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DETERMINANTS OF TAX AVOIDANCE WITH ENVIRONMENTAL UNCERTAINTY AS A MODERATING VARIABLE

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ABSTRACT

This study aims to analyze the determinants of tax avoidance and how the moderating effect of environmental uncertainty on the relationship between capital intensity and inventory intensity on tax avoidance. The population used in this study are manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period. The sample selection used a purposive sampling method with 160 companies selected as the sample. The data analysis technique used panel data regression analysis with the STATA application. The test results show that (1) capital intensity has a significant positive effect on tax avoidance, (2) inventory intensity does not have a significant effect on tax avoidance, (3) environmental uncertainty moderates the effect of capital intensity on tax avoidance, and (4) environmental uncertainty does not moderate the effect of inventory intensity on tax avoidance.

Keywords: Environmental Uncertainty; Capital Intensity; Inventory Intensity; Tax Avoidance

INTRODUCTION

Taxes are important for a country, especially for Indonesia, because taxes are the main source of state income. Tax revenues will be used for routine financing and state development (Monika & Noviari, 2021). Tax is a mandatory levy from the government to taxpayers based on the amount of income. One of the parties that contributes as a tax subject is the company (Regina et al., 2021). In practice, taxes are often considered a burden by companies because their existence will reduce profits which are the company's main orientation. With this burden, it is possible for companies to do tax planning to reduce their obligations (Wdiatmoko & Mulya, 2021). In general, tax reduction can be done in two ways, namely legally and illegally. Tax planning is illegally known as tax evasion, and planning legally is known as tax avoidance. Tax evasion is an action in reducing taxes in ways that violate tax laws. Meanwhile, tax avoidance is a tax reduction in a way that does not violate the law through the use of a loophole or weakness in tax regulations (Zainuddin & Anfas, 2021). Although tax avoidance is carried out not against the law and legally done, the impact will still be detrimental to the state.

In Indonesia, a lot of tax avoidance occurs because of the flexibility in recording, depositing, and reporting taxes using self-assessment systems. Reporting from Kontan.co.id, the Tax Justice Network reported that Indonesia's losses reached US$ 4.86 billion or

equivalent to Rp. 68.7 trillion per year as a result of tax avoidance practices. Where Rp 67.7 trillion is a loss due to tax evasion by corporate taxpayers and the rest by personal taxpayers. One of the cases of tax evasion was carried out by PT. Bentoel Internasional Investama Tbk in 2019. As a result of PT Bentoel's tax avoidance, Indonesia lost US$ 14 million per year. PT Bentoel channeled income abroad through intercompany loans in 2013-2015, resulting in a fairly large interest expense of Rp 2.25 trillion. This can be used to reduce the company's taxable income. The impact of tax evasion is very detrimental to the state which results in tax officials often not being able to meet tax revenue targets. The realization of tax revenue every year always does not meet the target. In 2020 the realization of tax revenue was 89.25%, although the value increased from 2019 which was 84.44% but the realization was still below 100%. This indicates the number of tax avoidance practices each year.

In relation to agency theory, there is a conflict of interest between the agent and the principal, which underlies the occurrence of tax avoidance. When fulfilling tax obligations, managers (agents) will act as if they are in the position of shareholders to maintain profits. Although his actions may be risky and detrimental to the principal, tax evasion is still often practiced. This is because the positive effect can increase the value of the manager's performance in front of shareholders. Several factors that influence tax avoidance include capital intensity and inventory intensity. Capital Intensity is a description of the amount of investment made by the company in the form of fixed assets (Zainuddin & Anfas, 2021). When a company has a large fixed asset intensity, it will cause a large depreciation expense (Sinaga & Malau, 2021). Fiscally, depreciation expense is recognized as deductible expense, which is a deduction component in tax calculations (Alghifari et al., 2020). So that the intensive ownership of fixed assets is indicated as one of the media in tax avoidance. The findings of previous research indicate the effect of capital intensity on tax avoidance, where the greater the intensity of fixed assets, the greater the tax avoidance (Artinasari & Mildawati, 2018; Saputro et al., 2018; Sinaga & Malau, 2021). However, other findings from Monika & Noviari (2021), Indah & Wijaya (2021) and Nugrahadi & Rinaldi (2021) state that there is no significant effect of the interaction of capital intensity and tax avoidance. Ownership of large fixed assets is intended to assist the running of the company's operational activities so that it does not affect the tendency to do tax avoidance.

Another factor that influences tax avoidance is inventory intensity. Inventory intensity is a description of the amount of inventory owned by the company. The size of the inventory owned by the company is related to the burden that will be borne by the company (Nasution & Mulyani, 2020). The higher the inventory available in the company, the higher the additional costs that must be incurred. These outgoing costs are expenses that will reduce profits (Yulianty et al., 2021; Nugrahadi & Rinaldi, 2021; Anggriantari & Purwantini 2020). When the company's profit decreases, the amount of tax that must be issued will also decrease. This indicates the motive for the action of tax avoidance. Meanwhile, the findings of Artinasari & Mildawati (2018) and Yulianty et al. (2021) said that the size of the inventory does not fully describe the company's tax avoidance. Where additional costs are only used as a determinant in determining the cost of goods sold, not for tax avoidance.

The development of the times in the era of globalization has made the business world experience changes and adjustments are needed. The rapid development of technology makes it easier for companies to carry out operational activities. But on the other hand, this has a negative impact because it is easy to invite other competitors into the industry. According to Darwin's theory (the survival of the fittest), someone who can survive in a new

environment is someone who can adapt to his environment (Darya, 2012). In this case, business people need to adapt when there is competition to face various pressures in order to survive in their industry. Environmental uncertainty relates to how management responds to taking different policies when uncertainty is high. One of the reasons for environmental uncertainty is competition uncertainty (Arieftiara et al., 2017). When a company cannot change its business pattern so that it cannot compete, it allows the company to be more aggressive in avoiding tax by investing in fixed assets and inventories. Huang et al. (2017), Ratu & Siregar (2019) and Putri & Syafruddin (2021) state that companies with high environmental uncertainty will face higher risks, so tax avoidance may be taken as an alternative step in reducing the tax burden and maintaining profits.

But on the other hand, when environmental uncertainty is high, companies that are capital and inventory intensive may be more careful in planning, including tax planning (Laksono & Firmansyah, 2020). McGuire et al. (2014) stated that companies with high uncertainty will reduce investment activity because operational uncertainty can affect the results of decisions that managers will take in the future. High uncertainty causes high information asymmetry and instability in the company's cash flows (Ratu & Siregar, 2019). Making the wrong planning decisions can lead to the risk of being subject to tax sanctions which will further worsen the company's condition. Therefore, environmental uncertainty due to competition in an industry is assumed to moderate the effect of capital intensity and inventory intensity on tax avoidance. Other factors outside the main variables that are also tested are profitability and leverage. This control variable was added to increase the level of accuracy of the research results.c The development of the times in the era of globalization has made the business world experience changes and adjustments are needed. The rapid development of technology makes it easier for companies to carry out operational activities. But on the other hand, this has a negative impact because it is easy to invite other competitors into the industry. According to Darwin's theory (the survival of the fittest), someone who can survive in a new environment is someone who can adapt to his environment (Darya, 2012). In this case, business people need to adapt when there is competition to face various pressures in order to survive in their industry. Environmental uncertainty relates to how management responds to taking different policies when uncertainty is high. One of the reasons for environmental uncertainty is competition uncertainty (Arieftiara et al., 2017). When a company cannot change its business pattern so that it cannot compete, it allows the company to be more aggressive in avoiding tax by investing in fixed assets and inventories. Huang et al. (2017), Ratu & Siregar (2019) and Putri & Syafruddin (2021) state that companies with high environmental uncertainty will face higher risks, so tax avoidance may be taken as an alternative step in reducing the tax burden and maintaining profits.

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tested are profitability and leverage. This control variable was added to increase the level of accuracy of the research results.

METHOD

Operasional Definition and Measurement of Variables

In this study the dependent variable is tax avoidance (Y). Capital Intensity and Inventory intensity as independent variables. Environmental uncertainty as a moderation. And the control variables used are profitability and leverage.

a. Tax Avoidance (ABTD)

Tax avoidance is a strategy or method taken by companies in order to reduce the tax burden by taking advantage of loopholes in the weakness of tax regulations or policies (Monika & Noviari, 2021). The measurement used as a proxy for tax avoidance is Abnormal Book Tax Difference (ABTD).

First, find the Book Tax Difference (BTD) value.

$$BTD_{it} = BI_{it} - \frac{CTE_{it}}{STR_{it}} \quad (1)$$

Note:
BI_{it} : Book Income Before Tax
CTE_{it} : Current Tax Expense
STR_{it} : Statutory Tax Rate (income tax rate according to applicable regulations)

Then, the formula for finding Abnormal BTD

$$BTD_{it} = h_0 + h_1\Delta INV_{it} + h_2\Delta REV_{it} + h_3 NOL_{it} + h_4 TLU_{it} + \varepsilon_{it} \quad (2)$$

Note:
BTD_{it} : Book Tax Difference
ΔINV_{it} : The amount of change in investment (tangible and intangible fixed assets) from the previous year
ΔREV_{it} : The amount of change in income from the previous year
NOL_{it} : Net operating loss
TLU_{it} : Fiscal loss compensation value
ε_{it} : BTD abnormal/discretion in year t
It : Company i year y

b. Capital Intensity (CIR)

Capital Intensity is the amount of investment made by the company in the form of fixed assets. Capital intensity is measured by the capital intensity ratio (Siboro & Santoso, 2021). The greater the value of the Capital Intensity Ratio (CIR), reflects the greater the ownership of the company's fixed assets.

$$\text{Capital Intensity Ratio} = \frac{\text{Total Fixed Assets}}{\text{Total Assets}}$$

c. Inventory Intensity (INVR)

Inventory Intensity is the amount of inventory owned by the company in the context of investment, measured using the inventory intensity ratio (INVR) (Nugrahadi & Rinaldi, 2021).

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

d. Environmental Uncertainty (HI)

A condition when a person cannot predict something with certainty, one of which is due to the uncertainty of competition (Arieftiara et al., 2017). Measured using the Herfindahl index (HI). The value of HI will reflect how strongly the company can dominate the competition in its industry. The higher the HI value, the lower the level of uncertainty because it is assumed that the company can dominate the competition.

$$\text{Herfindahl Indeks} = \left(\frac{\text{Total Sales i}}{\sum \text{Total Manufacturing Industry Sector Sales}}\right)^2$$

e. Profitability (ROA)

Profitability is a useful ratio in measuring the effectiveness of the company's management in managing wealth to get profits from the company's operational activities (Zainuddin & Anfas, 2021).

$$\text{ROA} = \frac{\text{Net profit after tax}}{\text{Total Assets}}$$

f. Leverage (DER)

Leverage is a ratio that shows the level of company operational funding that is financed by debt. This decision will result in the company having an interest expense on the loan (Saputro et al., 2018).

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

Location and Time

This study uses the annual financial statements of manufacturing companies listed on the Indonesia Stock Exchange for the period 2018-2020. The research data was obtained through the official website of the Indonesia Stock Exchange and the official websites of related companies.

Population and Sample

The population used is manufacturing sector companies listed on the Indonesia Stock Exchange (IDX) in 2018-2020. The sample was selected from the population by purposive sampling. Samples were selected for three consecutive years as many as 160 companies with a total of 421 samples.

Data analysis

Data analysis in this research is descriptive statistical analysis with panel data regression analysis. Then perform the classical assumption test (multicollinearity test, heteroscedasticity test, autocorrelation test, and normality test). Furthermore, to test the hypothesis and the feasibility of the model, the R Square Value Test, F Test, and T Test were carried out.

Regression Model

The regression model in this research uses multiple linear regression. The equation function is as follows:

Model 1 Direct Effect Regression Analysis

$$ABTD_{it} = \alpha + \Upsilon_1 CIR_{it} + \Upsilon_2 INVR_{it} + \Upsilon_3 ROA_{it} + \Upsilon_4 DER_{it} + \mathcal{E}_{it}$$

Model 2 Regression Analysis with Moderation

$$ABTD_{it} = \alpha + \beta_1 CIR_{it} + \beta_2 INVR_{it} + \beta_3 HI_{it} + \beta_4 CIR_{it}HI_{it} + \beta_5 INVR_{it}HI_{it} + \beta_6 ROA_{it} + \beta_7 DER_{it} + \mathcal{E}_{it}$$

Note:

ABTD	: Abnormal book tax difference (Tax avoidance)
CIR	: Capital intensity Ratio
INVR	: Inventory intensity Ratio
HI	: Herfindahl Indeks (Environmental Uncertainty)
ROA	: Return on Asset (Profitability)
DER	: Debt on Equity Ratio (Leverage)
Υ_0	: Constanta Model 1
$\Upsilon_{(1,2,3,4)}$	: Coefisien Regression Model 1
α	: Constanta Model 2
$\beta_{(1,2,3,4,5,6,7)}$	: Coefisien Regression Model 2
$\mathcal{E}$	: Error
it	: Company i year t

RESULTS AND DISCUSSION

Deskriptive Statistical Analysis

Descriptive statistics is an analysis by describing or describing the collected data in detail. The following are the results of descriptive statistics for each variable.

Tabel 1. Descriptive Statistics Test Results

Variabel	Obs	Mean	Std. Deviasi	Min	Max
ABTD	421	-0.0019266	0.0318595	-0.0747838	0.0749621
CIR	421	0.3913721	0.1905358	0.0009515	0.8960708
INVR	421	0.1959440	0.1212599	0	0.5803816
HI	421	-13.0652246	3.2120191	-19.3490700	-7.0719220
ROA	421	0.0342568	0.0645279	-0.1240430	0.1727538
DER	421	0.9841059	0.9787409	-1.1387401	3.7510639

Note: ABTD = Tax avoidance, CIR = Capital intensity, INVR = Inventory intensity, HI = Environmental Uncertainty, ROA = Profitability, DER = Leverage

Source: Data processed from Output STATA v.16.0

Based on Table 1, the explanation for each variable is obtained as follows:

Tax avoidance was measured using the Abnormal Book Tax Difference (ABTD). Based on the results of the data processing, the average value is -0.0019266 or -0.19% and the standard deviation is 0.0318595 or 3.18%. The comparison between the mean and standard deviation shows that the standard deviation value is greater than the average value (mean) which reflects that the tax avoidance data is heterogeneous. Overall, it can be interpreted that the average company performs tax avoidance is low or it can be said that it does not do tax avoidance at all as indicated by an average level of -0.19%. The minimum

value of tax avoidance data is -0.0747838 and the maximum value of tax avoidance is 0.0749621.

Capital intensity is measured by the capital intensity ratio (CIR). Based on the results of data processing, the average value is 0.391372 or 39% and the standard deviation is 0.190536 or 19%. The comparison between the mean and standard deviation shows that the standard deviation value is smaller than the average value (mean) reflecting that the capital intensity data is homogeneous. On average, the total ownership of the company's fixed assets is 39%, meaning that this value describes the amount of fixed assets that are owned and utilized in running the company. The lowest value of capital intensity is 0.000951 and the highest value of capital intensity is 0.896071.

Inventory intensity is measured by the inventory intensity ratio (INVR). Based on the results of data processing, the average value of inventory intensity is 0.195944 or 19.6% and the standard deviation is 0.121260 or 12%. The comparison between the mean and standard deviation shows that the standard deviation value is smaller than the average (mean) reflecting that the inventory intensity data is homogeneous. The average amount of 19.6% indicates that the intensity of inventory ownership in a moderate position tends to be low. The lowest value of inventory intensity is 0 and the highest value of inventory intensity is 0.580382.

Environmental Uncertainty as a moderation was measured by herfindahl index (HI). Based on the results of data processing, the average value is -13.0652246 and the standard deviation value is 3.2120191. The comparison between the mean and standard deviation shows that the standard deviation value is greater than the mean (mean) reflecting that the herfindahl index data is heterogeneous. The average value of -13.0652246 shows the average sales of the sample companies in the total sales of all companies in the manufacturing sector in 2018-2020. The lowest herfindahl index value is -19.3490700 and the highest value of herfindahl index is -7.0719220.

Profitability is measured by Return on Assets (ROA). Based on the results of data processing, the average value is 0.0342568 and the standard deviation is 0.0645279. There are 196 samples with ROA values above the average and the remaining 225 samples below the average. The comparison between the mean and standard deviation shows that the standard deviation value is greater than the mean (mean) reflecting that the profitability data is heterogeneous. This means that the average value of the company's profitability is still low, which is indicated by a value of 3.4%. The lowest profitability value is -0.1240430 and the largest profitability value is 0.1727538.

Leverage is measured by Debt to Equity Ratio (DER). Based on the results of data processing, the average leverage value is 0.9841059 and the standard deviation is 0.9787409. The majority of sample companies have a level of financing that is dominated by debt. The comparison between the mean and standard deviation shows that the standard deviation value is smaller than the average (mean) reflecting that the leverage data is homogeneous. The lowest leverage value is -1.1387401 and the largest leverage value is 3.7510639.

Results and Discussion

Panel data regression testing is useful to determine the relationship between variables. This study was conducted to examine the relationship between capital intensity and inventory intensity as independent variables, tax avoidance as dependent, environmental uncertainty as moderating, and profitability and leverage as control variables. The following are the results of multiple linear regression testing for model 1 and model 2 with the STATA application.

Regression Model 1

Tabel 2. Panel Model Data Regression Test 1

Variable	Regression Model Analysis 1				
	Fixed Effect Model				
	Coef.	t	P>|t|.	Hypothesis Prediction	Conclusion
Cons.	-0.0507764	-2.21	0.028		
CIR	0.0847253	1.96	0.051***	H1 (+)	H1 accepted
INVR	-0.0372589	-0.90	0.368	H2 (+)	H2 rejected
ROA	0.3709278	7.88	0.000*		
DER	0.0104507	2.04	0.043**		

Note: * < 0,01, ** < 0,05, *** < 0,10, ABTD = Tax avoidance, CIR = Capital intensity, INVR = Inventory intensity, ROA = Profitability, DER = Leverage.
Source: Data processed from Output STATA v.16.0

Regression Model 2

Tabel 3. Panel Model Data Regression Test 2

Variable	Regression Model Analysis 2				
	Fixed Effect Model				
	Coef.	t	P>|t|	Hypothesis Prediction	Conclusion
Cons.	-0.0049938	-0.08	0.937		
CIR	0.1023915	2.48	0.014**		
INVR	-0.0366335	-0.90	0.367		
HI	0.0025708	0.61	0.544		
CIR_HI	-779.0167	-2.14	0.034**	H3 : +/-	H3 accepted
INVR_HI	282.0559	0.62	0.534	H4 : +/-	H4 rejected
ROA	0.3781147	8.19	0.000*		
DER	0.0085918	1.76	0.000*		

Ket: * < 0,01, ** < 0,05, *** < 0,10, ABTD = Tax avoidance, CIR = Capital intensity, INVR = Inventory intensity, HI = Environmental Uncertainty, ROA = Profitability, DER = Leverage.
Source: Data processed from Output STATA v.16.0

Based on Table 2 model 1, the results show that at a significance level of 10%, the first hypothesis is accepted with a ratio of 0.051 < 0.10 and the variable coefficient is positive. This means that capital intensity affects tax avoidance significantly and is positively correlated. Where the higher the ownership of fixed assets of a company, the higher the indication of the company practicing tax avoidance. The company will not be harmed by the ownership of fixed assets because its presence is very important in supporting the company's operational activities. In this regard, fixed asset-intensive companies will have the opportunity to design profitable strategies on the tax side. Fixed assets will experience depreciation every year, where the depreciation expense on fixed assets is fiscally included in the deductible expense (regulated in Law of the Republic of Indonesia No. 36 of 2008). Deductible expense will be a component of reducing taxable income which causes the tax burden to be lower. Utilization of deductible expense is often used optimally by companies in order to get a reduction in the tax burden.

The company's management is always demanded to be maximal in carrying out the company's operations in fulfilling its obligations to the principal to gain profits. Even though this action is actually contrary to the carrying capacity theory which emphasizes the principle

of justice because tax avoidance tries to cover up the actual ability of the company. However, management continues to try to avoid tax, because it returns to the nature of the agent (manager) that in their actions are often driven by self-interest. The results of this study are in line with previous research, namely Sinaga & Malau (2021) which also found that there was a positively correlated effect of the intensity of fixed assets on tax avoidance practices. So that the ownership of large fixed assets allows the company to make maximum use of it in carrying out tax avoidance actions. The same result is also shown by Widiatmoko & Mulya (2021) who explain that the fixed assets owned will experience depreciation, thereby reducing their income and lowering their tax liability.

Based on Table 2 model 1, the results show that at the 10% significance level, the second hypothesis is rejected with a ratio of 0.368 > 0.10, and the variable coefficient is negative. This means that inventory intensity does not significantly affect tax avoidance. Inventory holdings are held as a company investment to generate future income. The additional costs arising from inventories are not a component that results in reduced taxable income. Whether or not the intensity of inventory can not describe the company doing tax avoidance. This can happen because there is no tax incentive for companies that have large-scale inventories in the tax law (Artinasari & Mildawati, 2018). Holding inventories does not affect tax avoidance reflecting that taxable income is not affected by deductions from additional costs of inventories.

The absence of tax avoidance actions will reflect that the company is trying to create conditions that are in line with the interests of shareholders, thereby avoiding conflicts from conflicts due to the risks that may be obtained when taking tax avoidance actions. This will minimize the conflict between the two parties in agency theory, namely the principal and the agent. Inventory ownership which does not have any effect on tax avoidance behavior makes the tax burden in accordance with the actual ability of the company without any attempt to cover its ability as a form of tax avoidance. This is in accordance with the carrying capacity theory which imposes taxes in accordance with the income earned by each taxpayer. This statement is in accordance with the findings of Artinasari & Mildawati (2018) and Yulianty et al. (2021) who found that tax avoidance was not significantly affected by inventory intensity, which was presumed because the size of the inventory did not fully describe the company's tax avoidance. Where the company takes advantage of additional costs only as a determinant in determining the cost of goods sold only. And perhaps the company is tax evasion by taking advantage of other deductible expenses such as depreciation expense on fixed assets rather than the incremental cost of inventory.

Based on Table 3 model 2, the results show that at the 5% significance level, the third hypothesis is accepted with a comparison of 0.034 <0.05, which means that environmental uncertainty moderates the effect of capital intensity on tax avoidance significantly. In another sense, when competition uncertainty occurs, fixed asset-intensive companies will reduce tax avoidance behavior. Environmental uncertainty indicates an inability to predict something. One of the reasons for this is the uncertainty of competition. Uncertainty in competition makes it difficult for management to design business strategies and control the risks that will be faced later. According to Darwin's theory (the survival of the fittest), adapting is the best way to survive in an environment. In line with this, business people must be able to adapt when there is environmental uncertainty due to high competition to face pressure to continue to exist in their environment. When there is uncertainty in competition, it will cause pressure for the company, thus requiring it to always innovate to keep up with its competitors. Companies that have intensive fixed assets, meaning that the company is less innovative. So that when there is high business competition the company will find it difficult to adapt because of a lack of flexibility.

Companies that have capital intensive (fixed assets) when facing competition uncertainty tend to reduce their tax avoidance behavior. This step is taken to avoid the risk of tax sanctions that will be faced, because the uncertainty of the information obtained in making decisions can make the company even more loser. The company will try to maintain the company's stability and good reputation to avoid the consequences of higher costs. This is also done in order to fulfill the obligations of managers to shareholders in saving the company. So that when there is uncertainty due to high business competition, companies that are not able to compete will be increasingly threatened and will choose to be more careful in taking tax planning. The results of the study are supported by the statement of McGuire et al. (2014) which states that companies with high uncertainty will tend to reduce investment activities in components that can reduce taxes, because operational uncertainty will make managers more careful in making tax savings decisions in order to minimize the risks that will be faced. So it can be concluded that when environmental uncertainty occurs, it can reduce the decisions of fixed asset-intensive companies to take tax avoidance actions.

Based on Table 3 model 2, the results show that at a significance level of 10%, the fourth hypothesis is rejected with a comparison of 0.534 > 0.10, which means that environmental uncertainty does not significantly moderate the relationship between inventory intensity and tax avoidance. The test results illustrate that the focus of management in facing the complexities of competition is not by utilizing tax avoidance strategies through intensive inventory ownership, but by choosing other business strategies both with innovation and other defense strategies. So this makes environmental uncertainty does not play a role in moderating the relationship between inventory intensity and tax avoidance. As an example of a company that is in high competition uncertainty, namely PT Jakarta Kyoei Steel Works Tbk (JKSW). The Company stated that the effort in overcoming intense competition is to change the production strategy by utilizing the latest technology as an effort in a competitive strategy considering that many competitors have taken advantage of the sophistication and efficiency of technology to make the price of goods cheaper than those of their production.

Based on Darwin's theory (the survival of the fittest) that business entities are required to follow developments or trends in society in order to survive among its competitors (Darya, 2012; Taufik, 2019). This also reflects the correlation between management (agents) and principals based on agency theory, where agents must always maintain the company's performance in any situation in accordance with the principal's orders. Therefore, it is possible to choose a strategy other than investing into inventory (inventory intensity) in an effort to avoid tax by the company. The results of the study were supported by Wardhana et al. (2021) which states that environmental uncertainty does not influence companies to take tax avoidance strategies in an effort to defend business in the midst of competition but by choosing other strategies, so that environmental uncertainty does not have an effect on tax avoidance. Inventory intensity ownership is intended only for the company's operational activities without any involvement in tax avoidance actions, because inventory ownership can provide future benefits when the inventory is successfully sold. Therefore, it is concluded that environmental uncertainty does not have a moderating role in the effect of inventory intensity on tax avoidance.

Then for the control variables, namely profitability and leverage. Based on the t-test in Table 12, tax avoidance is significantly affected by profitability at a significance level of 1%. Where the probability of profitability is 0.000 < 0.01 so the effect is significant. The results of the t-test of the leverage variable show that tax avoidance is significantly affected by leverage at a significance level of 5%. Where the probability of leverage is 0.043 <0.05 so that it is declared to have a significant effect.

CONCLUSION

The results of the tests that have been carried out to examine the effect of capital intensity and inventory intensity on tax avoidance accompanied by the moderation of environmental uncertainty in manufacturing companies listed on the Indonesia Stock Exchange in 2018-2020 have several results and decisions. First, capital intensity affects tax avoidance significantly and is positively correlated. When the capital intensity of the company is higher, the indication of the company's potential for tax avoidance is also higher.

Second, inventory intensity does not significantly affect tax avoidance. This means that the size of the inventory does not affect the decision to take tax avoidance action. The company invests in inventory as a form of investment in the future to make a profit when the inventory is sold. Regarding the additional cost of inventory, it is intended for calculating the cost of goods sold, not for tax avoidance.

Third, environmental uncertainty has been shown to have a role in moderating the relationship between capital intensity and tax avoidance. Where the role of the existence of environmental uncertainty is to reduce the behavior of companies that have intensive fixed assets to take tax avoidance actions. This reflects that when environmental uncertainty occurs due to competition uncertainty, companies are more careful in taking actions that can increase the company's risk.

Fourth, environmental uncertainty has not been proven to moderate the relationship between inventory intensity and tax avoidance. This happens because when environmental uncertainty occurs, companies tend to choose strategies that can maintain their existence and avoid risky strategies, such as innovation and survival strategies. This encourages companies to invest in things that can support their innovation or take advantage of other alternatives as a medium for tax avoidance rather than relying on inventory intensity as a medium for tax avoidance. So from the pattern of inventory intensity relationships in order to avoid tax when environmental uncertainty occurs, it has no effect. Then for the results of testing profitability and leverage as control variables have the same results, namely both have a significant effect on tax avoidance.

Limitations during the process of this research, namely the measurement of herfindahl index. Where the calculation of the Herfindahl index would be better if it included closed companies because the goal is to measure the complexity of competition. Limitations in obtaining information or research data regarding closed companies make this research only include data on public companies. Therefore, further research is expected to be able to overcome this so that the research carried out is getting better, so that the complexity of competition can be described better from two sides (go public and non-go public companies).

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