

The Effect of Profitability, Leverage, Capital Intensity, and Company Size on Tax Avoidance in Mining Companies on IDX 2022-2024

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Abstract: This study aims to analyze the effects of profitability, leverage, capital intensity, and firm size on tax avoidance among mining companies listed on the Indonesia Stock Exchange (IDX) for the period 2022–2024. Data were collected through documentary analysis of the financial statements of 36 sample companies selected using purposive sampling, resulting in a total of 108 observations. The data analysis technique used was panel data regression with the assistance of Eviews 12 software. The results of the study indicate that, individually, profitability has a negative and significant effect on tax avoidance, while leverage, capital intensity, and company size do not have a significant effect on tax avoidance. However, collectively, all of these independent variables have a significant effect on tax avoidance practices. The conclusion of this study is that mining companies with high profitability tend to be more compliant in paying taxes to maintain their reputation in the eyes of the public and tax authorities.

Keywords : Profitability; Leverage; Capital Intensity, Company Size; Tax Avoidance.

Abstrak: Penelitian ini bertujuan untuk menganalisis pengaruh profitabilitas, leverage, intensitas modal, dan ukuran perusahaan terhadap penghindaran pajak (tax avoidance) pada perusahaan pertambangan yang terdaftar di Bursa Efek Indonesia (BEI) selama periode 2022–2024. Data dikumpulkan melalui analisis dokumentasi terhadap laporan keuangan 36 perusahaan sampel yang dipilih menggunakan teknik purposive sampling, sehingga diperoleh total 108 observasi. Teknik analisis data yang digunakan adalah regresi data panel dengan bantuan perangkat lunak EViews 12.

Hasil penelitian menunjukkan bahwa secara parsial, profitabilitas berpengaruh negatif dan signifikan terhadap penghindaran pajak, sedangkan leverage, intensitas modal, dan ukuran perusahaan tidak berpengaruh signifikan terhadap penghindaran pajak. Namun, secara simultan, seluruh variabel independen tersebut berpengaruh signifikan terhadap praktik penghindaran pajak. Penelitian ini menyimpulkan bahwa perusahaan pertambangan dengan tingkat profitabilitas yang tinggi cenderung lebih patuh dalam memenuhi kewajiban perpajakannya guna mempertahankan reputasi di mata masyarakat dan otoritas perpajakan.

Kata kunci: Profitabilitas; leverage; intensitas modal; ukuran perusahaan; penghindaran pajak.

INTRODUCTION

Taxes are a major source of state revenue and play a vital role in Indonesia's national development. However, while the government relies on taxes to finance development, businesses often view them as a burden that reduces net profits. Based on this theory, companies aim to increase their profits (Bocken & Short, 2016). One business strategy for addressing tax challenges is tax avoidance which involves legally and compliantly reducing tax liabilities (Moeljono, 2020).

Tax avoidance is a strategy employed by a company to increase profits by reducing its tax burden without breaking the law; however, this practice impacts government revenue. It can lead to a reduction in the national tax base, resulting in a decline in government revenue. According to a report by CNBC Indonesia (2024), Finance Minister Sri Mulyani stated that as of the first half of 2024, tax revenue had reached only Rp893.8 trillion, or approximately 44.9% of the target, a 7.9% decrease compared to the same period the previous year (Purwanti & Sinring, 2025). Issues related to tax avoidance are complex because while this practice is lawful under tax laws, its impact is highly detrimental to the state if all large corporations continue to employ it. According to research (Razif & Alqonitur Rasyidah, 2020), opportunities for tax avoidance arise from the Indonesian government's tax system, which adopts a self-assessment system. Under this tax collection system, taxpayers are granted full discretion to calculate, pay, and report their own tax obligations. The implementation of this tax system seems to open the door for taxpayers to manipulate the amount of tax owed in an effort to reduce corporate costs, including tax burdens (Stawati Vicka, 2020). From a corporate perspective, tax avoidance is not merely a government revenue issue but also a strategic financial decision that affects corporate profitability and tax planning. Companies may seek to reduce their tax liabilities through the use of allowable deductions, interest expenses, depreciation, and other tax planning arrangements. These practices can result in differences between accounting income and taxable income, as well as variations in the effective tax rates among companies operating in the same industry. In the mining sector, these issues are particularly relevant because companies generally require substantial capital investment in exploration,

heavy equipment, and other fixed assets, while their profitability may fluctuate with commodity prices. Such conditions create different incentives and opportunities for companies to manage their tax burdens. Therefore, examining corporate characteristics that may influence tax avoidance is essential to understanding how companies balance profit maximization with their tax obligations.

There are various factors that influence tax avoidance, including profitability, leverage, capital intensity, and company size. Profitability is a measure of a company's ability to generate profits from its operations. It reflects a company's financial health, and understanding a company's profitability helps investors determine which companies to invest in. One of the profitability ratios is return on assets (ROA). Return on assets (ROA) is an indicator that describes a company's financial performance; the higher the ROA a company achieves, the better its financial performance can be categorized (Setyawan & Kurnia, 2024). Profitability may influence tax avoidance because companies with higher profits generally face greater corporate income tax liabilities, assuming other factors remain constant. This may encourage profitable companies to engage in tax planning strategies to reduce their tax burdens and maintain after-tax earnings. Conversely, highly profitable companies may have stronger financial resources and greater incentives to comply with tax regulations to protect their reputation and avoid potential tax disputes. Therefore, the relationship between profitability and tax avoidance may depend on how companies balance tax savings against compliance and reputational risks.

According to Wahyudi & Fitriah (2021), leverage is a decision regarding the selection of funding sources to increase a company's profits, involving the consideration of debt usage and the impact of interest expenses on the company's profit. Leverage reflects the sources of funds used by a company to conduct its operational activities. It also illustrates the level of risk faced by the company (Ernawati & Purwaningsih, 2022)

Leverage is one element of a company's capital structure. The determination of the leverage ratio must be considered by agents, as it relates to agency costs

within corporate governance. The more transparent the agent is toward the principal, the lower the agency costs incurred. This condition naturally impacts the company's value (Hasan, 2022). Leverage is proxied using the debt-to-equity ratio (DER), which is the ratio of debt to equity. The higher the debt level, the more the company is indicated to be engaging in tax avoidance (Setyawan & Kurnia, 2024). This occurs because the company's increasing debt burden to creditors reduces the company's profit margin (Nasution, K. M. P., & Mulyani, 2020). Leverage may affect tax avoidance because interest expenses on debt can reduce taxable income when such expenses are deductible under applicable tax regulations. Consequently, companies with higher debt levels may have lower tax liabilities due to the tax benefits associated with interest deductions, potentially reducing their incentives to pursue other tax avoidance strategies. However, the relationship is not necessarily straightforward because tax deductibility is subject to regulatory limitations, and highly leveraged companies may face greater financial risks and scrutiny. Therefore, the effect of leverage on tax avoidance depends on the company's financing structure and the applicable tax provisions.

Capital intensity refers to the intensity of tangible assets used in a company's business operations. In a company, every fixed asset depreciates in value each year; to account for this, the process of fixed asset depreciation is required. Thus, to minimize tax liability, a company can utilize this fixed asset depreciation (Rosdiani, 2020). Capital intensity may influence tax avoidance because companies with a greater proportion of fixed assets generally incur higher depreciation expenses. When depreciation is deductible for tax purposes, these expenses can reduce taxable income and corporate income tax liabilities. This mechanism is particularly relevant to capital-intensive industries, such as mining, where companies require substantial investments in heavy equipment, processing facilities, and other operational assets. Nevertheless, the tax implications depend on the applicable depreciation rules, the composition and age of fixed assets, and differences between accounting depreciation and tax depreciation. Thus, a higher capital intensity ratio does not automatically indicate more aggressive tax avoidance.

According to Ibrahim (2008) in his book titled *Theories and Concepts of Public Service and Their Implementation*,¹¹ the size of a company reflects its scale, which is determined based on nominal measures, such as the company's total assets and total sales over a given sales period, as well as market capitalization. Classifying companies based on the scale of their operations (large and small) can serve as one of the variables investors use in making decisions. According to (Siregar & Utama, 2008), the larger the company, the greater the information available to investors regarding investment decisions in the company's stock. Therefore, the quality of financial statements must be reliable and not influenced by earnings management, as the available information could be obscured particularly regarding efforts to reduce taxable income to minimize tax payments. Firm size may influence tax avoidance through differences in financial resources, organizational complexity, and public visibility. Larger companies generally have more resources to employ tax specialists, develop sophisticated tax planning strategies, and manage complex business transactions. These capabilities may create greater opportunities to reduce tax liabilities. However, large companies also tend to receive greater attention from tax authorities, investors, and the public, which may discourage aggressive tax practices because of potential regulatory and reputational consequences. In contrast, smaller companies may have fewer resources for sophisticated tax planning but may also face different levels of scrutiny. Accordingly, the relationship between firm size and tax avoidance may be either positive or negative, depending on the relative importance of tax planning opportunities and external monitoring. Indonesia is known as an archipelagic nation with abundant natural resources, particularly mineral resources. This certainly presents potential and benefits for the country if these resources can be managed wisely and appropriately. To that end, the government is partnering with companies and the public to help manage these resources in accordance with the relevant regulations and management mechanisms. The mining sector plays a significant role and makes a major contribution to Indonesia's economy, particularly in terms of Gross Domestic Product (GDP) and government revenue. The mining sector is one of the key pillars supporting GDP, especially in resource-

producing regions. Mineral products offer numerous benefits to companies in sectors such as manufacturing, energy, and construction for their operational activities, making these resources highly sought after. This drives high domestic and international demand for mineral products, which in turn boosts export value and fuels the nation's economic growth.

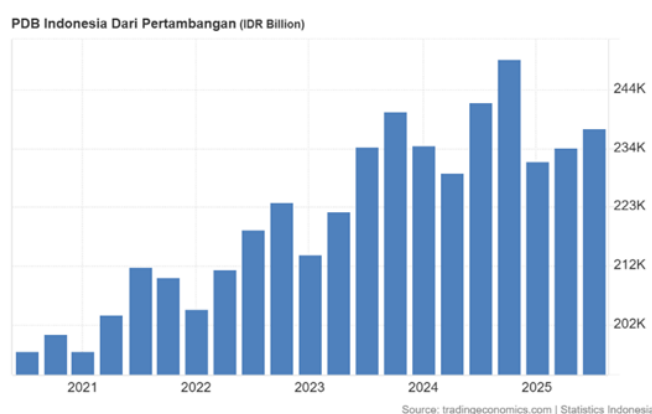


Figure 1. PDB Indonesia Dari Pertambangan (IDR Billion)

Sumber: Tradingeconomic.com

Based on data from the Central Statistics Agency (BPS) obtained from the official website of the Ministry of Energy and Mineral Resources (ESDM) www.esdm.go.id, in 2023 the mining sector contributed Rp2,198 trillion, or 10.5 percent, of Indonesia's total GDP of Rp20,892 trillion.

The mining sector also contributes to state revenue through taxes and non-tax state revenue (PNBP). However, tax revenue declined in 2024. According to the former Minister of Finance, tax revenue in 2024 fell compared to the previous year. In 2024, tax revenue from the mining sector reached Rp 48.75 trillion, a 58.4% decrease from the previous year. According to Sri Mulyani, the main factors causing the decline in tax revenue in the mining sector were a decrease in corporate income tax due to weakening commodity prices last year, as well as changes in coal business permits. Nevertheless, the mining sector has a very positive impact on the national economy. The decline in mining-sector tax revenue does not, by itself, establish that mining companies have engaged in tax avoidance, as tax receipts may also be affected by commodity price fluctuations, production levels,

changes in profitability, and tax regulations. Nevertheless, the combination of substantial economic contributions, capital-intensive operations, and fluctuating earnings makes the mining sector an important context for examining corporate tax behavior. Changes in profitability may affect taxable income, debt financing may generate deductible interest expenses, and substantial fixed assets may create depreciation deductions. Meanwhile, firm size may influence both the capacity for tax planning and the degree of external scrutiny. These characteristics provide a clear rationale for investigating whether profitability, leverage, capital intensity, and firm size are associated with tax avoidance among mining companies in Indonesia.

However, these efforts will not be fully effective if many companies remain reluctant to support the country's economic growth. The fact that so many companies still engage in tax avoidance practices demonstrates a lack of concern for the country's economy.

Issues related to tax avoidance that continue to occur among mining companies, as well as the significant contribution these companies make to the national economy both through taxes and non-tax state revenues prompted the researcher to select mining sector companies as the sample for this study. The basis for this study is the inconsistency found in previous studies. Specifically, a study conducted by (Hendayana et al., 2024) found that Profitability and Leverage have an effect on tax avoidance, whereas Capital Intensity does not. Meanwhile, according to a study (Ulinuha & Nurdin, 2024), only Profitability influences Tax Avoidance, while Leverage and Capital Intensity have no influence. This discrepancy creates a gap, necessitating further research to address the inconsistencies in previous studies.

This study examines the effects of profitability, leverage, capital intensity, and firm size on tax avoidance. This study treats firm size as an independent variable, which represents a novel approach compared to previous research, where firm size has almost exclusively been treated as a moderating variable. It is hoped that the novelty of this study can be further developed by subsequent research addressing similar topics. This study examines companies in the automotive sector

during the 2022–2025 period. By focusing on a different sector and a distinct timeframe, this study aims to address the limitations of previous research, thereby serving as a reference for future researchers.

LITERATURE REVIEW OR THEORETICAL FOUNDATION

Tax Avoidance

According to Logue in (Mclaren, 2008), tax avoidance can be defined as actions that manage all of a company's tax affairs to minimize taxes in a manner consistent with the law. According to research conducted by (Marlinda et al., 2020), companies can avoid taxes through legally permissible methods to reduce their tax burden while remaining within applicable tax regulations.

The benefit of *tax avoidance* is cash savings, which leads to increased cash flow for the company, offering it opportunities for further investment and thereby increasing the company's value (Annuar et al., 2014). As a matter of fact, developing countries are generally considered more vulnerable to tax avoidance practices due to legislative and technological inadequacies (Satyadini, 2018)

A commonly used approach is to calculate the Cash Effective Tax Rate (CETR) by dividing tax expenses by pre-tax profit (Erickson & Maydew, n.d.)($CETR = \text{Tax payments} / \text{Pre-tax profit}$).

Profitabilitas

Profitability is a ratio used to assess a company's ability to generate profits, Kasmir (2011:196). According to Hanafi and Halim (2016) in their book titled Financial Management, a profitability ratio is a ratio that measures a company's ability to generate profits at a given level of sales, assets, and equity. In other words, the higher the profitability ratio, the greater the company's ability to generate profits (Hendayana et al., 2024)

Profitability is considered a crucial quality indicator in analysis, used to assess productivity and profit potential (Nurdin, 2020). Companies have objectives they aim to achieve namely to obtain profit or earnings as much as possible. Achieving maximum profit has become a requirement for companies so that companies can

act in the interest of the well-being of owners, employees and to develop new product quality and make new investments (Umah et al., 2022). To measure profitability, the researchers used ROA (Return on Assets) by dividing the company's net profit by its total assets ($ROA = \text{Net Profit} / \text{Total Assets}$).

Leverage

According to Bambang, as cited in (Friyanka, 2020), *leverage* can be defined as the use of assets or funds where, for such use, the company must cover fixed costs or pay fixed expenses. The leverage ratio measures a company's ability to manage debt-financed assets, both short-term and long-term. *Leverage* is a ratio that compares the amount of debt to the company's total assets (Hendayana et al., 2024)

Leverage is approximated using *the debt-to-equity ratio* (DER), which is the ratio of debt to equity. Thus, in this study, the researcher uses the DER as an indicator to measure *leverage*. ($DER = \text{Total Debt} / \text{Total Assets}$).

Capital Intensity

The term *capital intensity* is used to describe how much a business relies on physical capital, such as factories, equipment, and other infrastructure, to operate (Mailia Vani & & Apollo, 2020). Capital intensity is the ratio of equity forms (debt and equity capital) used by a company in designing its financing structure, with the aim of determining the optimal combination of debt and equity to maximize corporate value. (Christina & Wahyudi, 2022)

Capital intensity reflects a company's investment in fixed assets, is a resource utilized by the company in production activities and to generate profits. The average *capital intensity* factor indicates how much a business relies on its fixed assets to generate revenue and sales. This is a critical component of a company's decisions regarding fixed asset allocation and capital intensity (Sinaga & Harman Malau, 2021)

The indicator used in this study to measure a company's capital intensity is calculated by dividing Net Fixed Assets by Total Assets. ($\text{Capital Intensity} = \text{Net Fixed Assets} / \text{Total Assets}$).

Size Company

According to Ibrahim (2008) in his book titled *Theories and Concepts of Public Service and Their Implementation*, the size of a company reflects its scale, which is determined based on nominal measures, such as the company's total assets and total sales over a given sales period, as well as market capitalization. Classifying companies based on the scale of operations can serve as one of the variables investors use in making decisions.

Company size can be defined as a benchmark for distinguishing between large and small companies (Hafizh Rahdal, 2017). Large companies typically play the role of shareholders with broad interests. This is why various policies within large companies have a greater impact on the public interest compared to those of small companies (Sumantri et al., 2022)

The indicator used to measure company size in this study is the logarithm of the company's total assets (Company Size = $\text{Ln}(\text{Total Assets})$).

Previous Research

Table 1. Previous Research

No	Title, Researcher's Name, and Year of Literature	Research Variables	Research Findings
1	<i>Impact Of Profitability, Leverage And Capital Intensity On Avoidance Of Tax, Moderated By the Size Of Firm In LQ45 Companies</i> (Hendayana et al., 2024)	a) Profitability, b) Leverage c) Capital Intensity d) Size Of Firm e) Avoidance Of Tax,	Profitability and leverage affect tax avoidance, while firm size strengthens these relationships but weakens the effect of capital intensity on tax avoidance.
2	<i>Firm Size Moderates the Effects of Profitability, Leverage, Capital Intensity, and CSR on Tax Avoidance</i> (Ulinuha & Nurdin, 2024)	a) Company Size b) Profitabilitas c) Leverage d) Capital Intensity e) CSR f) Tax Avoidance	Profitability and CSR significantly affect tax avoidance, whereas leverage and capital intensity do not. Firm size moderates the effects of leverage and CSR, but not those of profitability and capital intensity.

No	Title, Researcher's Name, and Year of Literature	Research Variables	Research Findings
3	THE EFFECTS OF PROFITABILITY, LEVERAGE, AND CAPITAL INTENSITY ON TAX AVOIDANCE (Setyawan & Kurnia, 2024)	a) Profitability, b) Leverage c) Capital intensity d) Tax avoidance	Capital intensity positively affects tax avoidance, while profitability has a negative effect and leverage has no significant effect.
4	The Effect of Profitability and Firm Value on <i>Tax Avoidance</i> with Firm Size as a Moderating Variable (Putri & Nurdin, 2023)	a) Profitabilitas b) Firm Value c) <i>Tax Avoidance</i> d) Company Size	Profitability significantly affects tax avoidance, whereas firm value does not. Firm size moderates the effect of profitability but not firm value, while both variables jointly influence tax avoidance with firm size as a moderator.
5	<i>The Effect Of Leverage, Capital Intensity, And Sales Growth On Tax Avoidance With Independent Commissioners As Moderating Variables (Empirical Study On Manufacturing Companies Listed On The Indonesia Stock Exchange In 2017-2020)</i> (Afrianti et al., 2022)	a) Leverage b) Capital Intensity, c) Sales Growth d) Tax Avoidance e) Independent Commissioners	Leverage and sales growth positively affect tax avoidance, whereas capital intensity has no significant effect. Independent commissioners do not moderate these relationships.
6	The Effects of Profitability, Debt Ratio, and Fixed Asset Intensity on Tax Avoidance (Ernawati & Purwaningsih, 2022)	a) Profitability b) Debt Ratio c) Fixed Asset Intensity d) Tax Avoidance	Profitability positively affects tax avoidance, while the debt ratio has a significant negative effect and fixed asset intensity has no effect. Collectively, all three variables significantly influence tax avoidance.
7	<i>The Effect Of Capital Intensity, Sales Growth, Leverage On Tax Avoidance And Profitability As Moderators</i> (Sumantri et al., 2022)	a) Capital Intensity b) Sales Growth, c) Leverage d) Tax Avoidance e) Profitability	Capital intensity and sales growth affect tax avoidance, whereas leverage (DER) does not. Profitability (ROA) moderates the effect of leverage but not those of capital intensity and sales growth on tax avoidance.
8	Profitability, Capital Intensity, And Company Size Against Tax Avoidance With	a) Profitability b) Capital Intensity c) Company Size d) Tax Avoidance e) Leverage	Profitability, capital intensity, and firm size directly influence tax avoidance. Leverage mediates the effects of

No	Title, Researcher's Name, and Year of Literature	Research Variables	Research Findings
	Leverage As An Intervening Variable (Sofiamanan et al., 2023)		profitability and firm size on tax avoidance, but does not mediate the effect of capital intensity.
9	The Effect Of Profitability, Leverage, Corporate Social Responsibility And Executive Character On Tax Avoidance On Manufacturing Companies Listed On The Indonesia Stock Exchange Period 2016-2020 (Djolafo, 2022)	a) Profitability b) Leverage c) Corporate Social Responsibility d) Executive Character e) Tax Avoidance	Profitability and leverage affect tax avoidance, whereas CSR and executive character do not. However, profitability, leverage, CSR, executive character, and firm size jointly influence tax avoidance.
10	The Effect Of Leverage, Sales Growth And Profitability On Tax Avoidance (Umar et al., 2021)	a) Leverage b) Sales Growth c) Profitability d) Tax Avoidance	Leverage negatively and significantly affects tax avoidance, whereas sales growth and profitability have no significant effects.

Conceptual Framework

In this study, the conceptual framework provides an overview of the relationships between dependent and independent variables. The dependent variables include *profitability*, *leverage*, *capital intensity*, and *firm size*, which are depicted as influencing *tax avoidance* as the independent variable.

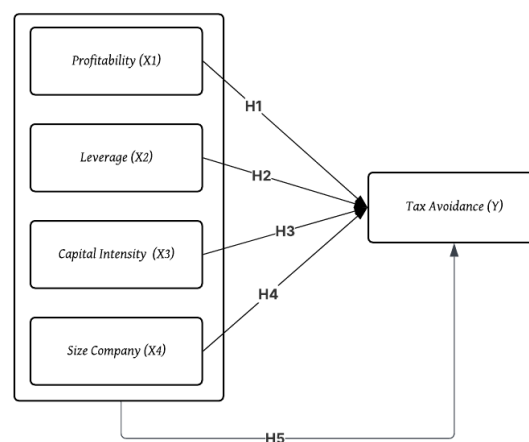


Figure 2. Conceptual Framework of the Study

Source: Researcher 2026

Hypotheses

Based on theoretical and empirical reviews, the research hypotheses are formulated as follows:

H1: Profitability has a negative effect on *tax avoidance*, supported by agency theory, which states that highly profitable companies tend to be more compliant because they are under public scrutiny.

H2: *Leverage* has a positive effect on *tax avoidance* because interest expenses from debt can reduce taxable income.

H3: *Capital intensity* has a positive effect on *tax avoidance* through the use of fixed asset depreciation expenses as a tax deduction.

H4: *Firm size* has a positive effect on *tax avoidance* because large firms have more resources and a more complex structure to devise efficient tax strategies.

H5: Profitability, *leverage*, *capital intensity*, and *company size* simultaneously have a significant effect on *tax avoidance*

RESEARCH METHODOLOGY

This section describes the methods used to analyze the effects of economic factors on tax avoidance in the mining sector. Data were collected from companies' 2022–2024 annual reports published on the IDX or official websites. The population in this study includes all companies in the mining subsector listed on the IDX, with a sampling technique using *purposive sampling* that resulted in a total of 108 observation samples.

Tax avoidance (Y) is measured by CETR. The independent variables are profitability (ROA), leverage (DER), capital intensity (net fixed assets divided by total assets), and firm size (natural logarithm of total assets). Panel data regression was conducted using EViews 12, with the Common Effect Model (CEM) selected based on the Chow and Lagrange Multiplier tests. The regression equation used is as follows:

$$Y = \alpha + \beta X_1 + \beta X_2 + \beta X_3 + \beta X_4 + e \dots\dots\dots(1)$$

To ensure the accuracy of the results, classical assumption tests were also conducted, including tests for normality, multicollinearity, and heteroscedasticity,

as well as the use of the *White Cross-Section* approach to anticipate potential heteroscedasticity issues in the research model.

RESULTS AND DISCUSSION

Results The results of the study on companies in the mining sector for the 2022–2024 period provide a comprehensive overview of tax practices through descriptive and inferential statistical analysis. The data presented in Table 1 are derived from 108 observations that underwent purposive sampling and classical assumption tests.

Table 2. Descriptive Statistical Tests

Model	Coeff B	t-Statistic	Prob.	Keterangan
(Constant)	0,542	2,134	0,035	Signifikan
Profitability (X1)	-0,257	-2,045	0,044	Signifikan (-)
Leverage (X2)	0,187	1,598	0,113	Tidak Sig.
Capital Intensity (X3)	0,037	0,313	0,754	Tidak Sig.
Size Company (X4)	-0,003	-1,313	0,193	Tidak Sig.

Source: Researcher 2026

Based on the data in Table 1, the *tax avoidance* variable, proxied by the *Cash Effective Tax Rate* (CETR), has an average value of 0.293, indicating that, in general, mining companies fall into the moderate category in terms of tax avoidance. An interesting *finding* is evident in the very wide range of CETR values, ranging from 0.001 to 0.826, reflecting stark disparities in tax strategies among companies within the same sector. Meanwhile, the average profitability of the sample companies was 14.1%, indicating that assets were quite effective in generating profits during the observation period.

Table 3. T-Test

Variabel	Mean	Median	Min	Max	Std. Dev
Tax Avoidance (Y)	0,293	0,231	0,001	0,826	0,194
Profitability (X1)	0,141	0,102	0,001	0,654	0,123
Leverage (X2)	0,452	0,415	0,085	1,250	0,211
Capital Intensity (X3)	0,387	0,356	0,024	0,885	0,186
Size Company (X4)	28,45	29,12	22,45	32,56	2,341

Source: Researcher 2026

Further analysis was conducted using panel data regression to test the formulated hypotheses. The results of the partial tests (t-tests) are presented in Table 2 to examine the relationship between the independent variables and the dependent variable.

The Effect of Profitability on Tax Avoidance

Profitability negatively and significantly affects tax avoidance ($\beta = -0.2573$; $p = 0.0444$), supporting H1. The results of this study indicate that the higher the level of profitability, as measured by Return on Assets (ROA), the lower the level of tax avoidance (a high CETR indicates low tax avoidance). This finding is consistent with agency theory proposed by Jensen and Meckling (1976) in (Bani Alkausar, 2020) which explains that agents (management) will strive to maximize corporate profits to increase their performance compensation. However, companies with high profitability tend to be more compliant in paying taxes because they are under public and tax authority scrutiny. Management prefers to maintain the company's reputation and avoid the risk of tax audits that may arise from aggressive tax avoidance practices. Thus, although high profits increase the tax burden, management prefers to pay taxes in accordance with regulations to maintain a positive image and the company's long-term sustainability. These results also support the Theory of Planned Behavior described (Setyawan & Kurnia, 2024), in which taxpayers who are aware of the importance of taxes will fulfill their tax obligations.

The findings of this study are consistent with the results of a study conducted by (Bani Alkausar, 2020) in their meta-analysis, which found that profitability influences tax aggressiveness. Similar results were also found by (Putri & Nurdin, 2023) who demonstrated that profitability influences tax avoidance in automotive companies. Additionally, (Djolafo, 2022), in his study of manufacturing firms, concluded that profitability influences tax avoidance. These results differ from those of the study conducted by (Umar et al., 2021), which found that profitability does not influence tax avoidance in manufacturing firms. This discrepancy may be attributed to differences in the sectors and time periods of the studies.

The Effect of Leverage on Tax Avoidance

Leverage has no significant effect on tax avoidance ($\beta = 0.1870$; $p = 0.1135$), leading to the rejection of H2. These findings indicate that the level of debt of mining companies is not a determining factor in tax avoidance practices. This contradicts the theory that debt provides tax benefits through deductible interest expenses under Article 6(1) of the Income Tax Law, which should reduce taxable income (Rahmadani et al., 2020). However, in the context of mining companies, the use of debt is driven more by the need for substantial long-term investment funding rather than solely to seek tax benefits. Additionally, regulations limiting the debt-to-equity ratio, such as Ministry of Finance Regulation No. 169/PMK.010/2015, may restrict companies from fully utilizing interest expenses as tax deductions. These results can also be explained through the agency theory perspective, where management that uses significant debt will actually be more cautious in financial management due to strict oversight from creditors, thereby reducing the tendency to engage in tax avoidance.

The results of this study are consistent with the research conducted by (Sofiamanan et al., 2023), who found that leverage does not affect tax avoidance. Similarly, (Hendayana et al., 2024) in their study of LQ45 companies, also demonstrated that leverage affects tax avoidance, though the direction of the effect varies depending on the context. However, (Rahmadani et al., 2020) in their study of mining companies, found that leverage has a significant positive effect on tax avoidance. These differing results may be due to differences in the study period, the proxies used, and the characteristics of the company sample.

The Effect of Capital Intensity on Tax Avoidance

Capital intensity has no significant effect on tax avoidance ($\beta = 0.0373$; $p = 0.7548$), leading to the rejection of H3. The findings suggest that fixed asset investments are not effectively used for tax avoidance. Theoretically, a large holding of fixed assets should provide tax benefits through depreciation expenses that can reduce taxable income.

However, in practice, mining companies may not yet be optimizing their depreciation policies as a tax avoidance strategy. This could be due to differences in depreciation methods for accounting and tax purposes, or because the useful lives of assets are so long that the tax benefits are not significant in the short term. Furthermore, companies focus more on owning fixed assets for operational purposes and to increase production capacity, rather than for tax planning purposes. This finding is inconsistent with agency theory, which states that management will utilize fixed asset investments to reduce tax burdens (Sasongko Wahyu Widodo, 2021)

(Hendayana et al., 2024) demonstrated that capital intensity does not affect tax avoidance in LQ45 companies. (Sumantri et al., 2022) in their study also confirmed that capital intensity affects tax avoidance, but this depends on the context and sector under study. Research by (Setyawan & Kurnia, 2024) on property companies, on the other hand, found that capital intensity has a positive effect on tax avoidance. These differing results indicate that the effect of capital intensity on tax avoidance is conditional and depends on industry characteristics and the observation period.

The Effect of Firm Size on Tax Avoidance

Firm size has no significant effect on tax avoidance ($\beta = -0.0035$; $p = 0.1930$), leading to the rejection of H4. These findings indicate that firm size does not influence tax avoidance among mining companies, contradicting political power theory, which links larger firms to greater tax planning capabilities.

On the other hand, these results also do not support the political cost theory, which states that large companies are under strict scrutiny by tax authorities and the public and are therefore more likely to be compliant.

In the context of mining companies, both large and small firms exhibit relatively similar tendencies in tax avoidance practices. Large companies may have capable tax teams but are also subject to strict oversight, while small companies may have limited resources but also receive less attention from tax

authorities. These two factors offset each other, so company size is not a significant determinant of tax avoidance practices.

In her study of the agricultural sector, (Stawati Vicka, 2020) found that firm size does not affect tax avoidance. This contrasts with the study conducted by (Rahmadani et al., 2020), which found that firm size has a positive but insignificant effect on tax avoidance in mining companies. Similarly,

CONCLUSION

Profitability negatively affects tax avoidance, while leverage, capital intensity, and firm size show no significant individual effects. However, all four variables jointly significantly influence tax avoidance among IDX-listed mining companies in 2022–2024. The study is limited by its low R^2 of 8.95%, sector-specific focus, and short observation period, limiting its explanatory power and generalizability.

Future studies should include more industries and extend the observation period to improve the generalizability of the findings. Furthermore, future research is encouraged to incorporate additional variables, particularly corporate governance characteristics, such as board independence, audit committee effectiveness, and institutional ownership, as well as audit quality, to examine their roles in monitoring corporate tax practices. Other relevant variables may include corporate social responsibility (CSR), sales growth, executive characteristics, and tax planning mechanisms. Researchers may also consider examining corporate governance or audit quality as moderating variables to investigate whether effective monitoring influences the relationship between corporate financial characteristics and tax avoidance. These extensions may improve the explanatory power of the research model and provide a more comprehensive understanding of the determinants of tax avoidance. For tax authorities, the results of this study can serve as a basis for consideration in strengthening regulations and oversight, particularly in identifying companies that may require further assessment of their tax compliance risks.

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