p–ISSN: 2723 - 6609 e-ISSN: 2745-5254
Vol. 5, No. 10, October 2024 http://jist.publikasiindonesia.id/

Analysis of the Influence of Capital Intensity, Inventory Turnover (ITO) and Return on Assets (ROA) on the Effective Tax Rate (Etr) with Institutional Ownership as a Moderating Variable

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Keywords: effective tax rate, capital intensity, return on assets, inventory turnover (ITO), institutional ownership.

ABSTRACT

This research aims to determine the effect of capital intensity, inventory turnover (ITO), and return on assets (ROA) on the effective tax rate (ETR) with institutional ownership as a moderating variable. This research uses secondary data in the form of financial reports that have been audited by auditors, where the data was obtained from the official website of the Indonesia Stock Exchange (IDX) at idx.co.id. The sampling technique used in this research is the purposive sampling method. The population in this research is property and real estate companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021, totaling 9 companies. The sample used in this research was 41 companies with 123 observation data, taken based on certain criteria. This research is quantitative research with secondary data sources including the company's annual financial reports obtained through the website www.idx.co.id and the official website of each company. The method used to analyze the influence of independent variables on the dependent variable in this research is multiple linear regression analysis using SPSS 26. The results of the research show that Return on Assets and Inventory Turnover (ITO) have a positive and significant effect on the Effective Tax Rate, while Capital Intensity has a negative effect. but it is not significant to the Effective Tax Rate for property and real estate sector companies listed on the Indonesia Stock Exchange (IDX) in 2019-2023. Institutional ownership can moderate the influence of Capital Intensity, Return on Assets, and Inventory Turnover (ITO) on the Effective Tax Rate in property and real estate sector companies listed on the Indonesia Stock Exchange (IDX).

Introduction

One way to achieve the independence of a nation or state in terms of development financing is to explore sources of funds from within the country, namely through taxes. Taxes have an important role as one of the country's largest sources of revenue, so the government pays special attention to this sector. In Indonesia, the government is making intensification and extensification efforts to optimize the tax sector. Based on this, the amount of tax revenue can affect the size of the State Budget (Setiawan & Al-Ahsan, 2018).

Tax payment is a manifestation of state obligations and taxpayers' participation in carrying out tax obligations to finance the state and national development. In accordance with the philosophy of tax law, paying taxes is not only an obligation, but also the right of every citizen to participate in state financing and national development and provide direct benefits for taxpayers (Ardyansah & Zulaikha, 2014). Companies as taxpayers will try to maximize profits through various expense efficiencies, including tax burdens. In an effort to increase the efficiency of the tax burden, many companies carry out tax avoidance. To encourage companies to be more active, the government provides incentives in the form of reducing domestic corporate tax rates (Angelina & Atiningsih, 2021).

In today's unpredictable economic conditions, property developers need to prepare for more than just "money"; They must also have competitive "weapons" to win the competition. Many property development companies have managed to excel in the competition because they have a good master plan (Chytia & Pradana, 2021). A master plan is an overarching development framework that includes infrastructure in a region. With a master plan, property developers can respond to customer needs faster and more flexibly in the face of market changes and economic conditions (Mustika et al., 2017). For property business people, income tax is considered to have an impact on the company's profit because the tax reduces the amount of profit earned, thus encouraging property business people to carry out tax planning.

(Putri & Lautania, 2016) stated that tax planning includes an effective tax rate (ETR), which refers to the tax liability that must be paid, as well as the return on assets (ROA). Based on the report of the Directorate General of Taxes, this phenomenon caused the realization of state revenue in 2020 to decrease compared to 2019, but increased again in 2021. The tax revenue target in 2019 of Rp 1,577.56 trillion was realized at Rp 1,332.06 trillion. In 2020, the tax revenue target is IDR 1,198.82 trillion with a realization of IDR 1,069.98 trillion. The decline in state revenue in 2020 was caused by a decline in national economic activity due to the COVID-19 pandemic, so taxpayers were unable to make payments as expected (Ghozali, 2018).

Rules regarding health protocols have prevented Account Representatives from conducting field visits directly, which has an impact on the quality of data obtained from confirmation of taxpayer data. Taxpayers tend to prioritize efforts to maintain their business over tax obligations. The problem is that many companies seek to reduce their tax liabilities, which results in discrepancies in the calculation of the tax burden applied

in accordance with the rates set out in the law and reported in the company's financial statements. The Effective Tax Rate is a tax rate used by taxpayers to calculate the amount of tax that must be paid by comparing the tax burden with commercial profit before tax (Rizal & Sari, 2022).

Capital intensity is the ratio of investment activities carried out by companies that are linked to investments in the form of fixed assets. The ratio of capital intensity can be used to show the level of efficiency of a company in using its assets to generate sales (Chytia & Pradana, 2021).

1. How does capital intensity affect the effective tax rate (ETR) on companies in the property and real estate sectors?
2. How does Inventory Turnover (ITO) affect the effective tax rate (ETR) on companies in the property and real estate sectors?
3. How does return on assets (ROA) affect the effective tax rate (ETR) on companies in the property and real estate sectors?
4. How does institutional ownership affect the effective tax rate (ETR) on companies in the property and real estate sectors?
5. How does capital intensity affect institutional ownership as a moderation variable on the effective tax rate (ETR) in companies in the property and real estate sectors
6. How does Inventory Turnover (ITO) affect institutional ownership as a moderation variable on the effective tax rate (ETR) in property and real estate sector companies?
7. How does return on assets (ROA) affect institutional ownership as a moderation variable on the effective tax rate (ETR) in property and real estate sector companies?

Several previous studies have tried to test the effect of capital intencity on the effective tax rate (ETR). However, the results of the study are still inconsistent. The research has been conducted (Sanyora & Safitri, 2023) where the results show that capital intencity has a significant effect on the effective tax rate (ETR). Meanwhile, the research conducted (Putri & Lautania, 2016) where the results showed that capital intencity had no effect on the effective tax rate (ETR).

The Capital Intensity Ratio is often associated with the size of the company's fixed assets and inventory. (Yunika et al., 2017) mentioned that fixed assets allow companies to deduct taxes due to depreciation every year, so that companies with high fixed assets have a lower tax burden compared to companies with low fixed assets. Liu and Cao (2007) added that the asset depreciation method is driven by tax law, which allows depreciation costs to be deducted from pre-tax profits, so that the larger the proportion of fixed assets and depreciation costs, the lower the effective tax rate (ETR) of the company. Furthermore, (Yunika et al., 2017) explained that companies with high fixed assets tend to do tax planning, so they have a low ETR. Based on this description, the hypothesis formulated is that the Capital Intensity Ratio has a negative effect on the Effective Tax Rate (ETR).

Method

Classical Assumption Test

The Classic Assumption Test is used to evaluate the regression test design and to confirm the existence of significant relationships before data analysis is performed. The results of data processing through a series of testing stages aim to ensure that the model is suitable and can be incorporated into a number of research sources (Chandrarin, 2017). Some of the classic assumption tests include the Normality Test, the Multicollinearity Test, the Autocorrelation Test, and the Heteroscedasticity Test.

Regression Analysis

A statistical model used to test causal relationships (influence and impact) with variables with more than one independent variable (Kuantitatif, 2016).

The equation:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Information:

Y = *effective tax rate* (ETR)
a = Konstanta
β1- β3 = Regression Coefficient
X1 = *Capital Intensity*
X2 = *Inventory Turnover* (ITO)
X3 = *Return on Asset* (ROA)
ε = *Error*

Moderating Regression Analysis (MRA)

The purpose of moderated regression analysis is to test the magnitude of the influence of each independent variable on the moderating variable.

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4\ (X1*Z) + + \beta 5\ (X2*Z) + \beta 6\ (X3*Z) + \varepsilon$$

Information:

Y = effective tax rate (ETR)
a = Konstanta
β1- β3 = Regression Coefficient
X1 = Capital Intensity
X2 = Inventory Turnover (ITO)
X3 = Return on Asset (ROA)
Z = Institutional Ownership
ε = Error

Results and Discussion

Normality Testing

This test is carried out to see if the residual variable shows a normal distribution or not. This test can be seen from the following histogram image:

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		45
Normal Parametersa,b	Mean	.0000000
	Std. Deviation	.19594635
Most Extreme Differences	Absolute	.075
	Positive	.045
	Negative	-.075
Test Statistic		.075
Asymp. Sig. (2-tailed)		.200c,d

From the table above, it can be seen that the significance level value of 0.200 is greater than 0.05, so it can be concluded that the data has a normal distribution.

Multicollinearity Test Results

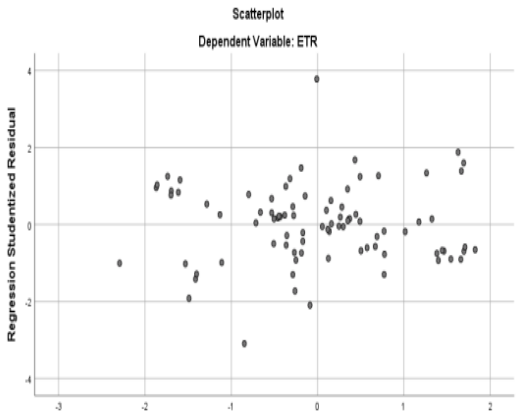
The results of the Multicollinearity test can be read in the table below:

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	CIR	.797	1.254
	ITO	.885	1.131
	ROA	.893	1.119

If the Variance Inflation Floor (VIF) value is below 10, it is certain that there is no multicollinearity. In the table above, it can be seen that the VIF values for CIR, ITO and ROA are 1.254 respectively; 1,1131; and 1,119; all of which are below 10 and it is certain that there is no multicollinearity.

Heteroscedasticity Test Results



In the scatterplot image above, it can be seen that the distribution of the points is almost even and no symptoms of heteroskedasticity occur. The research model is said to

experience symptoms of heteroscedasticity problems if there are variable variants in the research model that are not the same.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.809[a]	.655	.630	.14289	1.405

Based on the data of this study, namely the number of n as much as 45 and k as much as 3, the value of d table was obtained, namely dL = 1.3832 and dU = 1.6662. Based on the Durbin-Watson test, it is known that the DW value in this study is 1.405. The value lies among the provisions on.

The dU value < DW < 4-dU is 1.3832 < 1.405 < 2.3338, so it can be concluded that there are no autocorrelation symptoms.

Hypothesis Test Results

To find out the influence of partial independent variables on the Effective Tax Rate, it can be seen in the following table:

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Mr.
		B	Std. Error	Beta		
1	(Constant)	-.060	.054		-1.129	.266
	CIR	-.003	.333	-.001	-.008	.994
	ITO	.235	.109	.210	2.153	.037
	ROA	.267	.128	.270	2.093	.043

From the table, it can be seen that the influence of each independent variable on the Effective Tax Rate, with the following explanation:

Hypothesis H1: The t-test results show a calculated t-value of -0.03, which is less than the table's t-value of 2.018, with a significance level of 0.994 which is greater than 0.05. Therefore, H0 was rejected and Ha was accepted. The conclusion from this is that the CIR variable has a negative but not significant effect on the Effective Tax Rate.

Hypothesis H2: The results of the t-test show a calculated t-value of 2.153, which is greater than the table's t-value of 2.018, with a significance level of 0.037 which is less than 0.05. So, H0 was rejected and Ha was accepted. Thus, it can be concluded that the ITO variable has a positive and significant effect on the Effective Tax Rate.

Hypothesis H3: The results of the t-test show a calculated t-value of 2.093, which is also greater than the table's t-value of 2.018, with a significance level of 0.043 which is less than 0.05. So, H0 was rejected and Ha was accepted. The conclusion from this is that the ROA variable has a positive and significant effect on the Effective Tax Rate.

Statistical Test Results

The following table can show the influence of the variables CIR, ITO, ROA on ETR together, with the following details :

ANOVA

Model		Sum of Squares	df	Mean Square	F	Mr.
1	Regression	1.069	3	.178	8.442	.000b
	Residual	.802	41	.021		
	Total	1.870	44			

It can be concluded that Return on Asset, Capital Intencity and Inventory Turnover together have a significant effect on the Effective Tax Rate.

Coefficient of Determination (R2)

The results of the determination test can be read in the following table:

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.809[a]	.655	.630	.14289

The value of the determination coefficient on the Adjusted R Square is 0.630. From this value, it can be seen that the ability of independent variables to the dependent variable of the Effective Tax Rate is 63%. While the remaining 37% was explained by other variables that were not studied other than eturn On Asset, Capital Intencity and Inventory Turnover.

Moderating Regression Analysis (MRA)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.027	.069		.385	.703
	CIR	-.003	.333	-.001	-.008	.994
	ITO	.235	.109	.210	2.153	.037
	ROA	.267	.128	.270	2.093	.043
	CIR*KI	.315	.122	.216	2.636	.033
	ITO*KI	.473	.135	.483	3.504	.001
	ROA*KI	.240	.193	.349	.3.429	.021

And the interpretation of the results is as follows: The regression coefficients for the variables Capital Intensity, Inventory Turnover, and ROA have been explained earlier. The regression coefficient for the Capital Intensity variable moderated by institutional ownership is 2.636 with a t-value of 0.33 (p = 0.000). These results show that institutional ownership strengthens the influence of Capital Intensity on the Effective Tax Rate. The

regression coefficient for the Inventory Turnover variable moderated by institutional ownership is 0.001 with a t-value of 3.504 (p = 0.001). This indicates that institutional ownership strengthens the influence of Inventory Turnover on the Effective Tax Rate. Meanwhile, the regression coefficient for the Return on Asset variable moderated by institutional ownership is 3.429 with a t-value of 0.429 (p = 0.021). These results confirm that institutional ownership strengthens the influence of Return on Asset on Effective Tax Rate.

The results of this study show that there is an opposite relationship between capital intensity and effective tax rate, where if capital intensity increases, the effective tax rate will decrease and if capital intensity decreases, the effective tax rate will increase. Although capital intensity has a negative relationship, it is not significant. This happens because the company does not rely on assets to make decisions on the tax rates it pays. In addition, assets that are considered capital by the company only affect the level of sales and expenditure if there is a depreciation of goods related to the company's production activities. The results of this study did not find any effect of the number of fixed assets on the Effective Tax Rate. Companies that have large fixed assets are not used for tax deductions because of depreciation costs attached to fixed assets, but to support the company's operational activities (Rakhmati, 2019).

The results of this study are in accordance with the statement according to Irvan and Henryanto Wijaya (2015), which states that a low effective tax rate (ETR) describes a high level of tax aggressiveness and vice versa. Then the results of this study are in line with the results of research conducted by Danis and Zulaikha (2014) and Liu and Cao (2007), which stated that the capital intensity ratio has no effect on Tax Aggressiveness. The results of the research by Mulyanti & Sundawa (2022) show the same result, namely capital intensity has no effect on the effective tax rate. The results of hypothesis testing in this study show that there is no strong influence between the capital intensity ratio variable and tax aggressiveness, this can be caused by various things. The insignificant relationship between the company's capital intensity ratio and the level of tax aggressiveness proxied to the effective tax rate (ETR) can be caused by the relatively same capital intensity ratio in manufacturing companies.

The results of this study show that there is a relationship between Return On Asset and effective tax rate, where if Return On Asset increases, the effective tax rate will increase and if Return On Asset decreases, the effective tax rate will decrease. The research is in line with the research of Thomas (2011) which examined the relationship between Return On Assets and effective tax rates of companies. This research was conducted on manufacturing companies listed on the Indonesia Stock Exchange. And a study conducted by Janseen and Williem Buijink (2000) who researched companies in the Netherlands, their findings stated that there was an effect of Return On Asset on effective tax rates.

The results of the study show that capital intencity (CIR), return on assets (ROA) and Inventory Turnover (ITO) can be moderated with Institutional Ownership because with institutional investors, shareholders are able to optimize the supervision of

management performance by monitoring every decision taken by the management as the company's manager. Shleifer and Vishny (1986) (quoted from Khurana and Moser, 2009) state that institutional investors play an important role in supervising, disciplining, and influencing managers. Further, Shleifer and Vishny (1986) (quoted from Khurana and Moser, 2009) argue that institutional investors, with large shareholdings and voting rights, can force managers to focus on the company's performance and avoid opportunities to prioritize their personal interests, institutional investors also have an incentive to ensure that the company takes decisions that will maximize shareholder wealth. This research is in line with the research conducted by Khurana and Moser (2009) which found that companies with a larger level of institutional ownership will be more tax-aggressive. The more tax-aggressive the company, the lower the effective tax rateThe results show that Capital Intensity (CIR), Return on Asset (ROA), and Inventory Turnover (ITO) can be moderated by Institutional Ownership. With institutional investors, shareholders can optimize supervision of management performance by monitoring every decision taken by the company's management. According to Shleifer and Vishny (1986) quoted from Khurana and Moser (2009), institutional investors have an important role in supervising, disciplining, and influencing managers.

They argue that with large shareholdings and voting rights, institutional investors can force managers to focus on the company's performance and avoid personal conflicts of interest. In addition, institutional investors have incentives to ensure that the decisions taken by the company will optimize shareholder wealth. This research is in line with the results of research by Khurana and Moser (2009), which found that companies with higher levels of institutional ownership tend to be more aggressive in tax management. Companies that are more aggressive in tax management tend to have a lower Effective Tax Rate (ETR).

Conclusion

Based on the results of the analysis and discussion that have been described, it can be concluded that there is a negative and insignificant influence of Capital Intensity (CIR) on the Effective Tax Rate (ETR) partially in property and real estate sector companies listed on the Indonesia Stock Exchange for the 2019-2023 period. In addition, there is a positive and significant influence of Inventory Turnover (ITO) and Return on Asset (ROA) on the Effective Tax Rate (ETR) partially in the same company and in the same period. The variables Capital Intensity (CIR), Return on Asset (ROA), and Inventory Turnover (ITO) can also be moderated by institutional ownership of the Effective Tax Rate (ETR) in property and real estate sector companies listed on the Indonesia Stock Exchange for the 2019-2023 period. Therefore, it is possible to analyze the Effective Tax Rate (ETR) using a comparison of other variables or ratios. This research was conducted for five years, and it is hoped that further research can extend the research period and involve companies from other sectors, such as manufacturing companies, to obtain more accurate results regarding the effect of financial ratios on the Effective Tax Rate (ETR)

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