The Effect of Liquidity, Leverage, Firm Size and Fixed Asset Intensity on Tax Aggressiveness

Lukluul Khasanah¹, Wawan Sadtyo Nugroho², Nurcahyono Nurcahyono³

¹,² Department of Accounting, Universitas Muhammadiyah Magelang, Indonesia
³ Department of Accounting, Universitas Muhammadiyah Semarang, Indonesia
*Corresponding Author

Abstract

Tax is one of the primary sources of revenue in Indonesia. Optimization of tax revenue has many obstacles, one of which is the form of non-compliance in tax payments, called tax planning. This study aims to analyze the relationship of liquidity, leverage, firm size and fixed asset intensity to tax aggressiveness in companies. The population of this study is manufacturing companies listed on the IDX using the purposive sampling method. The results showed that liquidity, leverage and firm size affected tax aggressiveness, while fixed asset intensity did not affect tax aggressiveness. This research contributed to the development of the tax aggressiveness literature. Then, it has implications for the development of models in curbing tax aggressiveness carried out by companies.

JEL Classification: H26, H71


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Introduction

Indonesia is a developing country that is carrying out development activities, including infrastructure development, human resource development, and others that aim to improve the welfare of the people (Khamisan, 2020; Khuong et al., 2020; Rifai & Atiningsih, 2019). One way to realize development activities aimed at advancing and prospering is to optimize the source of funds derived from taxes because one of the Indonesian economy's pillars is still from the tax sector. Tax is a compulsory, coercive contribution for taxpayers, individuals, and entities by not getting direct reciprocity (counter achievement) where the collection is based on the law (Herzog, 2021).

For the government, taxes are a source of income to finance the administration of government, but for taxpayers, it is a cost that will reduce their income. Companies are taxpayers who contribute the most to state tax revenue. For companies, tax is a burden that will reduce net profit, so the company will try to manage its taxes to a minimum, which aims to obtain maximum profit (Tambahani et al., 2021). Companies consider taxes as expenses that might affect the company's income or profits, so doing tax planning is an effort to minimize the amount of tax to be paid. An organization commits tax aggressiveness to minimize its taxable income by legally avoiding part or all of its tax liability or by unlawfully avoiding part or all of its tax liability (Damayanti & Susanto, 2015; Hanlon & Slemrod, 2009). The Company may minimize its taxable income, among other things, by (1) misrepresenting personal expenses as business expenses, (2) classifying capital expenditures as operating expenditures, and (3) increasing the cost of raw materials to reduce the company's profit before tax (Yulyanah & Kusumastuti, 2019).

Several indicators can affect tax avoidance, namely liquidity, where tax is short-term debt whose capacity is reflected in the company's solvency ratio. When a company's cash ratio is high, the government believes it can satisfy its short-term obligations. When it's low, the opposite is true. The government will assume the corporation can meet its short-term commitments if its cash ratio is low (Adisamartha & Noviari, 2015; Lucky, 2022; Marfiana & Putra, 2021; Setiawan et al., 2021). Study A’yun et al (A’yun et al., 2022) discovered that liquidity ratios identify a company’s financing and compliance capacities when it comes time to collect, as well as its capacity to satisfy its short-term commitments. Tiaras would approve of this research, which shows that liquidity significantly affects tax aggressiveness. However, some researchers have found that liquidity does not affect tax aggressiveness (Astuti et al., 2021; Ermasova et al., 2021; Sinurat, Siagian, 2022; Windo Sinurat, Candra Josua Hasholano Siagian, 2022).

The second indicator is with Leverage. An organization's leverage indicates the extent to which it relies on debt financing for its day-to-day operations. Companies with debt receive tax breaks through reduced interest rates on loans. Companies often use this reduction in loan interest rates to reduce their income tax burden (Avrinia Wulansari et al., 2020). Research Fitriani & Sulistyawati (Fitriani & Sulistyawati, 2020) explains that companies can pay a low tax burden by reducing interest expenses so they can no longer commit tax evasion. Studies Susilowati et al (Susilowati et al., 2018) show that Leverage positively affects tax aggressiveness. However, some researchers have found that Leverage does not affect tax aggressiveness (Allo et al., 2021; Apriani et al., 2021; Pondrinal et al., 2023).

The third indicator is the firm size. The size of a corporation may be determined by looking at its total assets or total turnover. Companies that are very substantial often own a sizable plot of land. A bigger corporation is one with more assets. The annual depreciation expenditure reduces corporate tax, allowing the corporation to maintain high earnings while bearing a less tax burden (Reminda et al., 2017). This clarifies that tax aggression is strongly correlated with firm size. Tax aggression seems to be unaffected by firm size, according to several studies (Allo et al., 2021; Gayatri & Wirasedana, 2021; Prihanto, 2020; Santi & Wardani, 2018).
The fourth indicator is the influence of the intensity of fixed assets owned by a company. According to Dharma (Yani & Suputra, 2020), states that tax payments are affected by the intensity of these assets. For example, if a firm has a lot of fixed assets, it will have to pay a lot in depreciation charges, which means that earnings will go down. As a result, taxes will go down as well. Supporting this idea are the findings of Wahyuni et al (Wahyuni, 2021), which show that the intensity of fixed assets has that demonstrate a favourable correlation between the intensity of fixed assets and tax aggressiveness. Nevertheless, there are studies that have shown that tax aggression is unaffected by the intensity of fixed assets (Azzahra et al., 2023; Mallik et al., 2017; Nurcahyono et al., 2021).

The Ministry of Finance noted that tax revenue throughout January 2019 increased by 8.82%. Although revenue is still growing positively, revenue in the processing or manufacturing industry sector actually grows negatively. Even though this sector contributes 20.8% to tax revenue. Manufacturing sector revenue fell 16.2% year on year. The Director General of Taxes said the decline in tax revenue in the manufacturing sector was due to accelerated restitution which soared in January 2019. When viewed, the amount of VAT restitution made grew 40.66% year on year (yoy). Manufacturing companies experiencing a decrease in tax revenue is an issue that can lead to an increase in tax avoidance for manufacturing companies in Indonesia in 2020 (Nasional.kontan.co.id, 2019).

This study examines the effect of liquidity, Leverage, firm size and fixed asset intensity on tax aggressiveness, which shareholders and investors can later use to invest their capital in a company. Furthermore, this research also contributed to developing literature on aggressiveness in companies listed on the stock exchange.

**Hypothesis Development**

Tax aggressiveness is the planned manipulation of tax revenues through tax planning, using legally classified tax avoidance methods or tax evasion practices. Companies view taxes as a possible additional cost of reducing corporate profits (Kristianingrum et al., 2022; Videsia et al., 2022). Therefore, many researchers assume that corporations will take measures that reduce the company's tax burden. Companies view taxes as additional costs that can reduce company profits; therefore it can be assumed that companies will take actions that can reduce the company tax burden (Sugiyarti & Ramadhani, 2019).

**The effect of liquidity on tax aggressiveness**

Good corporate liquidity does not make taxes the main goal to minimize existing costs. However, if the company's liquidity is low and it cannot meet its short-term obligations, it can lead to tax avoidance practices, namely tax aggressiveness (Fadli et al., 2016). Liquidity is the company's ability to meet long-term obligations. Conventionally, "short-term" is considered a period of up to a year, even when referring to a company's regular business cycle. Consequently, the organization needs liquidity. Companies are more likely to be tax aggressive if they have sufficient cash on hand to pay all of their bills on time and in accordance with all laws and regulations (Tiaras & Wijaya, 2015).

A high ratio is indicative of a high degree of capacity to fulfill responsibilities, according to the signal theory. Also, a high liquidity ratio shows that there are enough of cash on hand to cover operational expenses and dividend payments. Research conducted (Indradi, 2018) discovered a positive correlation between liquidity and tax aggression, meaning that a company's ability to defray its short-term debts is directly correlated to its liquidity. (Wardana & Wulandari, 2021) Additionally, it was shown that tax aggressiveness is positively correlated with aggression; a larger degree of short-term debt is associated with a higher risk of tax-aggressive activities taken by a corporation.

**H1: Liquidity has a positive effect on tax aggressiveness**
The effect of leverage on the aggressiveness of the company
The more a company's leverage, the more risk it takes on since it needs to utilize its commercial profits to pay a high interest rate on its loans, cutting into its net profit. Companies are considered to deliberately take large amounts of debt to benefit from collecting interest on the debt so that the burden can reduce the company's profits (Akustika & Wikartika, 2023).

Along with signal theory, companies with high leverage levels are expected to resort to tax aggressiveness to reduce information asymmetry, which might result in increased creditor and investor pressure on the company. Research conducted (Savitri & Rahmawati, 2017) showed that tax aggressiveness is impacted adversely by leverage, since corporations incur significant interest costs when they borrow money to support their operations. The corporation may avoid dealing with profit management issues related to taxes as its taxable revenue is little. Because of the relatively modest tax burden, corporations often refrain from engaging in tax aggression. The study results (Apriliana, 2022) said that the greater the leverage, the less aggressively the firm would publish its financial accounts in order to avoid tax penalties. This is due to the fact that high leverage causes management to be more cautious.

**H2 : Leverage negatively affects tax aggressiveness**

The effect of firm size on tax aggressiveness
The firm size can be interpreted by a scale that classifies large or small companies from various points of view. One of these perspectives is based on assessing the amount of assets the company owns. The firm size can determine the size of the assets owned by the company (Suyanto & Ummu, 2022). The larger the assets, the higher its predicted production. Increases in both production and profit will have an effect on the amount of tax that a business must pay (Widiyastuti & Asalam, 2021).

The firm size indicates the size or size of the business identity measured in a certain way. According to (Putri & Putra, 2017) the firm size can indicate its ability and stability in carrying out its financial activities. Companies with significant total assets are relatively more stable and can generate higher profits than companies with small or small total assets (Tiaras & Wijaya, 2015).

The signal theory is an action by a company's management to provide information to investors. Signal theory has a relationship with firm size, where management must inform shareholders of the same information about the firm size through total assets or total sales owned by the company. So that investors can later find out how big the company they invest in is that they can know the company's prospects in the future in excellent or stormy conditions (Caroline et al., 2023). This is in line with research (Yanti & Hartono, 2019), as the more substantial a corporation is, the more likely it is to use tax aggressiveness, suggesting that firm size positively influences this trait. Large total asset companies are more likely to be profitable consistently and competently. The study's results (Tiaras & Wijaya, 2017) also stated that the size of the company positively influences tax aggressiveness.

**H3 : Firm size positively affects tax aggressiveness**

The effect of the intensity of fixed assets on tax aggressiveness
Companies with high levels of fixed assets need help to take advantage of their depreciation expense to reduce their net income. As a result of depreciation, a company's tax liability could change depending on the percentage of its ownership in fixed assets. Corporate taxation is impacted by the depreciation that results from owning fixed assets (Armelia & Ruzikna, 2016). This happens because depreciation expense is one of the costs that tax can be withheld.

Companies with a high proportion of fixed assets pay low taxes. The size of the company's investment in fixed assets implies the cost of devaluation of the company's cost structure. In addition, in accounting principles, several methods can be chosen when determining the depreciation of invested fixed assets (Budiadnyani, 2020). Research (Fernández-Rodríguez & Martínez-Arias, 2014) revealed that fixed asset intensity influences tax aggressiveness. This shows that companies with a high level of fixed assets have a
low tax burden, if the company has low fixed assets, the tax burden payable will be high. The results of the study Ardyansah (Ardyansah, 2014) show that the intensity of fixed assets influences tax aggressiveness. **H4: Intensity of fixed assets negatively affects tax aggressiveness**

**Method**

In order to determine the link between the research model's independent and dependent variables, this study employs a quantitative technique that involves numerical data collection (Ghozali, 2016). This study describes a population, an event, or a situation using a descriptive quantitative research approach that examines the connection between variables. The 134 manufacturing businesses that were listed on the Indonesia Stock Exchange between 2018 and 2021 make up the population of this research.

Purposive sampling, which has certain criteria, is the method used for sampling. Specifically, we looked for (1) Manufacturing businesses trading on the Indonesia Stock Exchange as our sample. (2) Businesses that regularly provide their yearly reports and financial accounts. (3) Manufacturers that provide comprehensive data matching the study's factors.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variable Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax aggressiveness</td>
<td>ETR = ( \frac{\text{Tax Expense}}{\text{Profit Before Tax}} )</td>
</tr>
<tr>
<td>Liquidity</td>
<td>CR = ( \frac{\text{Current Assets}}{\text{Current Liabilities}} )</td>
</tr>
<tr>
<td>Leverage</td>
<td>DAR = ( \frac{\text{Total Debt}}{\text{Total Assets}} )</td>
</tr>
<tr>
<td>Firm Size</td>
<td>( \ln(\text{Total Assets}) )</td>
</tr>
<tr>
<td>Fixed asset intensity</td>
<td>Fixed Asset = ( \frac{\text{Total Fix Assets}}{\text{Total Assets}} )</td>
</tr>
</tbody>
</table>

Using the statistical package SPSS 26, this research tested hypotheses using multiple linear regression. The regression model in this study is as follows:

\[
 AP = \alpha + \beta_1 (CR)_{i,t} + \beta_2 (DER)_{i,t} + \beta_3 (SIZE)_{i,t} + \beta_4 (\text{FIXED ASSET})_{i,t} - \varepsilon
\]

Information: The variables used in the research model are AP for tax aggressiveness, DER for leverage, SIZE for firm size, and FIXED ASSET for intensity of fixed assets. The variables \( i, t, \beta_1, \beta_2, \beta_3, \) and \( \beta_4 \) represent the coefficients of the independent variables, \( \alpha \) is a constant, and \( \varepsilon \) is the error.

**Result and Discussion**

Table 2 it is known that the tax aggressiveness variable has an average value of -0.434857 and a standard deviation of 28.82045 with the minimum value being at -511.6861 and the maximum value at 443.3797. The liquidity variable has an average value of 99.25010 and a standard deviation of 1656.116 with the minimum value at 2.13E-06 and the maximum value at 36600.12. The leverage variable has an average value of 0.551300 and a standard deviation of 0.525702 with the minimum value at 0.000535 and the maximum value at 5.167738. The firm size variable has an average value of 22.89756 standard deviations of 0.525702 with the minimum value at 11.91423 and the maximum value at 31.43096. The variable intensity of fixed assets
has an average value of 0.404190 and a standard deviation of 0.217260 with the minimum value at 0.007716 and the maximum value at 2.419206.

Table 2 Descriptive Statistical Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETR</td>
<td>-511.6861</td>
<td>443.3797</td>
<td>-0.434857</td>
<td>28.82045</td>
<td>-3.488198</td>
</tr>
<tr>
<td>CR</td>
<td>2.13E-06</td>
<td>36600.12</td>
<td>99.25010</td>
<td>1656.116</td>
<td>20.28383</td>
</tr>
<tr>
<td>DAR</td>
<td>0.000535</td>
<td>5.167738</td>
<td>0.551300</td>
<td>0.525702</td>
<td>5.374982</td>
</tr>
<tr>
<td>SIZE</td>
<td>11.91423</td>
<td>31.43096</td>
<td>22.89756</td>
<td>5.253437</td>
<td>-0.285571</td>
</tr>
<tr>
<td>FIXED ASSET</td>
<td>0.007716</td>
<td>2.419206</td>
<td>0.404190</td>
<td>0.217260</td>
<td>1.543412</td>
</tr>
</tbody>
</table>

Table 3 Multiple Linear Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR</td>
<td>0.010235</td>
<td>0.000602</td>
<td>16.99997</td>
<td>0.000</td>
</tr>
<tr>
<td>DAR</td>
<td>-3.751927</td>
<td>1.917099</td>
<td>1.957086</td>
<td>0.0508</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.319533</td>
<td>0.188727</td>
<td>1.693125</td>
<td>0.0190</td>
</tr>
<tr>
<td>FIXED ASSET</td>
<td>-2.143311</td>
<td>4.564922</td>
<td>-0.469518</td>
<td>0.6389</td>
</tr>
</tbody>
</table>

The Effect of Liquidity on Tax Aggressiveness

The first hypothesis (H1) is accepted, namely that Liquidity positively affects Tax Aggressiveness. The greater a company's degree of short-term debt, the more likely it is that it will be tax aggressive, according to the concept of positive liquidity. A company's capacity to meet its immediate financial commitments is shown by the liquidity ratio (Madubuko Cyril Phd, 2019). According to signal theory, a high ratio indicates a great capacity to meet commitments. When a company's liquidity is strong, it sends a positive signal to shareholders. This is due to the fact that shareholders have faith in the company's ability to meet its financial commitments and execute its strategy (Restianti & Agustina, 2018). If a business's liquidity ratio is high, it means that its cash flow is healthy. It is believed that the corporation can meet and pay its short-term commitments if it is in strong financial standing. This finding lends credence to studies carried by (Indradi, 2018).

The Effect of Leverage on Tax Aggressiveness

The second hypothesis (H2) is accepted, Leverage negatively affects tax aggressiveness. A lower level of tax aggression is associated with larger indebtedness. The taxable profit drops when the interest expenditure rises in relation to the company's leverage. Lower taxable profits tend to reduce the rate of application of tax aggressiveness. According to signal theory, information published by a company can be used to find its prospects (Gufranita et al., 2022). High leverage indicates that the company has high-interest costs, which will impact the interest expense borne by the company. The results of this study are reinforced by research (Saviti & Rahmawati, 2017), which revealed that companies that depend on debt to meet their operational costs also have high-interest costs (Adisamarta & Noviari, 2015; Allo et al., 2021; Tiaras & Wijaja, 2015). This high-interest rate can be used to reduce taxable income. Because taxable income is low, the tax imposed on businesses will also be low. Therefore, the Company tends not to engage in tax aggressiveness.

The Effect of Firm Size on Tax Aggressiveness

The third hypothesis (H3) is accepted; that is, the firm size positively affects tax aggressiveness. A company's propensity to be tax aggressive increases as its size increases. There is a correlation between a company's overall assets and its ability and stability to turn a profit. This situation will cause businesses to become more tax-aggressive, which in turn will raise the amount of tax they collect (Rohmansyah, 2017; Saviti & Rahmawati, 2017).
Signal theory is the management action of a company aimed at providing the same information to investors. Signal theory relates to firm size, where management must tell the same information about the firm size to shareholders through total assets or total sales owned by the company (Azzahra et al., 2023; Kristiana et al., 2021). So that shareholders can find out how big the company they invest in is and so that investors can know the company's prospects in the future in excellent or stormy conditions. The results of this study are reinforced by research (Kuriah & Asyik, 2016), which states that the size of a company will affect the level of tax aggressiveness in each company. Companies with large categories will pay more tax experts to manage taxes (Reminda et al., 2017). In addition, the greater the total assets owned by the Company, the more complex the Company will be.

The effect of fixed asset intensity on tax aggressiveness
The fourth hypothesis (H4), namely that fixed asset intensity affects tax aggressiveness, is rejected. The findings of the hypothesis testing indicate that tax aggression is unaffected by the intensity of fixed assets. When management tells employees that a company's operational operations will run more smoothly and earn more money if it has more fixed assets, this information is a signal theory connection with fixed asset intensity (Damanik et al., 2022). However, the more assets owned, the greater the depreciation burden on these assets. The results of this study are reinforced by research (Adisamartha & Noviari, 2015), which states that the intensity of fixed assets does not affect tax aggressiveness. Research (Rohmansyah, 2017) proves that it has no effect on the severity of tax aggression or fixed asset intensity. Since businesses are unable to employ depreciation costs to lower their net income, the link has no bearing on the impact of fixed assets on tax aggressiveness strategies.

Conclusion and Recomandation
From the results of research and discussion, liquidity has a positive effect on tax aggressiveness. A company's liquidity ratio indicates its capacity to meet its short-term loan obligations. If a business's liquidity ratio is high, it means that its cash flow is healthy. Companies with significant interest costs and a reliance on debt to cover operational expenditures are less tax aggressive. One might exploit this high interest rate to lower their taxable income. Profit management is therefore unnecessary for the business. Tax aggression is strongly correlated with firm size. Businesses that have a lot of assets can prove that they are good managers and will do well. Tax aggressiveness is unaffected by the intensity of fixed assets. Companies may still take advantage of depreciation charges to lower their net income, therefore the impact of fixed asset intensity on tax aggressiveness is not due to that.

The low Adjusted R-squared value indicates that the factors used in this research might benefit from revising their contributions in order to provide a more convincing explanation for the impact on tax aggression. To examine tax aggression, there are many more factors that may be employed with more substantial contributions. The results of this study provide some suggestions for future research that could improve the results. One suggestion is to include additional variables in future studies, as the independent variable in this study does not adequately explain the dependent variable. Another suggestion is to conduct studies that focus on tax aggressiveness, which could benefit from independent variable testing.

References


