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FACTORS AFFECTING TAX AVOIDANCE (A CASE STUDY OF MINING COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE 2020-2024 PERIOD)

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ABSTRACT

This study examines the factors influencing tax avoidance among mining companies listed on the Indonesia Stock Exchange (IDX) during 2020-2023. The independent variables are profitability, measured by Return on Assets (ROA); leverage, measured by Debt to Equity Ratio (DER); and firm size. Tax avoidance is measured using the Effective Tax Rate (ETR), where a lower ETR indicates higher tax avoidance. This study uses secondary data from published financial statements of mining companies listed on the IDX. Data were analyzed using multiple linear regression and classical assumption tests. The results show that profitability and leverage have no significant effect on tax avoidance. In contrast, firm size has a positive and significant effect, indicating that larger companies tend to have greater resources and tax planning capabilities. Future research should consider additional variables and broader industry sectors.

Keywords: Tax Avoidance, Profitability, Leverage, Firm Size

INTRODUCTION

Taxes are one of the main sources of state revenue and play an important role in supporting national development financing. Tax revenue consistently remained the largest contributor to Indonesia's state revenue during the 2020–2023 period. This condition indicates that corporate taxpayer compliance is an important aspect of maintaining sustainable state revenue and financing various development programs. Companies seek to generate profits by minimizing the costs they bear, including tax expenses. One strategy that can be employed is tax planning by utilizing loopholes in tax regulations. This practice is known as tax avoidance.

Tax avoidance refers to efforts to reduce tax liabilities through strategies that are formally not contrary to tax regulations. Unlike tax evasion, which violates the law, tax avoidance takes advantage of ambiguities or loopholes in regulations to optimize a company's tax liabilities. This practice has attracted attention because it may reduce potential state revenue. Tax avoidance is also relevant in the mining sector. The mining sector, particularly the mineral and coal subsector, has significant tax revenue potential; therefore, tax avoidance practices in this sector may affect state revenue.

One case that has attracted attention is the alleged tax avoidance practice of PT Adaro Energy Tbk through a transfer pricing mechanism involving its subsidiary in Singapore during the 2009–2017 period. This case demonstrates that corporate tax strategies can influence the amount of tax liabilities paid to the state. Tax avoidance may be associated with several corporate financial characteristics, including profitability, leverage, and firm size. Profitability reflects a company's ability to generate profits.

Companies with high profitability tend to have greater tax liabilities and may therefore have incentives to engage in tax planning to reduce their tax obligations. Tanjaya and Nazir (2021) provide evidence supporting a relationship between profitability and tax

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avoidance. Meanwhile, leverage reflects the use of debt to finance a company's activities. Interest expenses on debt may be deductible from taxable income, providing potential tax benefits for companies with certain levels of leverage. Rahmadani et al. (2020) found that leverage affects tax avoidance.

Firm size may also be associated with tax avoidance practices. Large companies generally have greater resources, specialized personnel, and tax planning capabilities to manage their tax obligations. However, large companies also face greater scrutiny from the public and regulators, which may limit their tendency to engage in aggressive tax strategies. Thus, there are two possible perspectives regarding the relationship between firm size and tax avoidance. Tahar and Rachmawati (2020) found that firm size has a negative effect on tax avoidance, indicating a potential difference between the greater resources available to large companies for tax planning and the greater level of scrutiny they face.

These differences in findings and arguments indicate the existence of a research gap regarding the relationship between corporate characteristics and tax avoidance. Profitability and leverage may provide incentives for companies to optimize their tax burdens, but their effects on tax avoidance still need to be examined across different sectors and periods. Firm size also has characteristics that may either encourage or constrain tax avoidance practices. In addition, the studies serving as references for this research have not specifically focused on mining companies listed on the Indonesia Stock Exchange during the 2020–2023 period. Therefore, this study aims to provide empirical evidence regarding the relationship between profitability, leverage, and firm size and tax avoidance in this sector.

THEORETICAL REVIEW AND HYPOTHESIS DEVELOPMENT

Agency Theory

Agency theory, introduced by Jensen and Meckling, explains the relationship between the principal (shareholders) and the agent (managers) in corporate management. Managers are granted authority to make operational and strategic decisions; however, differences in interests and information asymmetry may lead managers to make decisions that are not fully aligned with shareholders' interests.

Information asymmetry provides managers with opportunities to determine tax strategies that can reduce the company's tax burden. On the one hand, reducing the tax burden can increase after-tax profits and provide benefits to shareholders. However, overly aggressive tax avoidance practices may increase tax risks, penalties, and reputational risks for the company. Therefore, management's decisions regarding tax avoidance may reflect differences in interests and considerations between managers and shareholders.

Agency theory also emphasizes the importance of monitoring and control mechanisms to reduce conflicts of interest and limit managers' opportunistic behavior. Effective monitoring, information transparency, and corporate governance can help ensure that tax-related decisions are made carefully while considering the company's long-term interests. Thus, agency theory can be used to explain how information asymmetry and conflicts of interest between management and shareholders may influence a company's decisions regarding tax avoidance.

The Effect of Profitability on Tax Avoidance

According to agency theory, there are differences in interests between the principal and the agent. Managers, as agents, seek to maximize the company's profitability and may sometimes take measures to reduce the tax burden in order to increase net income. One strategy commonly implemented is tax planning, in which the actions taken remain within

the legal framework, such as tax avoidance. By implementing tax avoidance, companies can reduce their tax burden, thereby increasing the profits generated. This may encourage companies with high levels of profitability to engage more extensively in tax avoidance. This argument is consistent with the study conducted by Tanjaya and Nazir (2021), which found that profitability has a positive relationship with tax avoidance. Therefore, the first hypothesis is formulated as follows:
H1 = Profitability has a positive effect on tax avoidance.

The Effect of Leverage on Tax Avoidance

Companies that use debt as a source of financing incur costs associated with such debt, particularly interest expenses. The higher the company's leverage, the greater its level of debt. An increase in debt will result in higher interest expenses, which ultimately reduce the company's profit. These interest expenses are considered tax-deductible expenses, thereby reducing taxable income and ultimately lowering the amount of tax payable. Based on agency theory, companies may take various measures to improve their financial performance, including utilizing debt as a strategy to reduce their tax burden. This argument is supported by previous research conducted by Rahmadani et al. (2020), which found that leverage has a positive relationship with tax avoidance. Therefore, the second hypothesis is formulated as follows:
H2 = Leverage has a positive effect on tax avoidance.

The Effect of Firm Size on Tax Avoidance

Large companies tend to have lower levels of tax avoidance compared to smaller companies. This is because large companies, which generally have substantial total assets, often have more stable profits and are therefore better able to fulfill their tax obligations. In addition, large companies generally receive greater attention from the government and the public. Therefore, large companies tend to maintain their corporate image and reputation by complying with tax regulations and exercising greater caution when making decisions regarding tax policies. Non-compliance with tax regulations may result in sanctions and damage the company's reputation in the eyes of the public and tax authorities. This is consistent with the study conducted by Tahar and Rachmawati (2020), which found that firm size has a negative relationship with tax avoidance, indicating that the larger the company, the lower its tax avoidance practices. Based on this explanation, the third hypothesis is formulated as follows:
H3 = Firm size has a negative effect on tax avoidance.

RESEARCH METHODOLOGY

Population and Sample

The population of this study consists of all mining sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period. The sample was selected using a *purposive sampling* method based on the following criteria:

1. Mining sector companies listed on the IDX that published audited financial statements during 2020–2023
2. Companies that were listed before 2020 and remained listed through the end of 2023
3. Companies that reported positive net income during the research period, and
4. Companies that presented their financial statements in Indonesian Rupiah.

Variable Measurement

This study uses profitability, leverage, and firm size as independent variables, with tax avoidance as the dependent variable. Profitability is measured using Return on Assets (ROA), leverage is measured using the Debt-to-Equity Ratio (DER), and firm size is measured using the natural logarithm of total assets. Meanwhile, tax avoidance is measured using the Effective Tax Rate (ETR). A lower ETR indicates a higher level of tax avoidance. The variable measurements are based on Tanjaya and Nazir (2021).

Data Analysis Technique

Data analysis was conducted using IBM SPSS Statistics 25. The analysis stages included descriptive statistics to describe the characteristics of the data, followed by classical assumption tests consisting of normality, multicollinearity, and heteroscedasticity tests. Subsequently, hypothesis testing was conducted using multiple linear regression with the following equation:

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

The hypothesis testing included the *t*-test to examine the partial effects, the *F*-test to examine the simultaneous effects, and the coefficient of determination (R^2) to measure the model's ability to explain variations in tax avoidance. The significance level was set at 5% (0.05).

RESEARCH RESULTS AND DISCUSSION

Descriptive Statistics

Descriptive statistical analysis was conducted to describe the characteristics of the research data based on the minimum, maximum, mean, and standard deviation values. The results of the analysis are presented in Table 1 below:

Table 1. Descriptive Statistics Results

Variabel	N	Minimum	Maximum	Mean	Std. Deviation
ROA	90	0,00865	0,28334	0,0922123	0,06487909
DER	90	0,09654	208,936	0,7679809	0,46531328
Firm Size	90	1.910,171	2.584,793	226.319,552	144.046,028
ETR	90	0,00541	0,52827	0,1961757	0,09823041
Valid N (listwise)	**90**				

The results presented in Table 1 can be summarized as follows:

1. ROA has a minimum value of 0.00865, a maximum value of 0.28334, a mean of 0.09221, and a standard deviation of 0.06488. These results indicate variations in profitability across companies, although the data dispersion is relatively low.
2. DER has a minimum value of 0.09654, a maximum value of 2.08936, a mean of 0.76798, and a standard deviation of 0.46531. These results indicate differences in the level of debt utilization across companies, with relatively moderate data variation.
3. Firm size has a minimum value of 19.10171, a maximum value of 25.84793, a mean of 22.63196, and a standard deviation of 1.44046. This indicates differences in firm size within the sample, with relatively low data dispersion.
4. ETR has a minimum value of 0.00541, a maximum value of 0.52827, a mean of 0.19618, and a standard deviation of 0.09823. These values indicate variations in the level of tax payments across companies during the research period. Since a lower ETR indicates a higher level of tax avoidance, the differences in ETR values reflect variations in the level of tax avoidance within the sample.

Normality Test

The normality test was conducted using the Kolmogorov–Smirnov test. The data are considered normally distributed when the *p*-value is greater than 0.05. The results of the normality test are presented in Table 2 below.

Table 2. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		90
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	,09084973
Most Extreme Differences	Absolute	,079
	Positive	,079
	Negative	-,043
Test Statistic		,079
Asymp. Sig. (2-tailed)[c]		,200[d]

The Kolmogorov–Smirnov test results show a significance value of 0.200, indicating that the data are normally distributed, as the significance value is greater than 0.05.

Multicollinearity Test

The multicollinearity test was conducted to examine whether there is a high correlation among the independent variables in the regression model. The results of the multicollinearity test are presented in Table 3 below.

Table 3. Multicollinearity Results

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0.377	0.158		-2.388	0.019		
	ROA	-0.114	0.156	-0.075	-0.733	0.466	0.938	1.066
	DER	0.027	0.022	0.126	1.217	0.227	0.934	1.071
	FIRM SIZE	0.025	0.007	0.365	3.632	0.000	0.984	1.016
a. Dependent Variable: ETR								

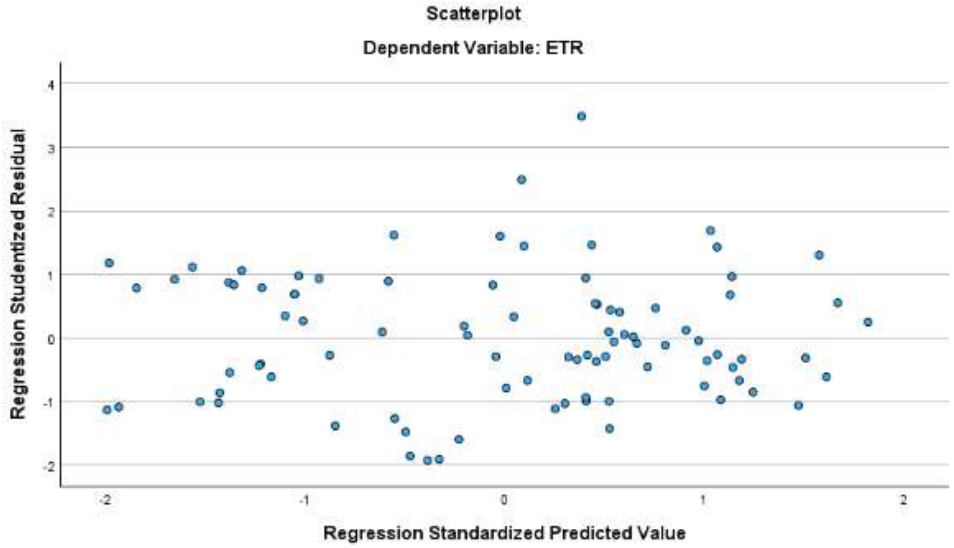
The ROA, DER, and Firm Size variables do not exhibit multicollinearity, as the Tolerance and VIF values for each variable are within the acceptable thresholds, namely Tolerance ≥ 0.1 and VIF ≤ 10. These results indicate that the three independent variables

do not have excessive correlations, allowing the regression model to be analyzed appropriately.

Heteroscedasticity Test

A good regression model should be free from heteroscedasticity, meaning that the variance of the residuals remains constant across observations. In this study, the heteroscedasticity test was conducted using a scatterplot, as presented in Figure 1 below.

Figure 1. Heteroscedasticity Test Results



The points in the scatterplot are randomly distributed and do not form any particular pattern. This indicates that there is no indication of heteroscedasticity, meaning that the residual variance is relatively constant across observations.

Hypothesis Testing (t-test)

The *t*-test was used to examine the partial effect of the independent variables (X) on the dependent variable (Y). If the significance value is less than 0.05, the independent variable is considered to have a statistically significant effect on the dependent variable. The results of the hypothesis testing to determine whether there are significant relationships between the variables are presented in Table 4 below.

Table 4. Hypothesis Testing Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0.377	0.158		-2.388	0.019		
	ROA	-0.114	0.156	-0.075	-0.733	0.466	0.938	1.066
	DER	0.027	0.022	0.126	1.217	0.227	0.934	1.071
	FIRM SIZE	0.025	0.007	0.365	3.632	0.000	0.984	1.016

a. Dependent Variable: ETR

Based on Table 4 above, the conclusions from the hypothesis testing (*t*-test) between the variables are as follows:

1. The constant of -0.377 indicates that the value of Tax Avoidance (ETR) is -0.377 when all independent variables (ROA, DER, and Firm Size) are equal to

zero. This represents the initial value of ETR when the independent variables are held at zero.

2. The regression coefficient for Profitability (ROA) of -0.114 indicates that a one-unit increase in Profitability (ROA) is associated with a 0.114 decrease in ETR, assuming the other variables remain constant. The significance value of 0.466 is greater than 0.05, and the calculated *t*-value of -0.733 is lower than the critical *t*-value of 1.987. Therefore, Profitability (ROA) does not have a statistically significant effect on Tax Avoidance (ETR).
3. The regression coefficient for Leverage (DER) of 0.027 indicates that a one-unit increase in Leverage (DER) is associated with a 0.027 increase in ETR, assuming the other variables remain constant. The significance value of 0.227 is greater than 0.05, and the calculated *t*-value of 1.217 is lower than the critical *t*-value of 1.987. Therefore, Leverage (DER) does not have a statistically significant effect on Tax Avoidance (ETR).
4. The regression coefficient for Firm Size of 0.025 indicates that a one-unit increase in Firm Size is associated with a 0.025 increase in ETR, assuming the other variables remain constant. The significance value of 0.000 is less than 0.05, and the calculated *t*-value of 3.632 is greater than the critical *t*-value of 1.987. Therefore, Firm Size has a statistically significant positive effect on ETR.

The Effect of Profitability on Tax Avoidance

Based on the *t*-test results for H1, which states that Profitability (ROA) affects Tax Avoidance (ETR), the calculated *t*-value is -0.733 with a significance value of 0.466. The significance value is greater than the 5% significance level ($\alpha = 0.05$), or $p > 0.05$, and the calculated *t*-value is lower than the critical *t*-value of 1.987. These results indicate that Profitability (ROA) does not have a statistically significant effect on Tax Avoidance (ETR).

This finding suggests that although companies may have high levels of profitability, profitability does not necessarily become a direct driver of tax avoidance. Tax avoidance may involve various risks and potentially result in significant long-term consequences. This finding is consistent with the study by Akbar et al. (2021), which also found that companies tend to avoid tax avoidance strategies involving relatively high risks, even when opportunities for tax avoidance are available.

Furthermore, tax avoidance may impose additional costs on companies, including tax consulting fees, the time required to address tax audits, and potential reputational consequences and penalties imposed by tax authorities. Therefore, even when a company has high profitability, it may be more inclined to avoid such risks by adopting safer and legally compliant tax strategies. This finding is also consistent with Rosa et al. (2022), who found that profitability does not have a significant effect on tax avoidance.

The Effect of Leverage on Tax Avoidance

Based on the *t*-test results for H2, which states that Leverage (DER) affects Tax Avoidance (ETR), the calculated *t*-value is 1.217 with a significance value of 0.227. The significance value is greater than the 5% significance level ($\alpha = 0.05$), or $p > 0.05$, and the calculated *t*-value is lower than the critical *t*-value of 1.987. These results indicate that Leverage (DER) does not have a statistically significant effect on Tax Avoidance (ETR).

Rosa et al. (2022) stated that higher levels of corporate debt may reduce taxable income because interest expenses can provide tax benefits that reduce the company's tax burden. However, excessive use of debt may increase the risk of default and threaten the company's business continuity. Therefore, management needs to carefully consider the

risks associated with debt financing as part of its tax strategy, ensuring that financial decisions not only provide tax benefits but also maintain the company's financial and operational stability in the future.

In Indonesia, Ministry of Finance Regulation No. 169/PMK.010/2015 limits the maximum debt-to-equity ratio (DER) to 4:1 for the purpose of regulating the deductibility of borrowing costs. This provision is intended to limit excessive reliance on debt in a company's capital structure and prevent excessive interest deductions. The study by Tanjaya and Nazir (2021) found that leverage does not have a significant effect on tax avoidance, suggesting that companies may consider the financial risks associated with excessive debt when making financing and tax-related decisions. Companies may therefore consider alternative approaches to managing their tax obligations without substantially increasing financial risk.

The Effect of Firm Size on Tax Avoidance

Based on the *t*-test results for H3, which states that Firm Size (*FIRM SIZE*) affects Tax Avoidance (ETR), the calculated *t*-value is 3.632 with a significance value of 0.000. The significance value is lower than the 5% significance level ($\alpha = 0.05$), or $p < 0.05$, and the calculated *t*-value is greater than the *t*-table value of 1.987. These results indicate that Firm Size (*FIRM SIZE*) has a statistically significant positive effect on the Effective Tax Rate (ETR).

This finding indicates that larger firms tend to have higher ETRs, which correspond to lower levels of tax avoidance, given that a lower ETR indicates a higher level of tax avoidance. Larger companies may have greater resources, both in terms of financial capacity and expertise, to conduct more effective tax planning. Companies with substantial total assets and sales may be better able to manage their tax obligations effectively and efficiently, thereby influencing their effective tax rates (Mayndarto, 2022).

This finding is consistent with the study by Apridinata and Zulvia (2023), which found that firm size has a positive effect on tax avoidance. Large companies tend to have easier access to capital and more effective tax planning. They may also manage their tax obligations more effectively because they possess greater resources, including experienced tax teams or consultants who can design legally permissible tax planning strategies. In addition, large companies may be able to take advantage of provisions and opportunities within tax regulations to legally reduce their tax liabilities, enabling them to manage their tax burden without violating applicable tax regulations.

CONCLUSION

Based on the research findings, it can be concluded that profitability (ROA) and leverage (DER) do not have a statistically significant effect on tax avoidance (ETR), whereas firm size has a positive effect on ETR. These findings indicate that the level of profitability and the use of debt do not significantly influence firms' tax avoidance decisions, while larger firms tend to have greater resources and capacity to engage in tax planning. Future research is recommended to incorporate other variables that may influence tax avoidance, extend the scope of sectors and research periods, and consider qualitative approaches, such as interviews or case studies involving internal company personnel, to obtain a deeper understanding of tax avoidance practices.

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