AN ANALYSIS OF COMPANY SIZE, OWNERSHIP STRUCTURE, INTENSITY OF FIXED ASSETS, AND INVENTORY INTENSITY ON TAX AVOIDANCE: A CASE OF RETAIL COMPANIES

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Abstract
This study aims to analyze the effect of firm size, managerial ownership structure, inventory intensity, and fixed asset intensity on tax avoidance. State revenues sourced from the taxation sector may decrease due to tax avoidance practices, and the company's main motive for doing so is to minimize the amount of tax owed that must be paid by the company. Several factors influence companies in tax avoidance, this study uses inventory intensity variables that are still rarely used by other researchers with the reasoning that this ratio can affect the effective tax rate. This study uses 11 retail companies listed on the Indonesia Stock Exchange (IDX) for the period 2015 – 2019. The sampling method is purposive sampling and the analytical technique used is multiple linear regression analysis. The results of the study prove that inventory intensity and fixed asset intensity have a positive effect on tax avoidance, while the firm size and managerial ownership structure do not affect tax avoidance.

Keywords: Firm Size, Managerial Ownership Structure, Inventory Intensity, Intensity of Fixed Assets, Tax Avoidance.

I. INTRODUCTION

Every country has a goal that is used as a guide in running the government and regulating people's lives. The government has implemented various programs to achieve the state goals stated in paragraph four of the Preamble to the 1945 Constitution by utilizing state revenues. According to Law Number 17 of 2003 concerning State Finances, it is explained that state revenues are all revenues originating from grant receipts from within and outside the country, tax revenues, and non-tax state revenues. The source of state revenue that has a major contribution to financing in Indonesia is taxes. Therefore, the taxation sector receives special attention from the government and it is hoped that the tax revenue target will continue to increase every year.

Taxation is now the mainstay of a country's revenue, and Indonesia is no exception. Economic growth in Indonesia opens up opportunities for companies to make innovations that can support company development. In general, profit-oriented companies will pay much attention to taxes because tax costs can reduce net income, so companies will be motivated to maximize profits and carry out planning that aims to minimize tax costs. Efforts to minimize tax costs by planning and without exceeding the limits of tax provisions are called tax avoidance [1]. Meanwhile, efforts to minimize tax costs by violating tax provisions are called tax evasion [2]. Thus, it can be concluded that the practice of tax avoidance is allowed as long as it does not violate the tax laws, although the state will suffer losses due to reduced tax revenues caused by the tax avoidance.

State revenues sourced from the taxation sector may decline due to tax avoidance practices. There are several factors that companies consider in making decisions regarding tax avoidance. According to Edeline dan Sandra [3], the characteristics of companies can be related to tax avoidance practices. The scale used to classify companies into large or small classifications and can explain company revenues and operational activities is called company size [4]. Stable profits tend to be generated by companies with relatively large assets, this situation causes tax costs to increase and forces companies to avoid tax [5]. This opinion is in contrast to the explanation of Putri et al. [6] and Noviyani & Muid [7] that tax avoidance is not significantly affected by the size of the company because citizens and business entities must pay taxes.

A factor other than firm size that is predicted to influence tax avoidance is ownership structure. This study focuses on managerial ownership which is known through the percentage of share ownership by company management [8]. According to Putri & Lawita [9], the large managerial ownership causes less opportunity for management to evade taxes, because managers try to prevent companies from being investigated for tax issues. This statement contradicts the opinion of Ashari et al. [10] which explains that tax avoidance is influenced by managerial ownership in a positive direction.
In addition to ownership structure, some researchers have tried to link inventory intensity with tax avoidance. Inventory intensity according to Palitean [11] is the level of inventory at a company that can create additional costs. High inventory will create additional costs that result in decreased income, thus it may cause the effective tax rate to decrease. This condition can indicate a high level of corporate tax avoidance [12]. This opinion contradicts Anindyka et al. [13] who explain that tax avoidance is influenced by inventory intensity in a negative direction.

Another factor that is considered to have a relationship with tax avoidance in addition to company size, ownership structure, and inventory intensity is the intensity of fixed assets. The ratio used to determine the level of ownership of fixed assets is called the intensity of fixed assets [14]. Large fixed assets will result in depreciation costs which lead to reduced company income, this condition results in a decrease in company tax costs [7], [15]. This opinion contradicts the opinion of Putri et al. [6] that tax avoidance is not significantly affected by the intensity of fixed assets.

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Based on the explanation of tax avoidance and the factors that influence it, different results were found in several previous studies. Therefore, the topic of tax avoidance and its supporting variables are still interesting to be studied. The inventory intensity variable is used in this study because inventory intensity is one of the ratios that can affect the effective tax rate. The effective tax rate can be detected for changes in the level of corporate tax avoidance, so that the higher the level of inventory, the practice of tax avoidance will also increase. While the reason for using the intensity of fixed assets is because the condition of the company can be shown through a comparison of fixed assets and total assets. Tax costs can be related to the intensity of fixed assets because there are depreciation costs that are likely to be deducted from the company's tax costs in the fiscal reconciliation. This research object used retail companies listed on the IDX for the period 2015 – 2019 considering that quite a several researchers have used manufacturing companies as well as property and real estate, and these companies experienced high growth in 2018–2019. While the observation year used was only the 2015 – 2019 period because in 2020 the company was in an unstable condition due to the impact of the COVID-19 pandemic that hit the world. Research related to taxation during the COVID-19 pandemic has been carried out by Hatta [16] with the topic of the successful use of e-filing during the COVID-19 pandemic. The results of the study found that the quality of collaboration or cooperation is a consideration for taxpayers in using e-filing for maximizing the state revenues from taxation.

II. THEORETICAL FRAMEWORK AND HYPOTHESES

A. Agency Theory

The right contract to reduce agency problems is at the core of agency theory [17]. Several factors can trigger conflicts of interest, one of which is information asymmetry or often referred to as information gaps. According to Jensen & Meckling [17] companies can experience two problems as a result of information asymmetry, namely:

1. Moral hazard
   
   This problem arises because management does not carry out its duties or obligations following the employment contract between management and shareholders.

2. Adverse selection
   
   This problem arises because the principal does not know the truth about the agent’s decision based on the information obtained or because of errors made by management in carrying out their duties.

   The actions of the management and shareholders can be explained by agency theory because basically the interests of each party are different [9]. Different interests between management and shareholders will affect a company's tax compliance. The authority and responsibility given to management will encourage it to make various efforts to increase company profits, so that management will be considered successful in carrying out its role as an agent. This is different from the owners or shareholders who want management to reduce tax costs by reducing reported profits. Agency problems because there are different interests between agents and principals
will lead to tax avoidance practices to align these interests.

B. Positive Accounting Theory

The process of practicing the right accounting understanding, abilities, policies, and knowledge to deal with future conditions is called positive accounting theory [18]. The theory aims to explain and predict accounting practices. Watts & Zimmerman [19] have put forward three main hypotheses, namely:

1. Bonus Plan Hypothesis
   Accounting policies that can increase the company's income will be an option for managers who have a desire to get high rewards. The increase in company profits will affect the bonuses that managers will get. Thus, a high net profit will cause the bonus received by the manager to be higher.

2. Debt to Equity Hypothesis
   Companies that have debt agreements must maintain a certain level of financial position following the agreed terms. These provisions cause management to tend to choose accounting methods or policies to maintain the financial position at the predetermined level.

3. The Political Cost Hypothesis
   Companies with the ability to earn high revenues tend to bear high political costs. Thus, management tends to choose accounting methods that can reduce the company's income, so that the company's political costs can be suppressed.

Based on the three hypotheses that have been described, the political cost hypothesis is related to research on tax avoidance practices. Companies tend to choose appropriate accounting policies to reduce revenue so that the tax costs borne by the company can be reduced.

C. Effect of Firm Size on Tax Avoidance

Size for classifying companies based on large and small company categories which can be shown from the number of assets is called company size [4]. Based on the results of Oktamawati [20], it is known that tax avoidance is influenced by company size in a negative direction because large company sizes tend to make management not do tax avoidance to maintain the company's image in the eyes of the public. This research is supported by Dewi & Noviari [21] who states that tax avoidance is influenced by company size in a negative direction because the tax authorities will carry out stricter supervision so that companies pay taxes according to tax regulations. In contrast Aliyani [22], Rani [23] argues that company size is a significant factor to consider in avoiding taxation because companies will use company resources to make tax plans so that they can obtain maximum tax savings.

The company's total assets indicate the maturity level of a company, high total assets indicate good prospects in the future. In addition, total assets can reflect the stability of the company and the company's ability to generate profits. Companies with high incomes tend to avoid taxation because the amount of high income will result in higher corporate tax costs. The company seeks to minimize tax costs by utilizing company resources to make tax savings. Thus, the larger the company, the greater the tax payable that must be paid, so the greater the tendency for tax avoidance. Therefore, the proposed hypothesis is:

H1: Firm size has a positive effect on tax avoidance.

D. Effect of Managerial Ownership Structure on Tax Avoidance

The managerial ownership structure is the proportion of shares owned by managers which are expected to be able to reduce agency problems between the agent and the principal [24]. The results of research by Krisna [24] explain that tax avoidance is not influenced by managerial ownership, because there may be things that have more influence on the practice of tax avoidance. Another study states that tax avoidance is influenced by managerial ownership in a negative direction [25]. In contrast to the opinion of Ashari et al. [10] and Niandari et al. [26] argue that tax avoidance is influenced by managerial ownership in a positive direction. Managerial ownership will give management the right to participate in company decision-making. The decisions taken by the management will always consider its position as a shareholder because the benefits or risks of the decisions that have been determined will be directly felt by the management so that the similarity of interests will align with the agency conflict. In addition, managerial ownership is a way for companies to provide compensation to management so that managers will make efforts to increase profits while still paying attention to tax cost efficiency by avoiding tax to obtain maximum rewards and compensation. Thus, the proposed hypothesis is:

H2: Managerial ownership structure has a positive effect on tax avoidance.

E. Effect of Inventory Intensity on Tax Avoidance

According to Putra [27], inventory intensity is part of assets which is calculated using a comparison between inventory and total assets. Palitean [11] states that additional costs that must be borne by the company can arise
due to high levels of inventory. Research by Artinasari & Mildawati [15] explains that ETR is not influenced by inventory which is a proxy for inventory intensity. Meanwhile, according to Anindyka et al. [13], it is known that tax avoidance is influenced by inventory intensity in a negative direction. This research is not following Dwiyanti & Jati [12] who argue that tax avoidance is influenced by inventory intensity in a positive direction.

The company will bear additional costs in the form of maintenance costs, storage costs, and other costs arising from the company's high investment in inventory. These costs must be excluded from the cost of inventory, so it will result in reduced company profits. Decreased profits result in lower ETR levels. A low ETR level may indicate the occurrence of tax avoidance practices. Thus, the proposed hypothesis is:

**H3**: Inventory intensity has a positive effect on tax avoidance.

**F. Effect of Fixed Asset Intensity on Tax avoidance**

Dwiyanti & Jati [12] argue that the intensity of fixed assets is related to the company's assets which are invested into fixed assets. According to Ervaniti et al. [28], the high fixed assets of the company can lead to large depreciation costs for these fixed assets. Based on research by Putri et al. [6], it is known that tax avoidance is not significantly affected by the intensity of fixed assets. In contrast to research by Artinasari & Mildawati [15], Dwiyanti & Jati [12], and Anindyka et al. [13] which states that tax avoidance is influenced by the intensity of fixed assets in a positive direction because depreciation costs can be a deduction for taxes. Meanwhile, results from Purwanti & Sugiyarti [29] and Palitean [11] show that significantly the intensity of fixed assets is a factor to be considered in tax avoidance.

The high level of investment in fixed assets results in higher depreciation costs and this depreciation expense can be a deductible expense. Management will take advantage of depreciation costs to reduce corporate taxes because the increase in depreciation costs will result in a decrease in company profits. The company's profit which has decreased has resulted in a decrease in the ETR level. High tax avoidance practices may indicate a low ETR level. Thus, the proposed hypothesis is:

**H4**: The intensity of fixed assets has a positive effect on tax avoidance.

**III. RESEARCH METHOD**

The population that will be used as research objects is retail companies listed on the IDX and using the period 2015 – 2019 for the data which were obtained through the IDX official website (www.IDX.co.id). The sampling technique used is purposive sampling with the following criteria: retail companies listed on the Indonesia Stock Exchange for the period 2015 – 2019, companies that publish annual reports and complete financial data for the period 2015 – 2019, companies that experience profits during the 2015 – 2019 period, and companies that present financial statements in Rupiah (IDR). This method is expected to help obtain samples according to the objectives set. The dependent variable in this study is tax avoidance as proxied by the effective tax rate (ETR) by dividing the cost of income tax by profit before income tax. While the independent variables used in the study are as follows:

1. Firm size (UP) is proxied by using the ratio obtained from the natural logarithm of total assets.
2. The managerial ownership structure (KM) is proxied by using the ratio obtained from the total share ownership by management divided by the total outstanding shares.
3. Inventory intensity (IP) is proxied by total inventory divided by total assets.
4. The intensity of fixed assets (IAT) is proxied by total fixed assets divided by total assets.

The data analysis technique used is multiple linear regression analysis. The effect of several independent variables on the dependent variable can be known through linear regression analysis [30]. Before performing multiple linear regression analysis, the classical assumption test was carried out which consisted of a multicollinearity test, normality test, autocorrelation test, and heteroscedasticity test. While for hypothesis testing, we used the F test, the coefficient of determination test, and the t-test.

**IV. DATA ANALYSIS AND DISCUSSION**

The data used in this study is sourced from the annual reports of retail companies listed on the IDX for the period 2015 – 2019 which were obtained through the IDX's official website (www.idx.co.id). Table I shows that there are 30 retail companies listed on the Indonesia Stock Exchange (IDX). While the companies that meet the research criterion are only 11 companies. In addition, there are 15 sample data whose values are extreme or different from other data samples (outliers), so these data must be deleted to obtain a sample of data with normal values. In this study, outliers were detected by SPSS using the Boxplot method. After deleting the outlier data, a sample of 40 data was obtained. Furthermore, the sample data can be used to test the classical assumptions.

Table II shows that the Effective Tax Rate used as a sample has a fairly high value, which is close to the maximum value. While the sample used for firm size on average has the same value. Managerial ownership used
as a sample has a low value because it is close to the minimum value. Meanwhile, inventory intensity and intensity of fixed assets used samples tended to be high value, which was close to the maximum value.

Based on Table III, it is known that the data normality test is met with a significance value of 0.345 > 0.05. The data also proved not to have multicollinearity because the tolerance value > 0.1 and the Variance Inflation Factor value < 10. In addition, the data sample was considered free from heteroscedasticity symptoms with a significance value > 0.05. Likewise, with the autocorrelation test that meets the requirements, there is no autocorrelation symptom with a significance value of 0.631 > 0.05. Thus, hypothesis testing can be carried out on the sample data.

**Table I. Research Sample**

<table>
<thead>
<tr>
<th>Description</th>
<th>Does Not Meet Criterion</th>
<th>Accumulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail companies listed on the IDX until 31 December 2019</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Retail companies listed on the Indonesia Stock Exchange for the 2015 – 2019 period that have been delisted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companies that do not publish complete annual reports and financial data during the 2015 – 2019 period</td>
<td>(8)</td>
<td></td>
</tr>
<tr>
<td>Companies that suffered losses during the 2015 – 2019 period</td>
<td>(11)</td>
<td></td>
</tr>
<tr>
<td>Total companies</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Year sample 2015 – 2019 (11 x 5)</td>
<td></td>
<td>55</td>
</tr>
<tr>
<td>Data outlier</td>
<td>(15)</td>
<td></td>
</tr>
<tr>
<td>Sample used</td>
<td></td>
<td>40</td>
</tr>
</tbody>
</table>

**Table II. Descriptive Statistics**

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETR</td>
<td>0.1455</td>
<td>0.4140</td>
<td>0.2448</td>
<td>0.0662</td>
</tr>
<tr>
<td>UP</td>
<td>28.8043</td>
<td>30.8088</td>
<td>29.6035</td>
<td>0.5679</td>
</tr>
<tr>
<td>KM</td>
<td>0.0000</td>
<td>0.0656</td>
<td>0.0105</td>
<td>0.0163</td>
</tr>
<tr>
<td>IP</td>
<td>0.0475</td>
<td>0.4659</td>
<td>0.2510</td>
<td>0.0982</td>
</tr>
<tr>
<td>IAT</td>
<td>0.0630</td>
<td>0.0466</td>
<td>0.2714</td>
<td>0.0700</td>
</tr>
</tbody>
</table>

*a. Dependent variable: Effective Tax Rate (ETR).*

*b. Independent variable: Firm Size (UP), Managerial Ownership Structure (KM), Inventory Intensity (IP), and Intensity of Fixed Assets (IAT).*

**Table III. Classic Assumption Test**

<table>
<thead>
<tr>
<th></th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normality Test</td>
<td>0.345</td>
</tr>
<tr>
<td>Multicollinearity Test</td>
<td></td>
</tr>
<tr>
<td><strong>Tolerance</strong></td>
<td><strong>VIF</strong></td>
</tr>
<tr>
<td>UP</td>
<td>0.944</td>
</tr>
<tr>
<td>KM</td>
<td>0.966</td>
</tr>
<tr>
<td>IP</td>
<td>0.741</td>
</tr>
<tr>
<td>IAT</td>
<td>0.752</td>
</tr>
<tr>
<td>Heteroscedasticity Test (Glejser)</td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td></td>
</tr>
<tr>
<td>UP</td>
<td>0.087</td>
</tr>
<tr>
<td>KM</td>
<td>0.162</td>
</tr>
<tr>
<td>IP</td>
<td>0.450</td>
</tr>
<tr>
<td>IAT</td>
<td>0.923</td>
</tr>
</tbody>
</table>

**Autocorrelation Test**

<table>
<thead>
<tr>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.631</td>
</tr>
</tbody>
</table>
Based on table IV on the F test, it is known that the variables of firm size, managerial ownership, inventory intensity, and fixed asset intensity can predict tax avoidance variables because the significance value is 0.011 < 0.05. The coefficient of determination test shows that the variation of firm size, managerial ownership, inventory intensity, and fixed asset intensity can explain the tax avoidance variable by 22.7%, while 77.3% is explained by variables not discussed in the research model. While the results of the t-test can be explained as follows:

A. Effect of Firm Size on Tax Avoidance
Company size does not affect tax avoidance as proxied by the effective tax rate, because the significance value is 0.206 > 0.05 and the beta has a positive value, which should have inversely proportional to the direction of the hypothesis. The results of this study are following Oktavia et al. [31] who argue that tax avoidance is not influenced by firm size. This opinion is supported by Reinaldo [32], Yani [33], Novieyani & Muid [7], and Putri et al. [6] that tax avoidance is not significantly affected by firm size. The size of the company is not a consideration in avoiding taxation because paying taxes is mandatory for individuals and entities. Management in large companies will choose not to practice tax avoidance to maintain the good name or image of the company in front of the public. In addition, management does not use company resources to make tax savings because there is a possibility that the company will become the target of government decisions.

B. Effect of Managerial Ownership on Tax Avoidance
Managerial ownership does not affect tax avoidance as proxied by the effective tax rate, because the significance value is 0.172 > 0.05 and the beta has a positive value, which should have inversely proportional to the direction of the hypothesis. These results are following the research of Krisna [24] and Setianti [34] which explain that managerial ownership is not a factor to be considered in tax avoidance. Meanwhile, Bandaro & Ariyanto [35] argue that the effective tax rate is not influenced by the size of the company. Managerial ownership is not a factor to be considered in avoiding taxation because management has too low a percentage of share ownership. The low percentage of share ownership means that management only has a very small influence on decision-making in the company so the opportunity for management to practice tax avoidance is also small. In addition, the percentage of share ownership that is too low does not spur management's enthusiasm to strive to achieve an optimal level of profit, so management chooses to be in a comfort zone and does not practice tax avoidance.

C. Effect of Inventory Intensity on Tax Avoidance
Inventory intensity harms the effective tax rate because the significance value is 0.009 <0.05 and the direction of beta is inversely proportional to the direction of the hypothesis. The negative effect indicates the higher the inventory intensity at the company, the lower the effective tax rate, meaning that there is a positive effect between the intensity of fixed assets and tax avoidance. This research is following Anindyka et al. [14] and Yuliana & Wahyudi [4] which states that tax aggressiveness is influenced by inventory intensity. In addition, Palitean [11] also explains that tax avoidance is significantly affected by inventory intensity.

D. Effect of Fixed Asset Intensity on Tax Avoidance
The intensity of fixed assets harms the effective tax rate because the significance value is 0.031 < 0.05 and the direction of beta is inversely proportional to the direction of the hypothesis. The negative effect shows that the higher the intensity of fixed assets in the company, the lower the Effective Tax Rate, meaning that there is a positive influence between the intensity of fixed assets and tax avoidance. This research is following Anindyka et al. [14] and Yuliana & Wahyudi [4] which states that tax aggressiveness is influenced by inventory intensity. In addition, Palitean [11] also explains that tax avoidance is significantly affected by inventory intensity.
al. [13], Artinasari & Mildawati [15], Dwiyanti & Jati [12], and Rinaldi et al. [36] who argue that tax avoidance is influenced by the intensity of fixed assets in a positive direction. This opinion is supported by Noviyani & Muid [7] who explain that positively and significantly asset intensity remains a consideration in tax avoidance. In addition, Purwanti & Sugiyarti [29] and Palitean [11] explain that significantly the intensity of assets remains a consideration in avoiding taxation.

V. CONCLUSION

Based on the test, it was found that the firm size and managerial ownership structure did not affect tax avoidance. Meanwhile, inventory intensity and fixed asset intensity have a positive effect on tax avoidance. It shows that the intensity of inventory and the intensity of fixed assets are mostly used by companies to carry out tax avoidance. High inventory will create additional costs that result in decreased income, thus causing the effective tax rate to also decrease, this condition can indicate a high level of corporate tax avoidance. Large fixed assets will result in depreciation costs which lead to reduced company income, this condition results in a decrease in tax costs that must be borne by the company.

The limitation of this research is that the autocorrelation test using Durbin Watson shows that there are symptoms of autocorrelation in the research model, so a run test must be carried out. In addition, the coefficient of determination test with Adjusted R Square shows a value of 0.227 or 22.7% which means that company size, managerial ownership, inventory intensity, and fixed asset intensity can only explain tax avoidance by 22.7% and 77.3% is explained by variables that are not discussed in the research model. Based on the discussion, conclusions, and limitations of this study, it is hoped that further researchers can increase the period of observation. This is recommended because there are only 30 retail companies listed on the IDX, so if an outlier is done, the data used as a sample will decrease. The reduction in the sample can affect the results of the tests to be carried out. Future researchers are also expected to use other independent variables, such as capital intensity and tax incentives.

REFERENCES


