory of finished products and the cost of inventory of products in process. Costs attached to finished products that have not been sold, in the balance sheet are presented in the cost of inventory of finished products. Production costs attached to products that

are still in progress at the balance sheet date are presented in the balance sheet as the cost of inventories of products in process.

Profitability Ratio

1. Definition of Profit Margin Ratio

Sartono (2010) Profitability can be interpreted as a company's ability to earn profits in relation to sales, total assets and own capital. Hanafi and Halim (2009) Profitability ratio is the ratio used to measure a company's profitability over a certain period of time. Profitability is used to monitor the development of profits earned by the company. Hasibuan (2001) Profitability is a company's ability to earn profits expressed in percentages. Profitability is considered very important for the survival of the company. High profitability can support the company's operational activities to the fullest. It was concluded that profitability is the ultimate goal of the company to get maximum profit. This ratio is intended so that the company can determine the success or failure of the company. The achievement of profitability is not only driven by large profits, but also how to improve management activities in managing working capital. Large profits indicate that the company has good capabilities, so it is easy to get creditors and investors and shows the company's growth in the future.

2. Profitability Ratio Objective

The purpose of using profitability ratios for companies or for outsiders, namely (Kasmir, 2017):

- 1) To measure or calculate the profit earned by the company in a certain period. Measurements are made to determine the company's ability to generate profits needed for those who need it as a consideration in making investments.
- 2) To compare the company's profit position in the previous year with the current year. Measurements are made to see the development of company profits.
- 3) To monitor profit development from time to time. Measurements are made to determine the company's ability to increase profits.
- 4) To assess the amount of net profit after tax with own capital. Measurements are made to see how efficient the company is in using its own capital.
- 5) To measure the productivity of all company funds used both loan capital and own capital. Measurements are made to see how the company optimizes profits to be used as capital for the company.

Hery (2015) objectives of profitability ratios include measuring a company's ability to generate profits during a certain period, comparing the company's profit position in the previous year with the current year, assessing profit growth from time to time, measuring how much net profit is generated from each rupiah of funds raised. embedded in total assets as well as in total equity, and measures gross profit margin, operating profit and net profit on sales. Based on the description above, it can be concluded that the objective of

profitability is knowing the amount of profit earned from year to year, knowing the amount of net profit after tax with own capital and can be used by investors as a benchmark for evaluating a company.

3. Profitability Ratio Measurement Method

1) *Gross profit* Margin

This ratio is used to measure the percentage of gross profit on sales of net profit (Hery, 2015). If the cost of goods sold increases, the *gross profit* margin will decrease and vice versa (Ratnasari, 2018). This ratio measures the efficiency of controlling cost of goods or production costs which indicates the company's ability to produce efficiently. The formula is as follows (Rahardjo, 2007):

$$GPM = \frac{\text{Laba Kotor}}{\text{Penjualan Bersih}} \times 100\% \dots \dots \dots (1)$$

2) *Net Profit Margin* (Net Profit Margin)

Net Profit Margin is a profit that compares profit after interest and tax compared to sales. This ratio shows the company's net income from sales. The higher this ratio indicates the better the activity of a company. The formula is as follows (Kasmir, 2017):

$$NPM = \frac{\text{Laba Bersih Setelah Pajak}}{\text{Penjualan Bersih}} \times 100\% \dots \dots \dots (2)$$

3) *Return On Assets* (ROA)

ROA shows the company's ability to manage its assets to earn profits. The higher the ratio, the better the company's financial condition, and vice versa (Kasmir, 2017). That is, this ratio is used to measure the effectiveness of the company's operations as a whole. The formula is as follows (Rahardjo, 2007):

$$ROA = \frac{\text{Laba Bersih}}{\text{Total Aktiva}} \times 100\% \dots \dots \dots (3)$$

4) *Return On Equity* (ROE)

ROE or profitability of own capital is a ratio that measures net profit after tax with own capital. This ratio shows the efficient use of own capital. The higher this ratio shows the better. This means that the position of the company owner is getting stronger, and vice versa (Kasmir, 2017). So by measuring the company's ROE can determine the rate of return on the equity of the owner of a company. The formula is as follows (Munawir, 2004):

$$\frac{\text{Laba Bersih Setelah Pajak}}{\text{Total Ekuitas}} \times 100\% \dots \dots \dots (4)$$

It was concluded that the method of measuring profitability ratios in this study uses a proxy for Return On Assets (ROA), namely comparing net income divided by total assets. The reason ROA was chosen as a proxy in this study is because ROA is comprehensive and can be used to determine the extent to which investment can provide returns on assets owned. In addition, this ratio can be used to compare the business results obtained from the company's operations with the total assets used to generate profits.

METHODOLOGY

Research Objects and Locations

The objects in this study are raw materials and direct labor costs to the profit margin ratio. The subject of this research is tofu, bro, Cibinong, Bogor district.

Research Variable

This study uses two types of variables, namely the dependent variable and independent variable:

1. Dependent Variable

Sugiyono (2016), the dependent variable is a variable that is affected or becomes a result because of the independent variables. The dependent variable in this study is the *Profit Margin Ratio* (Y).

2. Independent Variable

Sugiyono (2016), the independent variable is a variable that influences, is the cause of the change or the emergence of the dependent variable. The independent variables in this study are Raw Material Costs (X1) and Direct Labor Costs (X2).

Table 1. Operational Research Variables

No	Variable	Variable Operational Definitions	Indicator	Scale
1.	Raw Material Costs (X1)	Raw material costs are all raw materials that form an integral part of the finished product and are included explicitly in the calculation of production costs. (Carters 2014:40)	Actual raw material costs	Ratio
2.	Direct Labor Cost (X2)	Direct labor costs are costs incurred for direct labor users in processing a product from raw materials to finished goods. This statement generally implies that the use of Direct Labor Hours must be effective in producing certain products so that it will cause an increase in the profit margin ratio of the company. (Carters 2014:40)	Actual labor costs	Ratio
3.	Profit Margin Ratio (Y)	The profitability ratio is the ratio used to measure a company's profitability over a certain period of time. Profitability is used to monitor the development of profits earned by the company. (Hanafi and Halim 2009)	1. Sale 2. Gross profit	Ratio

Data Types and Sources

The type of data used in this research is secondary data. Secondary data are data sources that do not directly provide data to data collectors, for example through other people or through documents. Secondary data is obtained through library research through print media, the internet and written works that are useful for research. (Sugiyono 2015). The secondary data in this study is in the form of report data on raw material costs, labor costs, and the company's profit margin ratio for five years, namely from.

Data Analysis Method

Sugiyono (2016) Data analysis is the process of systematically searching and compiling obtained from interviews, field notes, and documentation, by organizing data into categories, describing them into units, synthesizing, compiling into patterns, choosing which what is important and then what will be learned, and make conclusions so that it is easily understood by oneself and others. The entire presentation of data analysis in this study is documentation and in order to simplify and speed up the process of calculating and processing data in this study, it was carried out using the help of the IBM SPSS (*Statistical Product and Service Solution*) 25 For Windows program .

Data Analysis Procedures

To see whether there is an influence between the independent and dependent variables partially or simultaneously, in the data analysis procedure, if it is poured into this model, there are two independent variables (X1, X2) and one dependent variable (Y). then, the relationship between research variables can be described in the research model as follows:

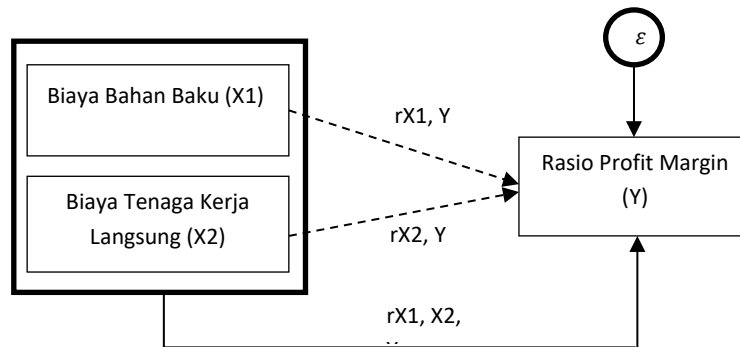


Figure 1. Research Paradigm

Descriptive Statistical Analysis

Descriptive statistics function as data analyzers by describing the sample data that has been collected and used to provide a description of the data in terms of the *mean* , *standard deviation* , maximum and minimum. Descriptive statistical analysis needs to be carried out to see the overall picture of the sample that was successfully collected and met the requirements to be used as a research sample. Descriptive statistics are used to describe and provide an overview of the variable frequency distribution of raw material costs, direct labor costs, and profit margin ratios.

Multiple Linear Regression Analysis

Testing the hypothesis on the effect of the independent variable on the dependent variable is carried out using multiple linear regression analysis. Sanusi (2016), states that multiple linear regression is an extension of simple linear regression, namely increasing the number of independent variables from previously only one to two or more independent variables. Sugiyono (2017), said that regression analysis is used to predict changes in the value of the dependent variable, if the value of the independent variable is increased or

decreased in value. The formula for testing the effect of the independent variables on the dependent variable is:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \varepsilon \dots \dots \dots (5)$$

Information :

- Y = Profit margin ratio
- X₁ = Cost of Raw Materials
- X₂ = Direct Labor Cost
- a = Constant number
- β_1 - β_2 = Regression coefficient
- ε = Error terms

RESULTS AND DISCUSSIONS

Cost production in the company manufacture grouped becomes a number of group according to specification its use that is:

1. The cost of raw materials is the cost incurred to buy materials raw which has in Use for produce something product so certain.
2. Direct labor costs are those incurred to pay worker which involved in a manner live in the process production.
3. Overhead costs are costs other than direct material and direct material costs direct labor costs but also required in the process production. Which including in this group are:
 - 1) Cost of auxiliary materials (indirect materials), namely additional materials which needed for
 - 2) something goods but no involved live in process production.
 - 3) Other manufacturing costs are production costs something certain product.
 - 4) The cost of auxiliary labor (indirect labor) is power work which needed in produce extra needed to produce a product in addition to the auxiliary additional costs and cost power work helper.
 - 5) Marketing costs are used to accommodate all costs incurred issued company for distribute goods the merchandise until up to hand customer.
 - 6) Correlation value (relationship) between independent variables to variables dependent strong enough that is as big :R= 0.731 (73.1%)
 - 7) Regression value (influence) between the independent variable on the variable dependent enough strong that is as big : R² = 0.534 (53.4%), whereas factors other causes outside this model as big 46.6%
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CONCLUSIONS AND RECOMMENDATIONS

Based on the results of testing, processing, and data analysis that has been carried out and the discussion that has been explained as well as the purpose of this study is to determine the effect of raw material costs and labor costs directly to the profit margin ratio in sub-sector manufacturing companies household products are not durable., then the conclusions that can be drawn from the results of this study namely as follows:

1. Partially, raw material costs have a positive and significant effect to the profit margin ratio in manufacturing companies in the product sub-sector households don't last long . Positive values on the test results indicate direction one-way relationship between the variable cost of raw materials with the profit ratio margins.
2. Partially, direct labor costs have a negative effect and significant to the ratio of profit margins in sub manufacturing companies The household product sector is not durable, you know, Cibinong. Negative value on the test result shows the direction of the relationship in the opposite direction between the cost variables direct labor to profit margin ratio.
3. Simultaneously, raw material costs and direct labor costs effect on the profit margin ratio in sub manufacturing companies household products sector is not durable This is indicated by the coefficient value determination of 0.520 or 52%, the remaining 48% is influenced by variables other than raw material costs and direct labor costs not investigated by researchers.

FURTHER STUDY

The presence of the industrial revolution 4.0 has the impact of intense competition, UMKM must be able to overcome this challenge creatively, product innovation, marketing, product packaging, human resource development and technology. The UMKM empowerment strategy can be pursued through the role of the Government in issuing fiscal and non-fiscal policies, the role of universities in carrying out services to educate and prosper the community and the role of stakeholders in encouraging UMKM to be more independent and innovative.

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