

## **Analysis of Company Size, Inventory Intensity, and Variability of COGS on The Selection of Inventory Valuation Methods in Basic Materials Sector Companies Listed on IDX 2017-2021**

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### **ABSTRACT**

This research purposed to determine the effect of company size, inventory intensity and variability of COGS on the selection of inventory valuation methods in basic materials sector companies listed on the Indonesia Stock Exchange (IDX) for the 2017-2021 period. This study uses secondary data with a sampling technique, namely purposive sampling technique. The number of samples in this study were 31 companies. Descriptive analysis method as well as several types of analysis in this study using SmartPLS software. From this reseach it was concluded that company size has a significant influence on the selection of inventory valuation methods. Meanwhile, inventory intensity and variability of COGS do not have a significant effect on the choice of inventory valuation method.

**Keywords:** Company Size, Inventory Intensity, Variability of COGS, Selection of Inventory Valuation Method

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### **INTRODUCTION**

Every company has a main goal, which is to generate as much profit as possible. According to Law No.8 of 1997 concerning Company Documents Article 1 Point 1 reads "Company is every form of business that carries out activities on a regular and continuous basis by obtaining profit and or profit, both organized by individuals and business entities in the form of legal entities or not legal entities, which are established and domiciled within the territory of the Republic of Indonesia" (Fahrudin, 2019). The company must also ensure that the goods or services that consumers want are available. This can be done with inventory control, especially in basic materials sector companies related to manufacturing. So that it requires inventory control related to raw materials, semi-finished materials, and finished products. The research object used in this study is a basic materials sector company (manufacturing). A manufacturing company is a type of business that produces raw goods into semi-finished or finished goods so that they have a selling value.

Inventory is the number of products a company has available for purchase. This inventory of goods will eventually be sold to customers for profit. Inventories consist of assets available for sale in the ordinary course of business and equipment used in the production process. Raja (2012).

In inventory accounting, companies can perform valuations on inventory using inventory valuation methods, such as FIFO (First In First Out) and Average. Each company uses a different inventory valuation method, this depends on the sector run by the company. And in choosing an inventory valuation method, the company must choose the best method so that it can provide a maximum valuation of inventory and can provide benefits to the company in using this valuation method. there are 3 problems in inventory accounting, namely: conflicts of interest, the influence of changes in PSAK (Financial Accounting Standards Regulations) and lack of knowledge regarding inventory valuation calculation methods.

**Table 1. Inventory Turnover of Basic Materials Sector Companies Listed on the IDX in 2020-2021**

Rating	Company Name	Inventory Turnover (2020)	Inventory Turnover (2021)	Increase (Decrease)
1	Barito Pacific Tbk	6.335	6.205	0.130
2	Merdeka Copper Gold Tbk.	2.057	1.985	0.072
3	Aneka Tambang Tbk.	8.719	10.326	1.670
4	Krakatau Stee Tbk.	5.623	5.321	0.302
5	Surya Esa Perkasa Tbk.	7.637	5.964	1.673
6	Vale Indonesia Tbk.	4.432	4.430	0.002
7	Seme Baturaja (Persero) Tbk.	4.010	3.463	0.547
8	Solusi Bangun Indonesia	6.796	8.208	1.412
9	Wijaya Karya Beton Tbk.	1.530	1.474	0.056
10	Timah Tbk.	4.892	3.597	1.295

Source: Processed Data, 2023

Table 1 shows a table analyzing inventory turnover in basic materials sector companies in 2020-2021 listed on the IDX. For the basic materials sector, this is an inventory turnover analysis of 10 companies with the highest number of shares listed on the IDX (Update November 2022). From the results of the calculations that I did on 10 companies in the basic materials sector companies in 2020-2021 listed on the IDX, 8 companies experienced a decrease in inventory turnover while 2 companies experienced an increase in inventory turnover. So, it can be concluded here, that of the 10 basic materials sector companies, many are still experiencing problems in their inventory turnover.

The inventory valuation method is a way to determine the total value of materials and products still in the company's inventory at the end of the accounting period. According to Zaki (2013) inventory valuation is determining the value of inventory contained in the balance sheet, where the final inventory can be calculated at its cost using several methods for determining the cost of the final inventory, but for this value it is not very clear in the balance sheet, the amount contained in the balance sheet depends on the valuation method used.

Company size shows the achievement of current operations and inventory control. Large companies tend to choose the average method which can reduce profits so that they can get tax savings, while small-scale companies choose the FIFO method which can increase profits to get funds from banks or other financial institutions because they are considered to have good performance (Sangadah & Kusmuriyanto, 2014). Based on research conducted by Oky (2017) stated that company size affects the selection of inventory valuation methods. Meanwhile, research conducted by Sangadah & Kusmuriyanto, (2014) and Febriansyah et al., (2020) state that company size has no effect on the selection of inventory valuation methods.

Inventory intensity shows the extent of management efficiency in managing inventory. The lower the ending inventory of a company, the company's inventory management can run well. Inventory intensity can affect the selection of inventory valuation methods used. When inventory is high, the manager will choose the average method so that the inventory becomes smaller than when using the FIFO method. This is done so that the manager's performance in managing inventory is considered good by the company because the lower the inventory, the more efficient the inventory management. (Sangadah & Kusmuriyanto, 2014). Based on research conducted by Febriansyah et al., (2020) states that inventory intensity affects the selection of inventory valuation methods. Meanwhile, research conducted by Mashuri (2014), Sangadah & Kusmuriyanto, (2014) and Oky (2017) stated that inventory intensity has no effect on the selection of inventory valuation methods.

COGS variability shows the cost of goods sold during the period which reflects the company's operations. Management will choose to apply inventory methods with low variability in cost of goods sold so as to generate higher profits, while investors will choose lower variability with lower profits so as to minimize taxes. (Sangadah & Kusmuriyanto, 2014). The value of cost of goods sold that varies in an entity is the definition of cost of goods sold variability. Cost of goods sold in inventory control requires accuracy to increase profits from operations, because cost of goods sold is the largest expense on the entity. Suzan & Ihsan (2021) Changes in cost of goods sold will have an impact on the company's net income. With price changes, the selection of inventory methods based on cost of goods will have a different effect on the balance sheet and ending inventory. (Saripudin, 2010)Based on research conducted by Hutahaeen & Muda, (2015) stated that COGS variability affects the selection of inventory valuation methods. Meanwhile, research conducted by

Mashuri (2014), Sangadah & Kusmuriyanto, (2014) and Oky (2017) stated that COGS variability has no effect on the selection of inventory valuation methods.

## LITERATURE REVIEW

### Positive Accounting Theory

Positive accounting theory is a theory developed by Watts and Zimmerman (1960) which explains accounting policies and practices in companies and predicts what policies managers will choose under certain conditions in the future. Positive accounting theory explains that there are motivations for companies in earnings management. (Hutahaean & Muda, 2015). One of the ways that managers can get the maximum possible profit is by adjusting the inventory valuation method used with the prevailing economic conditions so as to increase profits or reduce profits to reduce taxes to be paid. In times of inflation, the FIFO method will generate greater profits than using the average method. Conversely, companies that use the average method benefit in terms of tax payments because the tax to be paid is smaller. (Qosim, 2017). So it can be said in this theory that in choosing an inventory valuation method we must consider the accounting phenomena that occur in a company in order to know the most appropriate inventory valuation method used by a business.

### Supplies

According to Raja (2012) Inventory consists of assets available for sale in the ordinary course of business, such as retailers who buy merchandise for resale. Inventory also includes assets in the form of materials or equipment used in the production process and assets in production used for sales.

### Inventory Valuation Method

The inventory valuation method is a way to determine the total value of materials and products that are still in the company's inventory at the end of the accounting period. According to Zaki (2013) inventory valuation is determining the value of inventory contained in the balance sheet, where the final inventory can be calculated at its cost using several methods for determining the cost of the final inventory, but for this value it is not very clear in the balance sheet, the amount contained in the balance sheet depends on the valuation method used. There are four ways or measurements in the inventory valuation method, namely: special identification, FIFO, LIFO and the average method.

### Company Size

Company size is a measure, scale or variable that describes the size of the company based on several provisions, such as total assets, log size, market value, shares, total sales, total income, total capital and others. Brigham and Houston, (2001: 50) state that company size is the average total net sales for the year to several years. In this case sales are greater than variable costs and fixed costs, the amount of pre-tax income will be obtained. Conversely, if sales are smaller than variable costs and fixed costs, the company will suffer losses. (Sangeroki, 2013).

### Inventory Intensity

Inventory intensity or inventory turnover ratio (inventory turnover or stock turnover) is a measure of how often trade goods inventory is sold within one period. High inventory intensity indicates that the number of sales in the company is high and generates high profits. Conversely, a low inventory turnover ratio indicates that the number of sales in the company is low and generates low profits. (Febriansyah et al., 2020). Inventory intensity shows the extent of management efficiency in managing inventory. The lower the ending inventory, it can be concluded that inventory management is running well. Inventory intensity can affect the selection of inventory valuation methods used. When inventory is high, the manager will choose the average method so that the inventory becomes smaller than when using the FIFO method. This is done so that the manager's performance in managing inventory is 4 considered good by the company because the lower the inventory, the more efficient the inventory management. (Fauzi, 2019).

### COGS Variability

The value of cost of goods sold that varies in an entity is the definition of cost of goods sold variability. Cost of goods sold in inventory control requires accuracy to increase profits from operations, because cost of goods sold is the largest expense on the entity. Suzan & Ichsan (2021) Changes in cost of goods sold will have

an impact on the company's net income. With price changes, the selection of inventory methods based on cost of goods will have a different effect on the balance sheet and ending inventory. (Saripudin, 2010)The variability of cost of goods sold affects the choice of recording method to be used. One of the causes of cost of goods sold varies due to inflation. During inflation, the value of ending inventory will increase, which will also have an impact on increasing the cost of goods sold, causing a decrease in profit.

### **Hypothesis Formulation**

#### **The Effect of Company Size on the Selection of Inventory Valuation Methods**

Company size shows the achievement of current operations and inventory control. Large companies tend to choose the average method which can reduce profits so that they can get tax savings, while small-scale companies choose the FIFO method which can increase profits because they are considered to have good performance. (Sangadah & Kusmuriyanto, 2014). From the sentence above, it can be said that company size greatly influences the selection of inventory valuation methods. This is supported by research conducted by Ulfa Narulfita & Eko Hadi Siswanto (2020) stated that Company Size affects the selection of inventory valuation methods. In contrast to research conducted by Febriansyah et al., (2020). company size has no effect on inventory valuation.

H1: There is an effect of company size on the selection of inventory valuation methods.

#### **The Effect of Inventory Intensity on the Selection of Inventory Valuation Methods**

Large inventory intensity shows that the number of sales in the company is also high and generates high profits, but if on the contrary the intensity of inventory is low, the number of sales also decreases and generates low profits. The high and low profit that the company generates depends on the inventory valuation method. Inventory intensity shows the extent of management efficiency in managing inventory. The lower the ending inventory, it can be concluded that inventory management is running well. Inventory intensity can affect the selection of the inventory valuation method used. When inventory is high, the manager will choose the average method so that the inventory becomes smaller than when using the FIFO method. This is done so that the manager's performance in managing inventory is considered good by the company because the lower the inventory, the more efficient the inventory management. (Sangadah & Kusmuriyanto, 2014). So, inventory intensity greatly influences the choice of inventory valuation method. This is supported by research conducted by Febriansyah et al (2020) stated that Inventory Intensity has a significant effect on the selection of inventory valuation methods. In contrast to research conducted by Mashuri (2014) states that Inventory Intensity has no significant effect on the selection of inventory valuation methods.

H2: There is an effect of inventory intensity on the selection of inventory valuation methods.

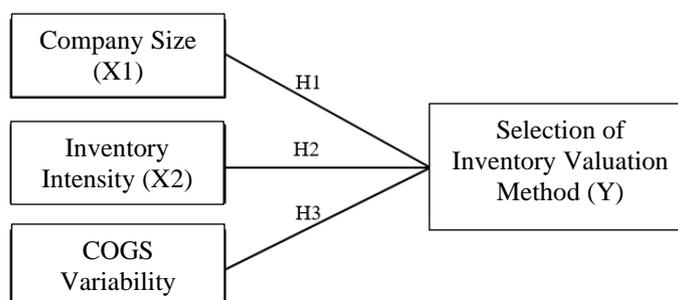
#### **The Effect of COGS Variability on the Selection of Inventory Valuation Methods**

COGS variability shows the cost of goods sold during the period which reflects the company's operations. Management will choose to apply inventory methods with low variability in cost of goods sold so as to generate higher profits, while investors will choose lower variability with lower profits so as to minimize taxes. (Sangadah & Kusmuriyanto, 2014). So, it is said that COGS variability greatly affects inventory valuation. This is supported by research conducted by Hutahaeen & Muda (2015) stated that "COGS variability provides significant results on the selection of inventory valuation methods". In contrast to research Mashuri (2014) that COGS variability has no effect on inventory valuation methods.

H3: There is an effect of COGS variability on the selection of inventory valuation methods.

### Framework of Thought

Based on theory and previous research, the relationship between Company Size, Inventory Intensity, COGS Variability, Inventory Valuation Method Selection can be seen in the following figure:



**Figure 1. Framework of Thought**

*Source: Developed Research Journal, 2023*

## RESEARCH METHODS

### Place and Time of Research

This research was conducted on basic materials sector companies listed on the IDX (Indonesia Stock Exchange) in the 2017-2021 period by taking data from several websites, including www.idx.co.id, britama.com and several other sites to get the data needed in this research. The time of this research was carried out starting from March 2023 to July 2023.

### Population and Sample

The population in this study are basic materials sector companies listed on the Indonesia Stock Exchange (IDX) during the 2017-2021 period. Based on the data obtained in 2022, there are 100 companies in the population. The sampling technique used in this study was purposive sampling. The sample ownership criteria are as follows:

**Table 2. Sampling Criteria**

No	Criterion Sampling	Number of Companies
1	Basic materials sector companies listed on the IDX for the period 2017-2021	100
2	Basic materials sector companies that are not on the main board of the stock list.	(60)
3	Basic materials sector companies that IPO after 2017	(8)
4	Basic materials sector companies that do not have complete financial statements	(1)
<b>Number of Research Samples</b>		<b>31</b>
<b>Total Observations (31 Companies x 5 Periods)</b>		<b>155</b>

*Source: Processed Data, 2023*

### Operational Research Variables

#### Company Size (X1)

According to Suzan & Ichsan (2021) that the formula for calculating company size is the natural logarithm value of total assets or assets. Company Size = Ln (Total Asset)

#### Inventory Intensity (X2)

According to Nasution & Mulyani (2020) the measurement of inventory intensity can be projected by:

$$\text{Inventory Intensity} = \frac{\text{Total Inventory}}{\text{Total Aset}}$$

### **COGS Variability (X3)**

According to Suzan & Ichsan (2021) can be projected with:

$$\text{Variability COGS} = \frac{\text{St dev HPP}}{\text{Average HPP}}$$

### **Selection of Inventory Valuation Method (Y)**

According to Hutahaean & Muda (2015) can be projected with dommy, namely the indicator is a value of 0 in the use of the FIFO method and a value of 1 in the use of the Average method.

### **Data Analysis Technique**

#### **Descriptive Analysis**

Descriptive statistics or deductive statistics are part of statistics studying how to collect data and present data so that it is easy to understand. Descriptive statistics only relate to describing or providing information about a data or situation or phenomenon. In other words, descriptive statistics function to explain the situation, symptoms, or problems. Drawing conclusions on descriptive statistics is only aimed at the existing data set (Leni Masnidar Nasution, 2017). Descriptive analysis in this study used is minimum, maximum, mean, and standard deviation.

#### **Normality Test**

Normality test is a test carried out with the aim of assessing the distribution of data in a group of data or variables, whether the distribution of the data is normally distributed or not. The normality test is useful for determining whether the data that has been collected is normally distributed or taken from a normal population. (Faradiba, 2020) The Kolmogorov Smirnov test is used to see the normality of the data by looking at the significance value at 0.05. If the resulting value is  $> 0.05$ , it can be concluded that the data in the study is normally distributed.

#### **Multicollinearity Test**

Multicollinearity testing aims to determine whether the regression model found a correlation between independent variables or not. Multicollinearity symptoms are generally found in multiple linear regression because in multiple regression there will certainly be more than one independent variable. (Widana & Muliani, 2020). To detect the presence or absence of multicollinearity in this study, it can be seen from the Variance Inflation Factor (VIF) and Tolerance values. If the VIF value is  $< 10$  and the Tolerance value is close to 1, it is stated that there is no correlation between the independent variables. However, if for example the program must be changed from SPSS to SmartPLS, the Tolerance value is not used and only the VIF value will be used.

#### **Heteroscedasticity Test**

The heteroscedasticity test is a classic assumption test that must be met in regression analysis. The heteroscedasticity test is carried out to determine whether bias occurs or not in a regression model analysis (Widana & Muliani, 2020). To test the presence or absence of heteroscedasticity is with the Scatter Plot and Glester Test. Data that is not heteroscedasticity is data whose significance value is above the 0.05 confidence level ( $\alpha > 5\%$ ).

#### **Determinant Coefficient Test**

According to Ghozali (2018) that the coefficient of determination (Adjusted R<sup>2</sup>) is used to measure how far the overall independent or independent variable can explain the dependent or dependent variable. If the value of the coefficient of determination of an independent variable is higher, the better it is in explaining the behavior of the dependent variable. The value of the coefficient of determination can be seen with the Adjusted R<sup>2</sup> value which has a value of 0 to 1. (Chabachib & Abdurahman, 2020).

#### **Multiple Regression Analysis**

The data analysis method used in this research is Multiple Regression Analysis through the SPSS 21 for Windows program. The formula is as follows:

$$y = a + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + e$$

Information:

- Y : Inventory Valuation Method
- X1 : Company Size
- X2 : Inventory Intensity
- X3 : COGS variability
- a : Constant
- $\beta_1 - \beta_3$  : Coefficient of X1-X3
- e : *Standard Error*

**Hypothesis Test (t-test)**

T test to test how much influence all independent or independent variables have on the dependent or dependent variable partially, using the assumption that other variables are considered constant (Chabachib & Abdurahman, 2020) To test the effect of the independent variable (X) on the dependent variable (Y). The criteria for partial testing in this study are (1) If the value of T Statistic > T Tabel or P Value  $\leq \alpha$  it can be interpreted that there is an influence of the independent variable (X) on the dependent variable (Y). (2) if the value  $T Statistic \leq T Tabel$  or  $P Value > \alpha$  it can be interpreted that there is no influence of the independent variable (X) on the dependent variable (Y).

**Test Equipment Used**

To facilitate the research process, the entire data analysis process is carried out using a test tool with the help of the SPSS program. However, if the normality test results show that the data is not normally distributed, the test tool will be replaced with the smartPLS program.

**RESULTS AND DISCUSSION**

**Descriptive Analysis**

Descriptive analysis and frequency distribution of the research model can be seen in table 3 below.

**Table 3. Descriptive Analysis**

Research Variables	Average	Minimum	Maximum	Standar Deviation
Company Size	29,2470	25,4334	32,3483	1,7213
Inventory Intensity	0,1391	0,0000	1,0278	0,1400
COGS Variability	0,1348	0,0001	1,2180	0,1641
Selection of Inventory Valuation Method	0,9355	0,0000	1,0000	0,2465

Source: SmartPLS processed data, 2023

**Company Size**

The average value of the company size variable in 31 basic materials sector companies listed on the Indonesia Stock Exchange (IDX) for the 2017-2021 period is 29.2470, which means that during the 2017-2021 period there were many increases in company size. The standard deviation amount of 1.7213 indicates that the standard deviation value is smaller than the average value. This means that the smaller the standard deviation value, the less varied or more accurate the data is with the average. The minimum value of the company size variable is 25.4334 and the maximum value is 32.3483.

**Inventory Intensity**

The average value of the inventory intensity variable in 31 basic materials sector companies listed on the Indonesia Stock Exchange (IDX) for the 2017-2021 period is 0.1391, which means that during the 2017-2021 period there was an increase in inventory intensity to be achieved. The standard deviation amount of 0.1400 indicates that the standard deviation value is greater than the average value. This means that the greater the standard deviation value, the more varied or less accurate the data is with the average. The minimum value of the inventory intensity variable is 0.0000 and the maximum value is 1.0278.

### COGS Variability

The average value of the variable COGS variability in 31 basic materials sector companies listed on the Indonesia Stock Exchange (IDX) for the 2017-2021 period is 0.1348, which means that during the 2017-2021 period there was an increase in COGS variability in the company. The standard deviation amount of 0.1641 indicates that the standard deviation value is greater than the average value. This means that the greater the standard deviation value, the more varied or less accurate the data is with the average. The minimum value of the COGS variability variable is 0.0001 and the maximum value is 1.2180.

### Selection of Inventory Valuation Method

The average value of the inventory valuation method selection variable in 31 basic materials sector companies listed on the Indonesia Stock Exchange (IDX) for the 2017-2021 period is 0.9355, which means that during the 2017-2021 period there were many improvements in the inventory valuation method. The standard deviation amount of 0.2465 indicates that the standard deviation value is smaller than the average value. This means that the smaller the standard deviation value, the less varied or more accurate the data is with the average. The minimum value of the inventory valuation method selection variable is 0.0000 and the maximum value is 1.0000.

### Normality Test

To see the normality of the data, the Kolmogorov Smirnov Test was used. The Kolmogorov Smirnov test is carried out by looking at the significance value at 0.05. If the resulting value is > 0.05 then the data is normally distributed. Furthermore, the Probability Plot graph is used (Faradiba, 2020).

**Table 4. Normality Test Results (Kolmogorov-Smirnov)**

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		155
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	.22656676
Most Extreme Differences	Absolute	.290
	Positive	.178
	Negative	-.290
Kolmogorov-Smirnov Z		3.614
Asymp. Sig. (2-tailed)		.000

a. Test distribution is Normal.

b. Calculated from data.

Source: Processed Data SPSS Version 21, 2023

Based on the data in table 4.36, it can be seen that the Kolmogorov-Smirnov value is 3,614 and Asymp. Sig of 0.000 <0.005. So it can be concluded that the data is not normally distributed, and the research will continue using the SmartPLS 4.0 program.

### Data Multicollinearity Test

To detect the multicollinearity test using the Variance Inflation Factor (VIF) and Tolerance value, but because this study uses the SmartPLS program, the Tolerance value is not used. The dependent variable in the form of selecting the inventory valuation method on the independent variables consisting of company size, inventory intensity and COGS variability has a VIF value <10, indicating that the data is free from multicollinearity symptoms.

### Test Coefficient of Determination (R<sup>2</sup>)

The amount of the Adjusted R Square value on the Inventory Valuation Method Selection variable is 0.146 or 14.6%. Thus the Inventory Valuation Method Selection variable is influenced by Company Size, Inventory Intensity and COGS Variability by 14.6%. While the remaining 85.4% is influenced by other factors not examined in this study.

## Path Analysis

**Table 5. Path Analysis**

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
Company Size -> Selection of Inventory Valuation Method	0.0930	0.0890	0.0250	3.6410	0.0000
Inventory Intensity -> Selection of Inventory Valuation Method	0.0190	0.0150	0.0170	1.1130	0.2660
COGS Variability -> Selection of Inventory Valuation Method	-0.0580	-0.0520	0.0380	1.5060	0.1320

Source: SmartPLS processed data, 2023

Based on this data, the following equation is obtained:

$$Y = 0.0930 \text{ Company Size} + 0.0190 \text{ Inventory Intensity} - 0.0580 \text{ COGS Variability}$$

## Hypothesis Test (t Test)

Based on the results of hypothesis testing, the following data is obtained:

**Table 6. Hypothesis Test**

Variable	T statistics ((O/STDEV))	T Tabel	P values	Conclusion
Company Size -> Selection of Inventory Valuation Method	3.6410	1.9758	0.0000	Significant
Inventory Intensity -> Selection of Inventory Valuation Method	1.1130	1.9758	0.2660	Insignificant
COGS Variability -> Selection of Inventory Valuation Method	1.5060	1.9758	0.1320	Insignificant

Source: Smart PLS processed data, 2023

Significant If P Value < 0,05

## The Effect of Company Size on the Selection of Inventory Valuation Methods

Based on the data contained in table 6 of the Multiple Linear Regression, it is known that the Company Size variable has a P Value of 0.000 while the alpha is 0.05 (P Value < 0.05) and T Statistics 3.6410 while T Table 1.9758 (T Statistics > T Table). So it can be concluded that Ho is rejected, Ha is accepted. This shows that Company Size has a significant effect on the Selection of Inventory Valuation Methods.

## The Effect of Inventory Intensity on the Selection of Inventory Valuation Methods

Based on the data contained in table 6 of the Multiple Linear Regression, it is known that the Inventory Intensity variable has a P Value of 0.2660 while alpha is 0.05 (P Value > 0.05) and T Statistics 1.1130 while T Table 1.9758 (T Statistics < T Table). So it can be concluded that Ho is accepted, Ha is rejected. This shows that Inventory Intensity has no significant effect on the Selection of Inventory Valuation Methods.

## The Effect of COGS Variability on the Selection of Inventory Valuation Methods

Based on the data contained in table 6 of the Multiple Linear Regression, it is known that the COGS Variability variable has a P Value of 0.1320 while alpha is 0.05 (P Value > 0.05) and T Statistics 1.5060 while T Table 1.9758 (T Statistics < T Table). So it can be concluded that Ho is accepted, Ha is rejected. This shows that COGS Variability has no significant effect on the Selection of Inventory Valuation Methods.

## Results and Discussion

### The Effect of Company Size on the Selection of Inventory Valuation Methods

Based on the test results, the company size variable measured using the natural logarithm (total assets) proves that company size has a significant effect on the selection of inventory valuation methods. Where large companies tend to choose the average method which can reduce the profit value so that tax savings occur, and if a small company will choose the FIFO method to increase the profit value so that it is considered to have good

performance so as to obtain loan funds from banks or other institutions. This research is in accordance with that conducted by Ulfa Narulfita & Eko Hadi Siswanto (2020) and Oky (2017) proving that company size affects the selection of inventory valuation methods. This research is not in line with research conducted by Febriansyah et al (2017) and Sangadah & Kusmuriyanto, (2014).

#### **The Effect of Inventory Intensity on the Selection of Inventory Valuation Methods**

Based on the test results, the inventory intensity variable as measured using the ratio of total inventory and total assets owned by a company. Proving that inventory intensity does not significantly affect the selection of inventory valuation methods. Therefore, companies that use the average method have a high indication of inventory turnover, and vice versa, companies that use FIFO have a low indication of inventory turnover. This research is in accordance with that conducted by Mashuri (2014), Sangadah & Kusmuriyanto, (2014) and Oky (2017) prove that inventory intensity has no effect on the choice of inventory valuation method. This research is not in line with research conducted by Febriansyah et al., (2020).

#### **The Effect of COGS Variability on the Selection of Inventory Valuation Methods**

Based on the test results, the inventory intensity variable as measured using the comparison of the standard deviation of COGS and the average COGS owned by a company. Proving that COGS variability does not significantly affect the selection of inventory valuation methods. Therefore, the fact is that companies have high and low variations in cost of goods sold and most choose the average method. In general, companies will use the average method which results in lower profits than using the FIFO method. This research is in accordance with that conducted by Mashuri (2014), Sangadah & Kusmuriyanto, (2014) and Oky (2017) prove that COGS variability has no effect on the choice of inventory valuation method. This research is not in line with research conducted by Hutahaeen & Muda (2015).

### **CONCLUSION**

Based on the results of research on the effect of Company Size, Inventory intensity, and COGS Variability on the Selection of Inventory Valuation Methods in Basic Materials Sector Companies listed on the Indonesia Stock Exchange in 2017 - 2021. Then it can be concluded that (1) Company Size has a significant effect on the Selection of Inventory Valuation Methods. (2) Inventory Intensity has no significant effect on the Selection of Inventory Valuation Methods. (3) COGS Variability has no significant effect on the Selection of Inventory Valuation Methods.

Based on the research conducted, there are still some limitations, namely: (1) Given the research results which show that only Company Size has a significant influence on the Selection of Inventory Valuation Methods, it is hoped that further research can add other variables, in order to find out what factors can influence the Selection of Inventory Valuation Methods. (2) In collecting data in this study using data derived from the annual report and financial statements of each company, not all activities are disclosed in the report, so to find it still uses other sites, (3) Another limitation is in the research sample, where research was only conducted on basic materials sector companies listed on the Indonesian stock exchange in 2017-2021.

Based on the research that has been conducted, the conclusions that have been described, and by taking into account the limitations of the research above. So the researcher wants to provide suggestions that are expected to be useful to: (1) For companies, it is hoped that each company can continue to maintain and improve financial performance every year so that it is expected to select inventory valuation methods effectively. (2) For investors, it is hoped that every investor will be careful in buying and investing in company shares by considering the information and financial performance of the company in order to avoid the risk of companies that have poor performance. Then before making an investment, pay attention to financial information not only focusing on profit, but also other information. (3) For academics, if you want to research in the same company sector, it is recommended that you can add other variables. Given that this study only uses 3 component variables, namely company size, inventory intensity, and COGS variability And for future researchers, it is recommended that they be able to expand the population and sample to be studied because it can affect the results of the research model.

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