Effect of Profitability, Leverage, Size, Capital Intensity, and Inventory Intensity toward Tax Aggressiveness

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ARTICLE INFORMATION

ABSTRACT

The goal of this research is to find out the effect of profitability, leverage, size, capital intensity, and inventory intensity towards tax aggressiveness. Quantitative approach has been used in this research and applied the multiple linear regression analysis. Tax aggressiveness is measured by Effective Tax Rate (ETR). Population in this study was manufacture, and property, building, real estate companies listed on Indonesia Stock Exchange (IDX) for the year of 2019 – 2020. Purposive sampling used as sampling technique and 135 samples were acquired. Data for this research is analysed using descriptive statistics, classical assumption test, multiple linear regression, hypothesis test, and coefficient of determination with the help of SPSS version 26. According to the finding of the research, profitability, leverage, size, and capital intensity partially has no effect on tax aggressiveness, while inventory intensity has an effect on tax aggressiveness. All the factors affect tax aggressiveness and contribute 11.6%.

Keywords: Capital Intensity, Inventory Intensity, Leverage, Profitability, Size, Tax Aggressiveness

JEL Classification: H25, H26, M41
INTRODUCTION

Indonesia has been affected by the Covid 19 pandemic, which had such an economic impact from the beginning of 2020. Also, it has a real impact on reduce state revenues, especially from the tax sector. The government announced through the Ministry of Finance that tax revenues reached Rp925.34 trillion until the end of November 2020 (Kementerian Keuangan, 2020). This amount is a decrease compared to the achievement in 2019 of Rp1,136.13 trillion. One of the reasons for the lowering was due to the Covid 19 pandemic which impact in limited economic activity.

The authorities who handle these cases in various business and economic sectors frequently discover cases of tax aggressiveness in the form of tax avoid. Companies that take tax aggressiveness actions will minimize corporate tax payments to achieve maximum profit. In Indonesia, tax aggressiveness occurs because the effective tax rate (ETR) borne by large corporations and taxpayers tends to decrease.

The large possibility of the company to reduce the tax expense shows that the company is aggressive towards taxes. Companies utilize a few strategies to avoid paying taxes and also being aggressive, both financially and non-financially. The financial factors include using long-term debt as a source of funding (leverage), the size of a company (size), capital intensity and inventory intensity as well as profitability that strengthens all the four.

The first affecting factor of tax aggressiveness is profitability. Profitability reflects the company's ability to earn a profit in a certain period. If the company has a low profitability ratio, company's tax expense will be low too. Research by (Maulana, 2020) obtained the result that profitability has a positive effect on tax aggressiveness. While (Leksono et al., 2019) found that profitability has a negative effect on tax aggressiveness. In contrast to (Savitri & Rahmawati, 2017) who found that profitability has no effect on tax aggressiveness.

Then, the factor that can affects tax aggressiveness is leverage. Leverage is all the company's debts to other parties that have not been paid or fulfilled. The debt is a source of external financing for expansion and to finance the company's needs. The size of the leverage on the company can affect the size of the tax paid because the interest costs from debt can reduce tax calculations so that the tax expense becomes smaller. Research by (Nurhandono & Firmansyah, 2017) found that leverage has a positive effect on tax aggressiveness. Nevertheless (Wulansari et al., 2020)’s result research is that leverage has a negative effect on tax aggressiveness. While (Wijaya & Saebani, 2019) obtained the result that leverage has no effect on tax aggressiveness.

Afterwards the other factor is the size of the company. The larger the size of the company, the more complex the transactions will be. This allows companies to exploit existing loopholes to avoid paying taxes on each transaction. In addition, companies that operate across countries tend to avoid the tax higher than companies that operate cross-country, because these companies can transfer profits to companies in other countries, where the country collects a lower tax rate. Research by (Leksono et al., 2019; Setyoningrum & Zulaikha, 2019) show that company size has a negative effect on tax aggressiveness. In contrast to (Susanto et al., 2018) who found that company size has no effect on tax aggressiveness.

Next factor is capital intensity. Capital Intensity is the action of companies that invest their assets in fixed assets. Basically, fixed assets will be depreciated which will later become a depreciation expense in the company's financial statements. The greater the
value of the company's asset ownership, the higher the depreciation expense will be. This causes the company to pay lower taxes because the depreciation expense of fixed assets will reduce the company's income calculation. Thus, reducing the tax expense that makes the company do the tax aggressiveness actions. The result of the research by (Andhari & Sukartha, 2017) found that capital intensity has a positive effect on tax aggressiveness. However (Lestari et al., 2019) found that capital intensity has a negative effect on tax aggressiveness. While (Indradi, 2018) found that capital intensity has no effect on tax aggressiveness.

Furthermore, inventory intensity can also affect tax aggressiveness. Inventory Intensity relates to the actions of companies that invest their assets in inventory. The more inventory a company has, the greater the expense for that inventory. The expense of maintaining inventory will reduce the company's profits which will have an impact on reducing taxes paid. Research by (Maulana, 2020; Yuliana & Wahyudi, 2018) found that inventory intensity has a positive effect on tax aggressiveness. In contrast to (Andhari & Sukartha, 2017; Savitri & Rahmawati, 2017) who found that inventory intensity has no effect on tax aggressiveness.

**LITERATURE REVIEW**

**Tax Aggressiveness**
One way that companies do to minimize their tax expense is to do tax aggressiveness. Tax aggressiveness is a more precise activity that involves activities whose primary goal is to decrease a company's tax (Yuliana & Wahyudi, 2018). Tax aggressiveness is an act of manipulating taxable income which is planned through tax planning using either legally (tax avoidance) or illegal (tax evasion) methods. It can be said that tax aggressiveness is a tax planning activity that consists of legal activity, but may fall into a gray area, as well as illegal activity (Wahab et al., 2017). Maximizing profit and minimizing tax is the company's purpose doing the tax aggressiveness.

Calculation for tax aggressiveness in this research is Effective Tax Rate (ETR). ETRs are an appropriate indicator of tax aggressiveness since companies that evade taxes by reducing their taxable revenue while keeping their financial accounting income have lower ETRs (Lanis & Richardson, 2012).

**Profitability**
Profitability is a ratio that describes the company's capacity to make a profit using all its available resources and capabilities (Harahap, 2016). Profitability is the company's earning net of costs and usually measured by Return on Assets (ROA) because it is proven to represent the company's performance well (Chen et al., 2016). The high profitability ratio indicates that the company is able to earn high profits. If the value of profitability is higher, the company's performance will be more productive in terms of generating profits (Gunadi et al., 2020). Increasing the value of profitability will make the company's tax value higher, so the company will be more aggressive towards taxes. This is confirmed by research from (Leksono et al., 2019; Maulana, 2020) which has the result that profitability affects tax aggressiveness.

**Leverage**
Leverage, frequently known as solvency, is a metric used to determine how much of a company's assets are financed by debt derived from external funding (Muslih & Novan, 2021). Leverage is used to measure the company's ability to complete all of its liabilities, both short-term and long-term (Hery, 2015). The high level of leverage shows that companies tend to depend on funding obtained from loans to other parties. The interest expense from loans to other parties can be used by the company to reduce the tax
payable, because interest expense will reduce taxable income, which automatically reduce tax. Leverage is measured using the Debt-to-Equity Ratio (DER) which describes the ratio between total debt and total company equity used as a source of funding. This is supported by research from (Nurhandono & Firmansyah, 2017; Wulansari et al., 2020) which found that leverage affects tax aggressiveness.

**Size**

Company size is a scale that can divide companies into small and large companies according to various ways such as the number of company assets, total sales, stock market value and average level of sales (Oktamawati, 2017). The size of the company directly reflects the intensity of the company's operating activities that may be seen through the total asset (Kusuma et al., 2021). Regarding company size and taxes, there are two theories with different views, these are political cost theory and political power theory. In political cost theory, large companies will get the higher Effective Tax Rate (ETR) because large companies are easier to be targeted by government, tax authorities, and public opinion (Stamatopoulos et al., 2019). Meanwhile in political power theory, large companies can suppress the political process in their favour, so that large companies have many resources for optimal tax savings (Kim & Im, 2017).

Size measured by assets because a large number of assets indicates the size of the company is large and is able to generate high profits. Companies with relatively large total assets tend to be more capable and stable to get profits, thereby increasing tax expense which encourages companies to avoid taxes (Mahanani & Titisari, 2016, p. 221). This is strengthened by research from (Leksono et al., 2019; Wulansari et al., 2020) which has the result that size affects tax aggressiveness.

**Capital Intensity**

Capital intensity is a measure of a company’s investment activity in the form of fixed assets (Nugraha & Mulyani, 2019). The capital intensity ratio refers to the size of a company’s fixed assets and stock (Irianto et al., 2017). Managers will invest company funds in fixed assets with the aim of utilizing the depreciation as a reduction in tax expense (Muzakki & Darsono, 2015). Company’s fixed asset allow company to reduce tax expense for its depreciation. This is strengthened by research from (Andhari & Sukartha, 2017; Lestari et al., 2019) which has the result that capital intensity affects tax aggressiveness.

**Inventory Intensity**

Inventory intensity is an explanation related to the inventory needs to support the company’s operations. Inventory intensity is company’s investment activity that associated with investment in the form of company's inventory (Ann & Manurung, 2019). The total inventory is compared to the total assets possessed by the company to determine inventory intensity (Yuliana & Wahyudi, 2018). The higher the company's inventory will increase the expense of maintenance and storage for inventory, so it can reduce profits which have an impact on tax deductions. This is strengthened by research from (Andhari & Sukartha, 2017; Savitri & Rahmawati, 2017) which has the result that inventory intensity affects tax aggressiveness.

**Hypothesis**

Derived from the previous, hypothesis for this research is:

- \( H_1 \): Profitability has an effect towards Tax Aggressiveness
- \( H_2 \): Leverage has an effect towards Tax Aggressiveness
- \( H_3 \): Size has an effect towards Tax Aggressiveness
- \( H_4 \): Capital Intensity has an effect towards Tax Aggressiveness
- \( H_5 \): Inventory Intensity has an effect towards Tax Aggressiveness
RESEARCH METHOD

This research applied quantitative approach. The quantitative approach was chosen since statistical tools would be used to analyze data in the form of numbers in this research. Multiple linear regression analysis was used to test the hypothesis in this study, which assesses the effect of various independent variables on the dependent variable. Population in this research are manufacturing and property, building, real estate companies listed on Indonesia Stock Exchange (IDX) for 2019 – 2020 period. The sample selection used purposive sampling and obtained a total of 135 samples. Each variable is calculated using the following calculation:
1. Tax aggressiveness proxied by Effective Tax Rate (ETR) which is derived by dividing tax expense by profit before tax.
2. Profitability proxied by Return on Asset (ROA) that is computed by dividing earning after tax by total asset.
3. Leverage proxied by Debt-to-Equity Ratio (DER) which is calculated by dividing total liability by total equity.
4. Size is calculated using natural log of total asset.
5. Capital intensity proxied by Capital Intensity Ratio (CIR) by dividing total fixed asset by total asset.
6. Inventory intensity proxied by Inventory Intensity (INVINT) by total inventory divided by total asset.

RESULTS

Descriptive Statistics
The results of data analysis are described through descriptive statistics. The description of the data using minimum, maximum, mean, and standard deviation for each variable.

Table 1. Descriptive Statistics Result (N = 135)

<table>
<thead>
<tr>
<th>Description</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax Aggressiveness</td>
<td>-.0141</td>
<td>0.6757</td>
<td>.2193</td>
<td>.1232</td>
</tr>
<tr>
<td>Profitability</td>
<td>0.0034</td>
<td>0.2357</td>
<td>0.0588</td>
<td>0.0493</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.0090</td>
<td>3.8754</td>
<td>.8876</td>
<td>.6985</td>
</tr>
<tr>
<td>Size</td>
<td>24.4679</td>
<td>33.4746</td>
<td>28.6537</td>
<td>1.7361</td>
</tr>
<tr>
<td>Capital Intensity</td>
<td>0.0010</td>
<td>0.7631</td>
<td>.2911</td>
<td>.2176</td>
</tr>
<tr>
<td>Inventory Intensity</td>
<td>0.0003</td>
<td>0.9198</td>
<td>.2566</td>
<td>.1997</td>
</tr>
</tbody>
</table>

Source: SPSS 26 output (processed by researchers)

Normality Test
The normality test is used to determine whether or not the data distribution is normal. This research use Kolmogorov Smirnov for the normality test. The significance level of is 5%. Based on Table 2, the Asymp. Sig. value is 0.071. The result show that the probability value is more than 0.05 and the data is normally distributed.

Table 2. Normality Test Result

<table>
<thead>
<tr>
<th>Description</th>
<th>Unstandardized Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>135</td>
</tr>
<tr>
<td>Test Statistic</td>
<td>.073</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.071c</td>
</tr>
</tbody>
</table>

Source: SPSS 26 output (processed by researchers)
Multicollinearity Test
Multicollinearity test is intended to show the correlation between independent variables. The interpretation of the test is based on the amount of tolerance and VIF. If tolerance > 0.10 and VIF < 10.00, then there is no multicollinearity. Table 3. Shows the amount of tolerance for each variable is more than 0.10 and VIF less than 10.00, it can be concluded that there was no multicollinearity among the independent variables.

<table>
<thead>
<tr>
<th>Collinearity Statistics</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>.801</td>
<td>1.248</td>
</tr>
<tr>
<td>Leverage</td>
<td>.773</td>
<td>1.294</td>
</tr>
<tr>
<td>Size</td>
<td>.936</td>
<td>1.069</td>
</tr>
<tr>
<td>Capital Intensity</td>
<td>.720</td>
<td>1.390</td>
</tr>
<tr>
<td>Inventory Intensity</td>
<td>.744</td>
<td>1.344</td>
</tr>
</tbody>
</table>

Source: SPSS 26 output (processed by researchers)

Heteroscedasticity Test
In this research, Spearman Rho used to test the heteroscedasticity. There is no heteroscedasticity if the significance value is more than 0.05. Table 4. shows that the significance value is more than 0.05 for each variable. It can be concluded that there was no heteroscedasticity among the independent variables.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>.782</td>
</tr>
<tr>
<td>Leverage</td>
<td>.274</td>
</tr>
<tr>
<td>Size</td>
<td>.925</td>
</tr>
<tr>
<td>Capital Intensity</td>
<td>.992</td>
</tr>
<tr>
<td>Inventory Intensity</td>
<td>.312</td>
</tr>
</tbody>
</table>

Source: SPSS 26 output (processed by researchers)

Autocorrelation Test
Autocorrelation test in this research was measured using the Durbin Watson. Data is free from autocorrelation either negative or positive if the value of dU < d < 4 – dL. Based on Table 5. the data is free from autocorrelation because 1.796 < 2.020 < 2.238.

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durbin Watson</td>
<td>2.020</td>
</tr>
<tr>
<td>dL</td>
<td>1.643</td>
</tr>
<tr>
<td>4-dL</td>
<td>2.357</td>
</tr>
<tr>
<td>dU</td>
<td>1.796</td>
</tr>
<tr>
<td>4-dU</td>
<td>2.238</td>
</tr>
</tbody>
</table>

Source: SPSS 26 output (processed by researchers)

Multiple Linear Regression
This test shows the high effect value of the independent variables on the dependent variable. If the values of the independent variables change, multiple linear regression
can be used to predict the dependent variable. Based on the result of the analysis in the Table 6. the multiple linear regression is:

\[
Y = 0.497 + (-0.281)X_1 + (-0.004)X_2 + (-0.008)X_3 + (0.087)X_4 + (-0.161)X_5 + e
\]

Table 6. Multiple Linear Regression Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
</tr>
<tr>
<td></td>
<td>Leverage</td>
</tr>
<tr>
<td></td>
<td>Size</td>
</tr>
<tr>
<td></td>
<td>Capital Intensity</td>
</tr>
<tr>
<td></td>
<td>Inventory Intensity</td>
</tr>
</tbody>
</table>

Source: SPSS 26 output (processed by researchers)

T Test

T test aims to see the effect of independent variable on dependent variable partially. Significance level for this test is 5%. The result on Table 7. shows that profitability, leverage, size, and capital intensity partially do not have effect on tax aggressiveness because the significance level is more than 0.05. Inventory intensity partially has an effect on tax aggressiveness because the significance level is less than 0.05.

Table 7. T Test Result

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2.941</td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
<td>-1.236</td>
</tr>
<tr>
<td></td>
<td>Leverage</td>
<td>-.232</td>
</tr>
<tr>
<td></td>
<td>Size</td>
<td>-1.414</td>
</tr>
<tr>
<td></td>
<td>Capital Intensity</td>
<td>1.607</td>
</tr>
<tr>
<td></td>
<td>Inventory Intensity</td>
<td>-2.771</td>
</tr>
</tbody>
</table>

Source: SPSS 26 output (processed by researchers)

F Test

F test aims to see the effect of independent variables on dependent variable simultaneously. Significance level for this test is 5%. The result on Table 8. shows profitability, leverage, size, capital intensity, and inventory intensity effect on tax aggressiveness because the significance level is less than 0.05.

Table 8. F Test Result

<table>
<thead>
<tr>
<th>Model</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>4.518</td>
<td>.001b</td>
</tr>
</tbody>
</table>

Source: SPSS 26 output (processed by researchers)

Coefficient of Determination

Table 9. shows that the value of Adjusted R Square is 0.116 or 11.6%. It means that all independent variables have contribution value of 11.6% in affect tax aggressiveness.
Table 9. Determination Analysis Result

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.386</td>
<td>.149</td>
<td>.116</td>
<td>.1158488</td>
</tr>
</tbody>
</table>

Source: SPSS 26 output (processed by researchers)

DISCUSSION

Profitability toward Tax Aggressiveness
As a result of the findings, profitability has no significant effect on tax aggressiveness, so the first hypothesis is rejected. The finding explains that if a company can earn high profits, it also has a high ability to pay taxes. Because company has no difficulty in fulfilling its responsibility, one of them is paying tax to government. The findings of this research agree with those of (Hidayat & Fitria, 2018; Savitri & Rahmawati, 2017) who concluded that profitability had no effect on tax aggressiveness.

Leverage toward Tax Aggressiveness
As a result of the findings, leverage has no significant effect on tax aggressiveness, so the second hypothesis is rejected. The result indicates that the company does not use its debt to minimize its taxes. This is because the large value of debt will cause more risks faced by company and reducing the level of investor's trust to invest in the company. This research are in line with (Maulana, 2020; Wijaya & Saebani, 2019) who discovered that leverage has no significant effect on tax aggressiveness.

Size toward Tax Aggressiveness
As a result of the findings, size has no significant effect on tax aggressiveness, so the third hypothesis is rejected. The result means that whether the company is big or no, it does not change the company's tax aggressive actions. Regardless of its size, companies tend to do tax aggressiveness because paying taxes is an expense that can reduce the value of company profit. The result of this research are in accordance with (Maulana, 2020; Susanto et al., 2018) who observed that size has no significant effect on tax aggressiveness.

Capital Intensity toward Tax Aggressiveness
As a result of the findings, capital Intensity has no significant effect on tax aggressiveness, so the fourth hypothesis is rejected. The result means that the company's investment in fixed assets is not intended to avoid taxes. However, the fixed asset is intended to support the company's operational activities. This research are in line with (Fahrani et al., 2018; Indradi, 2018) who found that capital intensity has no significant effect on tax aggressiveness.

Inventory Intensity toward Tax Aggressiveness
As a result of the findings, inventory intensity has significant effect on tax aggressiveness so the fifth hypothesis is accepted. Based on the research results, inventory intensity has a negative effect on the Effective Tax Rate (ETR) as a proxy for tax aggressiveness. This means that the greater the value of inventory intensity, the lower the value of ETR. The low value of ETR shows that the company has a small tax expense, and vice versa. The high value of the company's inventory will result in expenses that will reduce the company's taxable profit, lowering the company's tax. This research are in line with (Makhfudloh et al., 2018; Maulana, 2020) who found that inventory intensity has significant effect on tax aggressiveness.
CONCLUSION

Based on the result of the analysis research, the following conclusions can be drawn:
1. Profitability has no effect towards tax aggressiveness.
2. Leverage has no effect towards tax aggressiveness.
3. Size has no effect towards tax aggressiveness.
4. Capital intensity has no effect towards tax aggressiveness.
5. Inventory intensity has a significant effect towards tax aggressiveness.

LIMITATION

Based on the research that has been done, there are some limitations in this research. Among these limitations, the Adjusted R Square value in the coefficient of determination test obtained quite low results. These results indicate that there are other variables that have a relation to predict tax aggressiveness, both financial and non-financial factors that are not included in this research.

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DECLARATION OF CONFLICTING INTERESTS

There is no conflict of interest regarding the publication of this paper.

REFERENCES


