

The Effect of Capital Intensity, Inventory Intensity, Company Size and Leverage on Tax Avoidance in the Coal Mining Sector on the Indonesia Stock Exchange 2017 – 2021

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Abstract

This study aims to analyze the influence of Capital Intensity, Inventory Intensity, Company Size and Leverage on Tax Avoidance. This study uses a quantitative approach in the form of financial reports of coal mining companies listed on the Indonesia Stock Exchange from 2017 to 2021. The sampling technique used in this study used a purposive sampling approach, the number of samples used in this study were 55 samples. The results of this study indicate that the results of testing the first hypothesis (H1) show that capital intensity has an effect on tax avoidance, the results of testing the second hypothesis (H2) show that inventory intensity has no effect on tax avoidance, the results of testing the third hypothesis (H3) show that company size has an effect on tax avoidance, the results of testing the fourth hypothesis (H4) show that leverage has an effect on tax avoidance, the results of testing the fifth hypothesis (H5) show that capital intensity, inventory intensity, firm size and leverage simultaneously have an effect on tax avoidance. The problem definition in this study is very important in bringing the subject matter closer so that there is no confusion in interpreting the research results. In this study there are variable restrictions, namely using only independent variables, namely Capital Intensity, Inventory Intensity, Firm Size and Leverage. The dependent variable is tax evasion using secondary data on the coal mining sector for 2017-2021 which is listed on the Indonesia Stock Exchange. The results of this study are expected to provide consideration related to Capital Intensity, Inventory Intensity, Company Size and Leverage on tax avoidance.

Keyword:

Capital Intensity, Company Size, Inventory Intensity, Leverage and Tax Avoidance.

1. Introduction

Indonesia is a developing country that stretches from Sabang to Merauke. Indonesia is a country that has a very large population capacity and this is a potential object in the tax sector. According to Waluyo (2017) taxes are people's levies on the government treasury based on tax regulations (which form requires) and do not obtain reciprocal services that can openly be shown and used to fund public expenditures. As a form of participation in increasing the rate of growth and implementing national development in order to achieve national welfare, citizens have the duty and responsibility to pay taxes both individually and corporately. With the payment of taxes, the government can carry out development that can achieve prosperity and welfare of the people.

Various policies in the form of extensification and intensification have been made by the government in order to increase state revenue from the fiscal sector. This policy has an impact on society, the business world, and other parties as tax payers, collectors, and collectors. The self-assessment system is one of the government policies related to extensification and intensification to increase state revenue. In the self-assessment system, the taxpayer's role is to calculate, pay, and submit the taxes charged, in this section the tax authorities as tax officials cannot assist taxpayers in terms of calculating, paying their tax obligations, but only has the task of supervising Mardiasmo (2016). According to Waluyo (2017) Self-assessment system is a tax collection technique by giving power, confidence, and responsibility to taxpayers to total, deposit and submit themselves the total tax to be paid. However, because taxes have an element of coercion, it causes taxpayers to do tax evasion by carrying out active tax resistance, dominating more by carrying out corporate strategies to avoid taxes. There are factors that can influence tax evasion. In this study, researchers tested it with Capital Intensity, Inventory Intensity, Firm Size and Leverage.

There is a phenomenon in companies in Indonesia related to tax avoidance in coal mining companies, such as PT. Adaro Energy, Tbk is in trouble. An international report revealed that the company led by Garibaldi Thohir committed tax evasion through its subsidiary Coaltrade Services International in Singapore. Based on the Global Witness report entitled Taxing Times for Adaro which was released on Thursday 4 July 2019, Adaro is

reported to have diverted profits from coal mined in Indonesia. This is to avoid taxes in Indonesia. The report stated that from 2009-2017, the company through its subsidiary in Singapore, Coaltrade Services International, paid USD 125 million or less than it should have done in Indonesia. By diverting more funds through tax havens, Adaro may have reduced Indonesia's tax bill and the money available to the Indonesian government for essential public services by almost USD 14 million per year (<https://www.merdeka.com/>).

1.1. Agency Theory

According to Jensen & Meckling (1976) agency theory is the relationship between the agent (manager) and the principal (owner). Agency conflicts arise due to different risk preferences between agents (managers) and principals (owners). The purpose of this agency theory is to improve the ability of individuals (both principals and agents) to evaluate the environment in which decisions must be taken. Then, to evaluate the results of decisions that have been taken in order to facilitate the allocation of results between principals and agents in accordance with the work contract. The manager or agent has an obligation to provide information about the company to the owner of the company because the manager is considered to understand and know the actual condition of the company. However, managers sometimes do not report the actual state of the company. This can be done to benefit the manager and cover the performance weaknesses of the manager himself. This action is usually carried out due to differences in interests between owners and managers so that it can affect various matters related to company performance, one of which is company policy regarding corporate taxes. Currently, the tax system in Indonesia uses a self-assessment system that gives companies the authority to calculate and report their own taxes. This system can be used by agents to manipulate taxable income to be lower so that the tax burden paid by the company is smaller.

1.2. Tax Avoidance

According to Sinaga & Harman (2021) Tax avoidance or more often we call it tax avoidance is an activity carried out to seek profit by utilizing or avoiding taxes which are still within the framework of tax regulations in the Indonesian state tax system. Where also this tax avoidance is an effort to increase the efficiency of the tax burden collected by avoiding the tax burden through transactions that are basically not subject to tax. Tax avoidance or what is often also called tax refusal are obstacles that occur in tax collection so that what happens is a reduction in cash receipts from the state. This tax avoidance is an active resistance that comes from the taxpayer.

1.3. Capital Intensity

According to Sinaga & Harman (2021) Capital Intensity Ratio is a funding activity carried out by a sustainable company with funding in the form of fixed assets or capital intensity. The capital intensity ratio leads to how much the company's ability to use its fixed assets to generate sales. According to Vivie and Effendi (2021) The intensity of fixed assets is a scale that indicates the amount of fixed assets of a company that has depreciation which can be used as a reduction in profits. If the company has a large number of fixed assets, the profit earned will be minimal due to the depreciation of these assets. Fixed assets are company assets in a physically visible form that have economic benefits that exceed one year, which play a role in company operations such as production activities, to be rented out to other people or other things.

1.4. Investment Intensity

According to Sinaga & Harman, (2021) A measure that describes how much inventory is invested in a company is called inventory intensity. If a company has a high/large enough inventory, the expenses that the company will incur will also be high/large. The greater the costs incurred by the company to increase inventory investment will be able to reduce the profit of the company. For inventory intensity itself, it can be measured how large the total inventory is at the end of the Company's period, where the cost of the inventory is calculated based on the amount of the initial inventory for a period plus the addition of inventory, and subtract the total ending inventory. So that the greater the total inventory, the higher the company's inventory, the higher the inventory costs. With high inventory cost calculations, it can reduce profits for the company

1.5. Company Size

Company size is a big or small comparison of an object. If in a company or institution, company size is a comparison of the size of a business in a company or organization Hery (2016). Company size is seen based on total assets, total sales, market capitalization, number of employees. The greater the value of these criteria, the larger the size of the company. This research will use total assets as a company size.

1.6. Leverage

According to Kasmir (2016), leverage is a ratio used to measure the extent to which a company's assets are financed with debt. Companies with high leverage ratios (having large debts) can have an impact on the emergence of large financial risks, but also have great opportunities to generate high profits. Conversely, a company with a low leverage ratio has little financial risk, but may also have a small chance of generating large profits. After all, risk is always directly proportional to profit. A financial manager must have expertise in managing a company's leverage level, especially in examining the relationship between financial risk and the rate of return generated from funds borrowed by the company.

1.7. Research Framework

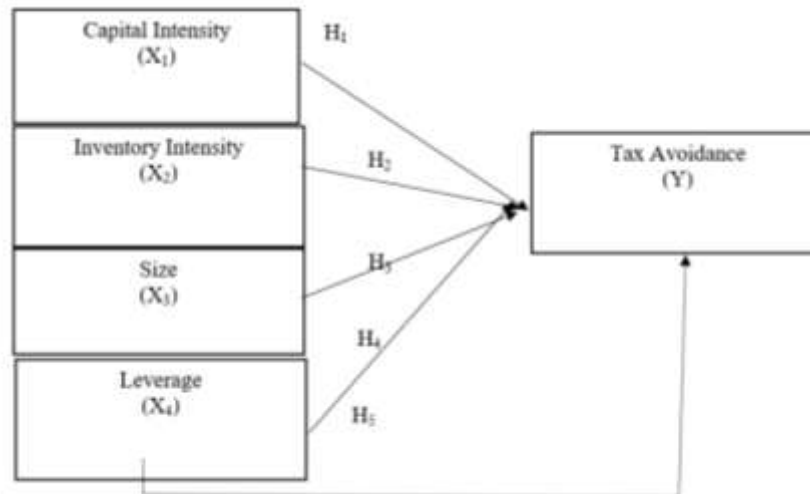


Figure 1: Research Framework

From the model above, the research hypothesis is arranged as follows :

- H1 : Capital Intensity Influences Tax Avoidance
- H2: Inventory Intensity Influences Tax Avoidance
- H3: Company Size Has an Influence on Tax Avoidance
- H4 : Leverage Has an Effect on Tax Avoidance
- H5 : Capital Intensity, Inventory Intensity, Company Size and Leverage Affect Tax Avoidance

2. Methodology

2.1. Types of Research

The type used in this research is quantitative. Quantitative can be interpreted as a research method used to examine certain populations or samples with the aim of testing established hypotheses Sugiyono (2017). Population is a generalized area consisting of objects or subjects that have certain qualities and characteristics determined by researchers to study and draw conclusions Sugiyono (2017). The population of this study is the coal mining sector which is listed on the Indonesia Stock Exchange by accessing the website of the Indonesia Stock Exchange, namely www.idx.co.id. The sampling technique in this study was carried out using purposive sampling method. The purposive sampling method is taking samples based on the considerations of the research subjects, the samples are selected based on the suitability of the characteristics with the sample criteria determined in order to obtain a representative sample. The following are the criteria for taking samples using the purposive sampling method:

1. Coal mining sector companies listed on the Indonesia Stock Exchange during the 2017-2021 period.
2. Companies in the coal mining sector that continuously publish financial reports on the Indonesia Stock Exchange during the 2017-2021 period.
3. Mining sector companies that use Rupiah in their financial reports for the 2017-2021 period.

2.2. Data Types and Sources

The type of data in this study uses quantitative data types and data sources in this study use secondary data sources. Secondary data is data related to the problem under study but the data obtained is not directly, namely through intermediaries. Secondary data in this study uses financial reports on the coal mining sector for the period 2017 – 2021 by accessing the website of the Indonesia Stock Exchange, namely www.idx.co.id.

2.3. Variable Operational Definitions

2.3.1. Dependent Variable

The dependent variable in this study is tax avoidance. According to Barli (2018) tax avoidance is legal utilization or legal arrangements of tax fair's affairs, namely a legal action by exploiting loopholes in the Tax Law to minimize the income tax burden that should be paid. Tax evasion in this study is proxied using the effective tax rate (ETR) ratio. The formula used is:

$$\text{ETR} = \frac{\text{Income Tax Expense (PPH Articles 21, 22, 23, 25 and 29)}}{\text{Profit before tax}}$$

Information :

ETR : Effective Tax Rate

Independent Variables

The independent variables in this study are Capital Intensity, Inventory Intensity, Firm Size and Leverage.

2.3.2. Capital Intensity

According to Sinaga & Harman, (2021) Capital Intensity is a funding activity carried out by a sustainable company with funding in the form of fixed assets or capital intensity. The ratio of capital intensity leads to how much the level of the company's ability to use its fixed assets. The formula used is:

$$\text{CAP} = \frac{\text{Total Net Fixed Assets}}{\text{Total Assets}}$$

Information :

CAP : Capital Intensity

2.3.3. Inventory Intensity

According to Sinaga & Harman (2021) Inventory Intensity is a measure that describes how much inventory is invested in a company. The formula used is:

$$\text{INV} = \frac{\text{Total Inventory}}{\text{Total Assets}}$$

Information :

INV : Inventory Intensity

2.3.4. Company Size

According to Barli (2018) company size, which is an internal factor, reflects how much resources the company has. The larger the size of the company, the more complex the transactions will be. The formula used is:

$$\text{Firm Size} = \text{LN (Total Assets)}$$

Information :

Firm Size : Firm Size

LN : Log Natural

2.3.5. Leverage

According to Barli (2018) Leverage describes the level of debt used by companies in financing Leverage in this study using the Debt to Equity Ratio formula Vivie dan Syahril (2021), the formula used is:

$$\text{DER} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

Information :

DER : Debt to Equity Ratio

3. Results and Discussion

3.1. Descriptive statistics

Descriptive statistics can provide an overview or description in a data obtained from the average value (mean), standard deviation, variance, maximum and minimum Ghozali (2016).

Table 1. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CAPINT	55	0,0285	0,9730	0,550458	0,2643406
INVENTINT	55	0,0072	0,1639	0,043646	0,0354144
UKPERUSH	55	18,4700	22,7497	20,551938	1,2914476
LEVERAGE	55	0,0369	34,0556	2,764560	5,9708673
ETR	55	-1,4980	0,8295	-0,245285	0,3532200
Valid N (listwise)	55				

Based on table 1 above, it describes the descriptive variables statistically in this study. The minimum is the smallest value from a series of observations, the maximum is the largest value from a series of observations, the mean is the average value of all data, while the standard deviation is the square root of the difference between the data values and the average divided by the number of data. Table 1 shows a descriptive study with a total of 55 samples of data which can be explained as follows:

1. Capital Intensity

Capital Intensity has a mean value of 0.550458 and a standard deviation (std deviation) of 0.2643406. the minimum value during the observation period is 0.0285. While the maximum value in the observation period is 0.9730.

2. Inventory Intensity

Inventory Intensity has a mean value of 0.043646 and a standard deviation (std deviation) of 0.0354144. the minimum value during the observation period is 0.0072. While the maximum value in the observation period is 0.1639.

3. Company Size

Firm size has a mean value of 20.551938 and a standard deviation (std deviation) of 1.2914476. the minimum value during the observation period is 18.4700. While the maximum value in the observation period is 22.7497.

4. Leverage

Leverage has a mean value of 2.764560 and a standard deviation (std deviation) of 5.9708673. the minimum value during the observation period is 0.0369. While the maximum value in the observation period is 34.0556.

5. Tax Avoidance

Tax Avoidance has a mean value of -0.245285 and a standard deviation (std deviation) of 0.3532200. the minimum value during the observation period is -1.4980. While the maximum value in the observation period is 0.8295.

3.2. Significant Test (F Test / Simultaneous Test)

This statistical test is used to show whether all the independent variables included in the model have a joint effect on the dependent variable Ghozali (2016). The 5% confidence level is used for the F test, with the following criteria:

1. If the significance value is $\leq 5\%$, it means that the independent variables jointly affect the dependent variable.
2. If the significance value is $> 5\%$, it means that the independent variables together have no effect on the dependent variable.

Table 2. Significant Test (F Test / Simultaneous Test)

		Anova				
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.384	4	.346	3.232	.020b
	Residual	5.353	50	.107		
	Total	6.737	54			

From table 2 it can be concluded that the significance level is <0.05 (5%) ($0.020 < 0.05$). This means that in the joint F test, namely the Independent Variables, namely Capital intensity, Inventory intensity, Firm Size and Leverage, they have an effect on the Dependent Variable, namely Tax Avoidance.

3.3. Significant Test (T Test / Partial Test)

The t statistical test shows how far the influence of one independent variable individually explains the variation of the independent variable Ghozali (2016). The 5% confidence level is used for the t test, with the following criteria:

1. If the significance value is $\leq 5\%$, it means that the independent variables individually affect the dependent variable

- If the significance value is $> 5\%$, it means that the independent variables individually have no effect on the dependent variable.

Table 3. Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	3.165	1.108		2.857	.006		
CAPINT	-2.098	.746	-1.570	-2.814	.007	.051	19.591
1 INVENTINT	-.660	1.491	-.066	-.442	.660	.711	1.406
UKPERUSH	-.111	.043	-.404	-2.597	.012	.656	1.525
LEVERAGE	-.701	.311	-1.219	-2.252	.029	.054	18.421

Based on table 3 the results of the t test on the independent variables can be explained in detail as follows:

- Capital intensity influences tax avoidance

Based on table 3 with a 5% confidence level, the results of testing the first hypothesis (H1) show that capital intensity has an effect on tax avoidance. This can be seen from the 5% confidence level. This indicates that the value of α is greater than the tsign value ($0.05 > 0.007$). Thus the test shows that H1 is accepted. The results of this analysis show that capital intensity affects tax avoidance. Capital intensity is how much the company invests its assets in the form of fixed assets. Companies that decide to invest in fixed assets can make depreciation costs a cost that can be deducted from income. The depreciation expense will cause the company's taxable profit to decrease which will ultimately reduce the amount of tax that must be paid by the company.

- Inventory intensity has no effect on tax avoidance.

Based on table 3 with a 5% confidence level, the results of testing the second hypothesis (H2) show that inventory intensity has no effect on tax avoidance. This can be seen from the value of the 5% confidence level. This shows that the value of α is smaller than the tsign value ($0.05 < 0.660$). Thus the test shows that H2 is rejected. The results of this analysis show that inventory intensity has no effect on tax avoidance. Companies that have large fixed assets do use these fixed assets for the company's operational interests, not for tax evasion. Thus a high proportion of fixed assets will not affect the level of tax avoidance that will be carried out by the company. This can be proven by the amount of investment in the fixed assets of mining companies which are the research samples which tend to have very high values because these companies need heavy equipment to carry out their operational processes. This high fixed asset value is followed by a high depreciation expense so that it has more potential to reduce company profits so that the tax burden becomes smaller. In addition, companies that have high inventory intensity are likely to use these additional costs only to determine the cost of goods sold as a benchmark in determining the selling price of goods, not as a way to reduce profits so that the tax becomes smaller.

- Company size has an effect on Tax Avoidance

Based on table 3 with a confidence level of 5%, the results of testing the third hypothesis (H3) show that company size has an effect on tax avoidance. This can be seen from the 5% confidence level. This indicates that the value of α is greater than the tsign value ($0.05 > 0.012$). Thus the test shows that H3 is accepted. The results of this analysis show that company size has an effect on tax avoidance. Company size is a description of the size of a company. Company size directly reflects the high and low operating activities of a company. The larger a company, the greater its activities, so that the transactions carried out will be more complex. So it allows companies to take advantage of existing loopholes to take action to avoid taxes from every transaction.

- Leverage has an effect on Tax Avoidance

Based on table 3 with a 5% level of confidence. The results of testing the fourth hypothesis (H4) show that leverage has an effect on tax avoidance. This can be seen from the 5% confidence level. This indicates that the value of α is greater than the tsign value ($0.05 > 0.029$). Thus the test shows that H4 is accepted. The results of this analysis show that leverage affects tax avoidance. Leverage is a financial ratio that describes the relationship between a company's debt to capital and company assets. The leverage ratio also shows the risks faced by the company. Company debt will arise an interest expense can be a deductible element of taxable income. This is where there is the possibility of using loans by companies that increase debt burdens and debt burdens cause interest expenses which reduce profit income thereby reducing the tax burden paid, so that's when tax evasion is identified as occurring.

4. Conclusion

Based on The Results of the Research That Has Been Done, Several Conclusions Can Be Drawn, Namely

- The Results of Testing the First Hypothesis (H1) Show That Capital Intensity Has an Effect on Tax Avoidance
- The Results of Testing the Second Hypothesis (H2) Show That Inventory Intensity Has No Effect on Tax Avoidance

3. The Results of Testing the Third Hypothesis (H3) Show That Company Size Has an Effect on Tax Avoidance
4. The Results of Testing the Fourth Hypothesis (H4) Show That Leverage Affects Tax Avoidance
5. The Results of Testing the Fifth Hypothesis (H5) Show That Capital Intensity, Inventory Intensity, Firm Size and Leverage Have a Simultaneous Effect on Tax Avoidance

References

- Barli, H. (2018). Pengaruh Leverage Dan Firm Size Terhadap Penghindaran Pajak. *Jurnal Ilmiah Akuntansi Universitas Pamulang*, 6(2).
- Ghozali, I. (2016). Aplikasi Analisis Multivariete dengan program IBM SPSS 23 (Badan Pene).
- Hery. (2016). Analisis Laporan Keuangan. PT. Gramedia Widiasarana Indonesia.
- Jensen, C., & Meckling, H. (1976). Theory of the Firm : Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305–360.
- Kasmir. (2016). Analisis Laporan Keuangan Cetakan Kesembilan (Edisi 1).
- Mardiasmo. (2016). Perpajakan. Andi Offset.
- Sinaga, R., & Harman, M. (2021). Pengaruh Capital Intensity dan Inventory Intensity Terhadap Penghindaran Pajak. *Jurnal Ilmiah Mahasiswa Manajemen, Bisnis Dan Akuntansi*, 3(2).
- Sugiyono. (2017). Metode Penelitian Kuantitatif, Kualitatif, Dan R&D.
- Vivie dan Syahril, E. (2021). Analisis Intensitas Aset Tetap, Intensitas Persediaan dan Leverage terhadap Penghindaran Pajak Perusahaan di Bursa Efek Indonesia. *Jurnal ECO-Buss*, 4(2).
- Waluyo. (2017). Perpajakan Indonesia. Salemba Empat.