FACTORS AFFECT TAX AVOIDANCE (EMPirical STUDY ON THE MINING SECTOR AND COMPONENT LISTED IN THE INDONESIA STOCK EXCHANGE THROUGHOUT 2016-2019)

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ABSTRACT

The effort to do a tax avoidance is frequently done by a company to minimize the tax that they have to paid. This research is done to empirically test the factors that have any effect to tax avoidance, the factors are Company Size, Return on Asset, Fixed Asset Intensity, Thin Capitalization, and Inventory Intensity. The independent variables in this research are the effect of Company Size, Return on Asset, Fixed Asset Intensity, Thin Capitalization, and Inventory Intensity, meanwhile the dependent variable is Tax Avoidance. This research uses a time series and cross section data on the mining sector and the research period from 2016-2019. The total of the samples uses in this research are 71 samples collected by using purposive sampling technique, data analysis is done by performing the t-test (partial test) using Eviews 11. The result of this research shows that Fixed Asset Intensity, and Thin Capitalization does affect Tax Avoidance meanwhile Company Size, ROA, and Inventory Intensity does not have any effect on Tax Avoidance.

Keywords: Company Size, ROA, Fixed Asset Intensity, Thin Capitalization, Inventory Intensity, Tax Avoidance.

I. INTRODUCTION

Taxes are state revenues, the nature of which is forcing the taxpayer to collect and the compensation for the payment is indirect. (Diana Sari, 2016). This makes tax payments an obligation for taxpayers. However, there is an opposite relationship between the government and taxpayers due to differences in interests. (Jumailah, 2020). Where the government acts as a tax collector who wants full tax revenue. Meanwhile, taxpayers act as taxpayers who want as little tax payments as possible.

This difference in interests gives rise to tax avoidance by taxpayers. Tax avoidance is an effort by taxpayers to avoid paying taxes by making use of what is contained in tax law. (Diana Sari, 2016). Such as giving in kind in the form of food allowance for employees which can be recognized as an expense in the company's tax report. (Josua Tommy, 2020)

“Tax Justice Network found the impact of tax avoidance in Indonesia which is estimated to lose up to US$ 4.86 billion per year. This figure is equivalent to Rp. 68.7 trillion when using the rupiah exchange rate at the close of the spot market on Monday (22/11) of Rp. 14,149 per United States (US) dollar.” (Kompas.com, 2020). Tax avoidance exists in several corporate sectors, one of which is the mining sector. This sector has conditions where tax avoidance can occur.

Firm size is a factor that allows companies to avoid tax, with a high company size indicating that the company is able to have professional human resources in managing the tax expense. (Ayem, Sri and Agus, 2018)

ROA is a ratio used to measure how well a company manages its assets to earn a net profit. (Siahaan, 2004). The higher the company's profits, the more companies want to do tax avoidance.
The intensity of fixed assets shows the dominance of fixed assets in total assets. The intensity of fixed assets affects tax avoidance, the more companies own fixed assets, the more depreciation expense incurred by the company. This depreciation expense will reduce the company's income so that the company can pay lower taxes. (Shinta and Listya, 2017)

Thin capitalization is a scheme to allocate a company's capital structure that is more inclined to use liabilities than equity. (Olivia and Dwi Mulyani, 2019; Cakmak & Taskiran, 2020; Combita et al., 2020; Meyer & Hassan, 2020; Altounjy et al., 2020). This can affect tax avoidance, in the use of liabilities as part of a large capital structure will result in a large interest expense to reduce company income so that tax payments can be reduced.

Inventory intensity is part of inventory turnover activities within the company. Where this inventory turnover means that the company is able to manage the inventory to be sold so as to generate income (Lestari, 2015). This can affect tax avoidance by the additional expense, the lower the inventory turnover, the more inventory stored in the company and this make the additional expense on the storage of the inventory become higher, if the additional expenses are high the smaller the company's profit obtained. When company's profit is small the tax payable will be small too.

This research refers to research by Suhaidar, Erita Rosalina and Anggun Pratiwi entitled "Factors Affecting the Impact of Tax Avoidance Before and During Covid-19 on Manufacturing Company". Where the researcher examines the relationship between firm size, ROA, asset intensity, thin capitalization, and inventory intensity on tax avoidance. The study was conducted by analyzing the financial statements of 22 companies listed on the Indonesia Stock Exchange (IDX) in 2019-2020. The result of the study shows that company sizes, ROA, fixed asset intensity, and inventory intensity doesn’t have any effect to tax avoidance. Meanwhile thin capitalization have a positive effect towards tax avoidance. Furthermore there is an increase in tax avoidance during the Covid-19

Therefore, this study aims to determine the effect of firm size on tax avoidance, ROA on tax avoidance, asset intensity on tax avoidance, thin capitalization on tax avoidance and inventory intensity on tax avoidance in mining sector companies.

II. LITERATURE REVIEW

Between the 1960s and the early 1970s scientists conducted research on the sharing of risk between groups who had different goals and visions but worked under a cooperative contract (Jensen and Meckling, 1976). Agency theory can solve problems that arise between two groups, namely agents and principals.

Agency theory is defined as a contract that occurs between the principal and the agent in delegating the authority to make decisions within the company. (Jensen and Meckling, 1976). Delegation of authority is given from the principal to the agent where the principal provides facilities and funds for the continuity of the activities carried out by the agent. The availability of facilities and funds from the principal makes the agent responsible for reporting the results of the use of existing facilities and funds to the principal.

In the context of tax avoidance, the government acts as the principal where the government authorizes the company as an agent to manage resources in order to achieve the company's main goal, which is to earn a profit. Where later the profit will affect the tax to be paid.

Tax avoidance is a planning activity carried out by companies to reduce taxes that must be paid by minimizing legally but this action is unethical, because it takes advantage of concessions in tax laws in a country. (Puspita and Febrianti, 2017). Tax avoidance efforts include allocating the expense that occurs on the company's activities into the form of an acceptable tax expense in accordance with applicable tax law. This aims to reduce the profit of the existing company.

Tax avoidance in this study was measured using the Cash Effective Tax Rate (CETR) model. CETR is a comparison between the tax paid by the company with the profit earned before tax. (Hanlon and Heitzman, 2010). This model is formulated as follows:

\[ \text{CETR} = \frac{\text{Cash Tax Paid}}{\text{Pre - Tax Income}} \]
Development of The Hypothesis

1 Company Size and Tax Avoidance

Firm size is a value that shows the size of a company by looking at the share of total assets, income, and total company capital. Where the bigger the company has assets, income and capital, the bigger the size of the company (Basyaib, 2007).

With the large amount of assets, income, and capital owned by the company, the company is able to manage the tax expense to a minimum through effective tax planning carried out by the section professionals of the company. (Rodriguez and Arias, 2012).

This study refers to research conducted by (I Made and Putu, 2016) which states that company size has a positive effect on tax avoidance, while the results of research conducted by (Ni Luh Putu Puspita Dewi and Naniek Noviari, 2017) state that company size does not effect on tax avoidance.

**H1 : Company size does affect tax avoidance**

2 ROA Effect and Tax Avoidance

ROA is a ratio that measures the company's ability to generate net income with its assets. (Tandelilin, 2020). To achieve the company's main goal, namely to earn a profit, the company must be able to manage its resources to achieve this goal. In this case, the resources in question are assets owned by the company.

The existence of net income that arises due to the effective use of assets company causes the company's desire as an agent to reduce the tax expense so that the existing net income does not decrease.

Based on research conducted by (Darmawan and Sukartha, 2014) which states that ROA has an effect on tax avoidance, while the results of research conducted by (Laila Marfu'ah, 2015) which states that ROA has no effect on tax avoidance.

**H2 : ROA does affect tax avoidance**

1 Fixed Asset Intensity and Tax Avoidance

The intensity of fixed assets is an illustration of how much the company invests the assets into fixed assets in the company. (Darmadi and Zulaikha, 2013). Fixed asset investment made by the company is related to the depreciation expense that arises as a result of this. This depreciation expense is related to tax avoidance. Depreciation expense is used as a deduction from taxes, because depreciation expense can reduce the company's taxable profit which will reduce the company's tax payable. (Mulyani, 2014).

Based on research conducted by (Noor et al, 2010) which states that asset intensity has a positive effect on tax avoidance, while the results of research conducted by (Suhaidar, Erita Rosalina and Anggun, 2020) which states that asset intensity has no effect on tax avoidance.

**H3 : Fixed asset intensity does affect tax avoidance**

3 Thin Capitalization and Tax Avoidance

Thin Capitalization is a comparison between debt and equity in a company. (OECD, 2012). Thin capitalization is related to the company's capital structure that prioritizes the use of liabilities to fulfill the company's capital. (Ismi, and Linda, 2016)

Thin capitalization leads to tax avoidance by utilizing interest expense as a deduction from company profits which will later affect the tax payable. The lower the interest expense paid, the higher the company's profit that is taxed. (Olivia and Dwimulyani, 2019)

Based on the tax regulations which is inside the Minister of Finance Regulation Number 169/PMK.010/2015 about Determination of The Amount of Debt and Equity on Company, it is declared that Debt to Equity Ratio(DER) or the ratio between debt and equity that is allowed is 4:1, where if the DER is below 1.00 then the
company is said in a good condition. Therefore even though the rate expense is allowed in the tax regulations, however there is a limitations to that.

Based on research conducted by (Noor et al, 2010) which states that asset intensity has a positive effect on tax avoidance, while the results of research conducted by (Suhaidar, Erita Rosalina and Anggun, 2020) which states that asset intensity has no effect on tax avoidance.

H4 : Thin capitalization does affect tax avoidance

Inventory Intensity Effect on Tax Avoidance

Intensity describes how much company funds are invested in inventory, on the other hand inventory intensity is an assessment of the company in managing inventory effectively and efficiently. (Raharja, 2014)

In PSAK 14 No. 13 describes several expenses that result from high inventory levels. That expense is related to tax avoidance. These expenses are additional expenses that can reduce the company's profit. (Adisamartha and Noviari, 2016)

Based on research conducted by (Muhammad Syamsudin and Trisni Suryani, 2019) which states that inventory intensity has a positive effect on tax avoidance, whilst the result of research that conducted by (Luthfiyyah, 2018) stated that, inventory intensity does not affect tax avoidance.

H5 : Inventory intensity does affect tax avoidance

III. METHODOLOGY

The sample used in this research comes from the financial statements of companies in the mining sector listed on the Indonesia Stock Exchange. The total number of mining companies listed on the Indonesia Stock Exchange is 49 companies. By using a purposive sampling technique with criteria, there are 18 companies in the mining industry that have complete data and have released their annual financial statements in the 2016-2019 period, the total sample collected is 71 research samples.

The data used in this research is quantitative data. The use of time series and cross section data, also known as panel data, is a combination of the number of companies in the mining industry and the 2016-2019 research period.

Firm size is a scale that is measured from total assets, total sales, share value and others, the company can then be measured on a large, medium, small scale. (Putu Ayu and Gerianta, 2018). This is measured by multiplying the natural logarithm with the total assets owned by the company (Sagala, 2015).

Return on Assets is a ratio that is calculated by dividing the company’s total assets divided by net profit after tax obtained (Hanafi and Halim in Yoehana, 2013).

Inventory intensity describes the amount of inventory the company has to the company's total assets. According to Lanis and Richardson (2012) in Sagala (2015), inventory intensity is measured by dividing the total inventory by the total assets owned by the company.

The intensity of fixed assets in this study is calculated by dividing the total fixed assets divided by the total assets owned by the company and then multiplied by one hundred percent, this calculation method is the same as the research conducted by Ardiansyah and Zulaikha (2014).

The thin capitalization variable in this study was calculated using the formula, Debt to Equity Ratio, namely by calculating the total debt owned by the company divided by its capital (Kasmir, 2014:158).

Table 1

<table>
<thead>
<tr>
<th>Research Variable, Symbol, and Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>Tax Avoidance</td>
</tr>
</tbody>
</table>
Data analysis technique used in this research is descriptive analysis. Descriptive analysis was conducted to get a big picture of the conditions or characteristics of the research data related to the variables concerned, namely, Tax Avoidance, Company Size, Return on Assets, Fixed Asset Intensity, Thin Capitalization, and Inventory Intensity. Descriptive analysis is based on the mean, median, maximum, minimum and standard deviation. Before determining the results of the hypothesis, first the Chow test, Hausman test and Lagrange Multiplier (LM) test were carried out to determine the suitable model for this study. The results of this test show that the Fixed Effect Model (FEM) is the model that will be used in this study.

Hypothesis testing using t test with a significant level of 5% and panel data regression. The panel data regression model that will be used as the research hypothesis is described as follows:

\[ TA = + CV\beta_1 + ROA\beta_2 + IAT\beta_3 + TC\beta_4 + II\beta_5 + e \]

Data used in this study will first be tested for classical assumptions. The test that will be carried out is, the first is the normality test of the data using Jarque-Bera. The second is heteroscedasticity using the Glejser test and the last is the autocorrelation test using the Durbin-Waston test. The process of processing this data using Eviews 11.

IV. RESULT AND DISCUSSION

1.1 Result

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Size</td>
<td>71</td>
<td>19.84</td>
<td>20.64</td>
<td>30.64</td>
<td>0.000</td>
<td>7.680152633</td>
</tr>
<tr>
<td>ROA</td>
<td>71</td>
<td>0.02</td>
<td>0.00</td>
<td>0.46</td>
<td>-0.006</td>
<td>0.058878691</td>
</tr>
<tr>
<td>Fixed Asset Intensity</td>
<td>71</td>
<td>0.54</td>
<td>0.62</td>
<td>0.90</td>
<td>0.000</td>
<td>0.24643462</td>
</tr>
<tr>
<td>Thin Capitalization</td>
<td>71</td>
<td>1.46</td>
<td>1.12</td>
<td>11.91</td>
<td>0.000</td>
<td>1.751373396</td>
</tr>
<tr>
<td>Inventory Intensity</td>
<td>71</td>
<td>0.08</td>
<td>0.05</td>
<td>1.06</td>
<td>0.000</td>
<td>0.141875851</td>
</tr>
<tr>
<td>Tax Avoidance</td>
<td>71</td>
<td>0.86</td>
<td>0.39</td>
<td>12.24</td>
<td>-3.528</td>
<td>1.941681294</td>
</tr>
</tbody>
</table>

The ROA variable has an average value of 0.02 or 2%, this number is arguably very small, which means that the company can only earn 2 percent of the total assets owned, a good ROA value for the mining industry is at 9%, management is expected companies can do better. (Brigham & Hounstan, 2010)

Fixed Asset Intensity, is a ratio that is measured to calculate how much the company invests its capital in the form of fixed assets, this is intended to find out how much depreciation expense must be paid by the company. In this study, the average company in the sample has a value of 0.54 which means that the average company in this sample has fixed assets of half of the total assets owned.

Thin Capitalization or which can be calculated using the DER formula, shows an average value of 1.46, where this number is more than 1 indicating that the company prefers to fund its business using debt rather than using capital.
The next variable is inventory intensity, this variable is calculated by dividing the total inventory by total assets, this shows that the company does not have a lot of inventory or management is less effective in regulating the entry and exit of inventory in the company.

Tax Avoidance in this research is measured using CETR or cash tax effective tax rate, which is calculated by dividing cash that used to pay taxes this year divided by the earning before tax. The value if this variable is range from 0 to 1, the lower the CETR value the higher the possibility of a company to commit a tax avoidance (Warsini, 2014). In this research the CETR value is worth 0.86 which is a quite big number that indicates that the average of the company in the mining sector does not perform tax avoidance.

Next, the classical assumption test is performed. The results of the classical assumption test for data normality using Jarque-Bera show that the data used in this study has an abnormal distribution, but because the number of samples is more than 30, this test can be ignored. In addition, the multicollinearity test using the correlation model can be concluded that there is no multicollinearity. Heteroscedasticity test using the Glejser test shows results that show that the value of each independent variable has a value of more than 0.05. This shows that there is no heteroscedasticity. The Durbin-Watson stat method is used to test the autocorrelation. The results of this test indicate that there is no autocorrelation in this data.

Panel data regression analysis using Fixed Effect Model produces the following equation:

\[
TA = c - 0.101681CV - 5.146192ROA + 6.081840IAT - 0.903162TC - 0.382225II
\]

Table 3

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nilai Perusahaan</td>
<td>-0.101681</td>
<td>0.067093</td>
<td>-1.515514</td>
<td>0.1362</td>
</tr>
<tr>
<td>ROA</td>
<td>-5.145192</td>
<td>4.834699</td>
<td>-1.064429</td>
<td>0.2925</td>
</tr>
<tr>
<td>Intensitas Aset Tetap</td>
<td>6.08184</td>
<td>2.490154</td>
<td>2.442354</td>
<td>0.0183</td>
</tr>
<tr>
<td>Thin Capitalization</td>
<td>-0.903162</td>
<td>0.310205</td>
<td>-2.911497</td>
<td>0.0054</td>
</tr>
<tr>
<td>Intensitas Persediaan</td>
<td>-0.382225</td>
<td>2.075986</td>
<td>-0.184117</td>
<td>0.8547</td>
</tr>
<tr>
<td>Penghindaran Pajak</td>
<td>0.950223</td>
<td>1.011098</td>
<td>0.939793</td>
<td>0.3520</td>
</tr>
</tbody>
</table>

Table 4

Hypothesis Testing

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>Prob.</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Size</td>
<td>-0.101681</td>
<td>-1.515514</td>
<td>0.1362</td>
<td>No effect</td>
</tr>
<tr>
<td>ROA</td>
<td>-5.146192</td>
<td>1.064429</td>
<td>0.2925</td>
<td>No effect</td>
</tr>
<tr>
<td>Fixed Asset Intensity</td>
<td>6.08184</td>
<td>2.442354</td>
<td>0.0183</td>
<td>Effect</td>
</tr>
<tr>
<td>Thin Capitalization</td>
<td>-0.903162</td>
<td>-2.911497</td>
<td>0.0054</td>
<td>Effect</td>
</tr>
<tr>
<td>Inventory Intensity</td>
<td>-0.382225</td>
<td>-0.184117</td>
<td>0.8547</td>
<td>No effect</td>
</tr>
<tr>
<td>Tax Avoidance</td>
<td>0.950223</td>
<td>0.939793</td>
<td>0.3520</td>
<td></td>
</tr>
</tbody>
</table>

Capitalization have prob values of 0.0183 and 0.0054, both of which are smaller than 0.05, this indicates that these two variables have an influence on the occurrence of tax avoidance. However, Firm Value, ROA and Inventory Intensity, all three have a value of more than 0.05, which are 0.1362, 0.2925 and 0.8547, respectively, so these three variables have no effect on the occurrence of tax avoidance. The value of adjusted R squared is 0.434212.
0.174892, meaning that the variables of firm value, ROA, fixed asset intensity, thin capitalization, and inventory intensity only affect the occurrence of tax avoidance by 17.48%, the remaining 82.52% from other variables not included in the study. this.

V. DISCUSSION

Based on the data obtained from research and from the results of statistical tests that have been carried out, the results of the hypothesis prove that company size does not affect the occurrence of tax avoidance. The average company size in the mining sector has a value of 19.84 where this is < 20. So the average company in the mining sector has a medium company size. Medium size companies have a tendency to allocate assets, income, and capital to other things such as company investments compared to the allocation of compensation to the tax professional section. This statement is supported by the research that done by (Ni Luh Putu Puspita Dewi and Naniek Noviari, 2017) stated that company size does not affect tax avoidance.

Hypothesis testing proves that Return on Assets does not affect the occurrence of tax avoidance. The average ROA in this study is 0.02 or 2%. This indicates that the average ROA in the mining sector is very bad compared to the normal ROA of 9%. With an ROA value of 2%, it means that the company's management is very bad at managing its assets to earn a profit. This explains that the average after-tax income from mining sector companies is small so that companies do not have the desire to create tax avoidance scenarios. This is supported by the research done by (Laila Marfu’ah, 2015) stated that ROA does not affect tax avoidance.

The probability value of the fixed asset intensity is 0.0183 and <0.05, this proves that the asset intensity affects tax avoidance. Tax intensity has an influence on tax avoidance through depreciation expense, where if the company has a high asset intensity, the depreciation expense generated on the fixed assets is also high so that the existing profit is reduced and the tax payable on the profit also decreases. This is in accordance with research conducted by (Noor et al, 2020) which states that asset intensity has a positive effect on tax avoidance.

For thin capitalization, the results of hypothesis testing show a probability value of 0.0054 where this value is smaller than 0.05, this proves that thin capitalization affects tax avoidance. Thin capitalization has an effect on taxes seen from the interest expense generated on the use of liabilities as capital that dominates the company. The greater the liability used by the company as capital, the greater the interest expense that must be incurred by the company, a large interest expense will affect the profit to be smaller so that the tax payable on the profit is also small. This is in accordance with research conducted by (Agung and Neo, 2018) which states that there is a positive effect on tax avoidance.

The inventory intensity has a probability value of 0.857 and > 0.05, this indicates that the inventory intensity has no effect on tax avoidance. The average tax intensity in the mining sector is 0.08, which means that there is only 8% of the total inventory of the company's total assets. With only 8% of existing inventory from total assets, it indicates that there is not much inventory in the company, so it does not cause a large additional burden for the company. The result of this research is supported by the research conducted by (Luthfiyyah, 2020) stated that inventory intensity does not affect tax avoidance.

VI. CONCLUSION

From the results of the study, it can be concluded that the variables that can be categorized as factors that affect tax avoidance are asset intensity and thin capitalization, while 3 other variables, including firm size, ROA and inventory intensity, do not affect tax avoidance.

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