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The Effect of Inventory Intensity, Capital Intensity and Company Size on Tax Aggressiveness in Chemical Companies Listed on the IDX 2018-2022

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ABSTRACT. This final project research about the impact of the supply intensity, capital intensity and size of the company on the tax aggressiveness of the chemical company registered with the Indonesian stock exchange in 2018-2022. In this research, researchers use an independent variable that are: Supply intensity, capital intensity and company size. Whereas the dependent variables is: tax aggressiveness. The method of data analysis used in this research is the T test using the SPSS program. Where the results of this research show the intensity of supply and the intensity of capital have a significant impact on tax aggressiveness. While size of the company doesn't have impact of tax aggressiveness.

.**Keywords**: Supply Intensity, Capital Intensity, Company Size;

INTRODUCTION

Paying taxes is a manifestation of the obligations and participation of taxpayers who directly and collectively contribute to raising funds for state needs and realizing national development. Indonesian taxpayers are divided into individual taxpayers and corporate taxpayers. Individual taxpayers are those who pay taxes individually or are unmarried. Corporate taxpayers, on the other hand, are taxpayers who have rights and obligations in accordance with tax laws and regulations and have registered to obtain a Taxpayer Identification Number (NPWP). The Indonesian government has been increasingly optimizing its tax collection year after year, as evidenced by the positive trend in the national income taxation graph. Taxes have different meanings for the government and taxpayers. For companies, taxes are considered a burden that will reduce profits.

Therefore, companies will minimize tax payments, a practice commonly referred to as tax aggressiveness (Natalya, 2018). In a company, matters that could give rise to taxes are designed in such a way as to minimize the amount of taxes the company must pay to the government by engaging in tax aggressiveness. Tax aggressiveness can also be defined as a management activity aimed at lowering the corporate tax rate that the company must pay to the state (government). When this practice is repeated by a company, it is inevitable that the company will become increasingly aggressive in dealing with increasingly higher tax rates.

The government's implementation of tax collection is not always well-received by companies. Taxes play a crucial role in national development, financing routine expenditures as well as the social and economic development of the people (Hanum, 2015). Companies strive to pay as little tax as

possible because taxes reduce revenue or net profit, while the government seeks the highest possible tax to finance government operations (Nugraha, 2015).

If a company's inventory intensity is high, these costs will decrease and profits will increase. Therefore, higher inventory intensity will increase the company's tax aggressiveness. Research by Adi Samarha (2015) shows that inventory intensity has a positive effect on tax aggressiveness. Higher inventory intensity can incur additional costs, including material costs, labor costs, production costs, storage costs, administrative costs, and selling costs. Costs resulting from high inventory levels will reduce net profit and tax burdens, allowing companies to engage in tax aggressiveness.

Another factor influencing tax aggressiveness is capital intensity. Capital intensity is a ratio that describes how much of a company's assets are invested in fixed assets. Fixed assets include buildings, factories, equipment, machinery, and property (Sukharta, 2019). This is because fixed assets contain depreciation, a deductible expense, or a cost that can be deducted during fiscal correlation. This means that the taxes paid by a company when it owns a large amount of fixed assets will result in a reduction in taxes. Research conducted by Navitasari et al. (2017) showed that capital intensity had no significant effect on tax aggressiveness. Meanwhile, research by Hidayat (2018) showed different results, indicating that capital intensity had a significant effect on tax aggressiveness. The final factor influencing tax aggressiveness is company size. Company size is the average total sales for the year in question or for several years. The larger the company, the greater the positive impression it creates to attract public interest. According to Windy Novianty (2018), company size is determined by the business sector in which it operates. Company size can be determined based on total sales, total assets, and average sales level. Research by Rahmi Ilyani (2018) shows that company size has no effect on tax aggressiveness. Meanwhile, research by Dewi (2017) indicates that company size influences tax avoidance, which is also supported by Reminda (2017) who found that company size significantly influences tax aggressiveness.

METHOD

Research Nature

This research uses a quantitative approach. According to Sugiono (2015: 26), quantitative research is research in which data is expressed in numbers and analyzed using statistical techniques. Associative research aims to determine the relationship between two or more variables. The collected data is analyzed and described to obtain correct and accurate conclusions.

Research Population

According to Sugiyono (2018), a population is a generalized area consisting of objects or subjects with certain qualities and characteristics that the researcher determines to be studied and then conclusions drawn. The population of this study is 11 chemical companies listed on the Indonesia Stock Exchange (IDX) from 2018 to 2022.

Sample

A sample is a portion of a population taken in a specific, clear, and complete manner, so that it is considered representative of the population. If the population is large and it is impossible for researchers to study everything in the population, researchers can use samples taken from the population (Sugiyono, 2014:85). In this study, there were 8 companies in the chemical sub-sector that met the criteria.

Analysis Method

The analysis method used in this study is quantitative. This study aims to analyze data measurements in the form of numbers using statistical methods using analytical tools. The data was processed using the SPSS 24 application program.

Multiple Linear Regression Analysis

Multiple linear regression analysis is an analytical technique used to examine the relationship or influence of several predictors (independent variables) on a criterion (dependent variable). The measurement scale for two or more predictor (independent) variables is an interval or ratio (Trijono, 2015:70). The multiple linear regression equation can be formulated as follows:

$$Y = \alpha + \beta1X1 + \beta2X2 + \beta3X3 + \varepsilon$$

Statistical Hypothesis

T-Statistic Test (Partial Test)

The T-statistical test essentially indicates the extent to which an independent variable individually explains the variation in the dependent variable. The T-test can be assessed by its magnitude, with a significance level of $\alpha = 5\%$ or $\alpha = 0.05$, compared to the probability (P-value).

F-Test (Simultaneous Test)

The simultaneous test, or F-test, is used to test the significance of the independent variable (X) on the dependent variable (Y) simultaneously by comparing the calculated F with the Ftable, at a significance level of $\alpha = 5\%$ or with degrees of freedom.

Coefficient of Determination (Adjusted R2)

The coefficient of determination test aims to measure the model's ability to explain the variation in the dependent variable.32 The coefficient of determination value is between zero and one. However, using this coefficient of determination has a weakness: if an independent variable is added to the model, the R2 value will continue to increase, regardless of whether the variable is significant or not. To mitigate this weakness, an adjusted coefficient of determination, known as the Adjusted R2, is used. The higher the value, the better the model is at explaining the influence of the independent variable on the dependent variable. A smaller Adjusted R2 indicates a weaker model in explaining the variability of the dependent variable.

RESULTS AND DISCUSSION

Multiple Linear Regression Analysis

Multiple linear regression analysis is an analytical technique used to examine the relationship or influence of several predictors (independent variables) on a criterion (dependent variable). The measurement scale for two or more predictor (independent) variables is either interval or ratio. The following are the results of multiple linear regression:

Table 1. Multiple Linear Regression

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.862	.932		-.925	.361
	Intensitas persediaan	1.038	.277	.529	3.749	.001
	Intensitas Modal	.441	.210	.370	2.094	.043
	Ukuran Perusahaan	.027	.036	.127	.744	.462

Source: Data processed in 2024

Based on the data processing results above, the multiple linear regression analysis can be performed using the following equation:

$$Y = \alpha + \beta1X1 + \beta2X2 + \beta3X3 + \varepsilon$$

$$Y = -0.862 + 1.038X1 + 0.027X2 + 0.441X3 + \varepsilon$$

Where:

Y: Tax Aggressiveness

α: Constant

X1: Inventory Intensity

X2: Capital Intensity

X3: Firm Size

Based on the regression equation above, the magnitude of each independent variable's influence on the dependent variable can be determined as follows:

1. The constant value a is -0.862, meaning that if the independent variables, namely inventory intensity, capital intensity, and firm size, have constant values or are 0, the value of tax aggressiveness tends to remain constant, at -0.862.
2. The inventory intensity coefficient is 1.038. This means that if inventory intensity increases by one unit, tax aggressiveness will increase by 1.038.
3. The capital intensity coefficient is 0.441. This means that if capital intensity increases by one unit, tax aggressiveness will increase by 0.441.
4. The firm size coefficient is 0.027. This means that if firm size increases by one unit, tax aggressiveness will increase by 0.027.

Statistical Hypothesis

T-Test (Partial Test)

The T-statistical test essentially shows the extent to which an independent variable individually explains the variation in the dependent variable. The t-test can be seen from its magnitude, with a significance level of α = 5% or α = 0.05, compared to the probability (P-value).

The following are the results of the partial test:

Table 2. T-Test (Partial)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.862	.932		-.925	.361
	Intensitas persediaan	1.038	.277	.529	3.749	.001
	Intensitas Modal	.441	.210	.370	2.094	.043
	Ukuran Perusahaan	.027	.036	.127	.744	.462

Source: Data processed in 2024

Based on the T-test results above, the researcher can draw the following conclusions:

1. The inventory intensity variable (X1) yields a t-test of 3.749, which is greater than the t-table (2.021), with a significance value of 0.001 and less than 0.05 (0.001 < 0.05).Therefore, H1 is accepted. It can be concluded that the inventory intensity variable has a significant effect on tax aggressiveness.
2. The capital intensity variable (X2) yields a t-test of 2.094, which is greater than the t-table (2.021), with a significance value of 0.043 and less than 0.05 (0.043 < 0.05).Therefore, H2 is accepted. It can be concluded that the capital intensity variable has a significant effect on tax aggressiveness.
3. The firm size variable (X3) yields a t-test of 0.744, which is smaller than the t-table (2.021) with a significance value of 0.462 and greater than 0.05 (0.462>0.05). Therefore, H3 is not accepted. It can be concluded that firm size does not significantly influence tax aggressiveness.

F Test (Simultaneous Test)

The simultaneous test, or F test, is used to simultaneously test the significance of the independent variable (X) on the dependent variable (Y) by comparing the calculated F with the F table, at a significance level of $\alpha = 5\%$ or with degrees of freedom. The following are the results of the simultaneous test:

Table 3. F Test (Simultaneous)

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.539	3	.180	6.470	.001[b]
	Residual	1.000	36	.028		
	Total	1.539	39			

Source: Data processed 2024

Based on the figure above, the significance values for variables X1, X2, and X3 are greater than the calculated F table (6.470 > 2.61), with a significance value of 0.001, which is less than 0.05. Therefore, it can be concluded that inventory intensity, capital intensity, and company size simultaneously influence tax aggressiveness.

Coefficient of Determination (Adjusted R2)

The coefficient of determination test aims to measure the model's ability to explain variations in the dependent variable. The coefficient of determination is between zero and one. However, using this coefficient of determination has a drawback: if an independent variable is added to the model, the R2 value will continue to increase, regardless of whether the variable is significant or not. The following is the result of the coefficient of determination (adjusted R2).

Table 3. Coefficient of Determination

Model Summary[b]						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics	
					R Square Change	F Change
1	.592[a]	.350	.296	.1666671	.350	6.470

Source: processed data 2024

Based on the figure above, the coefficient of determination is 0.350, or 35%. The factors influencing tax aggressiveness are explained by inventory intensity, capital intensity, and company size, accounting for 35%. The remaining 65% is explained by other factors not examined in this study.

The Effect of Inventory Intensity on Tax Aggressiveness

Based on the results of the partial t-test, the calculated t-value was 3.749, which is greater than the t-table (2.021), with a significance value of 0.001 and less than 0.05 (0.001 < 0.05). Therefore, H1 is accepted. A good company condition is one where inventory ownership and turnover are always in balance.

This means that if inventory turnover is low, there will be a large accumulation of goods in the warehouse, creating additional burdens for the company, recognized as expenses outside of the inventory itself. However, if turnover is too high, the number of goods stored in the warehouse will be small. The results of this study align with previous research by Eka Fitri Nor Wahyuni (2018), which found that inventory intensity influences tax aggressiveness.

The Effect of Capital Intensity on Tax Aggressiveness

Based on the results of the partial t-test, the calculated t-value was 2.094, which is greater than the t-table (2.021) with a significance value of 0.043 and less than 0.05 (0.043 < 0.05). Therefore, H2 is accepted. Capital intensity is the fixed asset investment activity undertaken by each company. Increasing company profits will affect the company's capital, and greater capital will make funding and operational activities more comprehensive. The results of this study align with previous research by Dharma, I Made Surya, and Putu Agus Ardiana (2016), which found that capital intensity influences tax aggressiveness.

The Effect of Company Size on Tax Aggressiveness

Based on the results of the (Partial) T-test, the calculated t-value was 0.744, which is smaller than the t-table (2.021), with a significance value of 0.462 and greater than 0.05 (0.462 < 0.05), therefore H3 is not accepted. Company size is measured by the total assets owned by the company that can be used for company operations. This also indicates that the company is more stable and more capable of generating profits than companies with smaller total assets. Increasing company size is closely related to the financing decisions the company will implement to optimize its value. The larger a company's size, the more it becomes the focus of government attention, leading to a tendency to comply with or avoid taxes. The results of this study align with previous research by Rahmi Ilyani (2018), which found that company size has no effect on tax aggressiveness.

The Effect of Inventory Intensity, Capital Intensity, and Company Size on Tax Aggressiveness

Based on the results of simultaneous testing, a significant value of 0.001 was found (Sig 0.001 <0.05). This indicates that the variables inventory intensity, capital intensity, and company size simultaneously influence tax aggressiveness. Companies that invest in inventory in warehouses will incur inventory maintenance and storage costs, resulting in increased company expenses and, consequently, reduced profits. Therefore, companies with high inventory intensity will be more tax-aggressive. Similarly, companies with high fixed assets will reduce taxes through reduced profits from increased depreciation expenses arising from the large proportion of fixed assets, thus reducing the company's tax burden. This theory, tested by several researchers, found that companies with high capital intensity will have a lower effective tax rate, while a low ETR indicates a more aggressive company. Larger companies may have greater resources and opportunities to engage in tax aggressiveness. Research by Hazır (2019) found that company size has a positive effect on the effective tax rate. These results, he said, indicate that larger companies face a greater tax burden, supporting the political cost theory. This research is supported by research by Wulansari (2020), which found that inventory intensity, capital intensity, and company size influence tax aggressiveness.

CONCLUSION

Based on the results of data processing on the influence of inventory intensity, capital intensity, and company size on tax aggressiveness in chemical companies listed on the Indonesia Stock Exchange from 2018 to 2022, the following conclusions can be drawn:

1. The results of the t-test indicate that inventory intensity and capital intensity partially influence tax aggressiveness. Meanwhile, company size has no effect on tax aggressiveness.
2. The results of the f-test indicate that inventory intensity, capital intensity, and company size simultaneously influence tax aggressiveness.

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