OWNERSHIP, DIVIDENDS, AND CAPITAL INTENSITY: DETERMINANTS OF TAX PLANNING IN INDONESIAN COAL MINING FIRMS

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# Abstract

*This study examines the effect of ownership structure, dividend policy, and capital intensity ratio on tax planning in coal mining sub-sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. The research sample consists of 23 companies, yielding 115 firm-year observations. The data were analysed using multiple linear regression with the assistance of SPSS version 25.0. The results show that ownership, dividends, and capital intensity simultaneously significantly affect tax planning, as indicated by an F-value of 6.251 and a significance level of 0.001 (p < 0.05). Partially, ownership is proxied by institutional ownership, which significantly affects tax planning with a t-value of 3.974 and a significance level of 0.000. Dividends proxied by the dividend payout ratio also have a significant partial effect with a t- value of 2.039 and a significance level of 0.044. In contrast, the capital intensity ratio does not substantially affect tax planning, as indicated by the t-value of 0.794 and a significance level of 0.429 (p > 0.05).*

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**Keywords**: Ownership, Dividends, Capital Intensity, Tax Planning.

# Introduction

Tax revenue is the primary source of financing for development and public services in Indonesia. As the country with the largest economy in Southeast Asia, Indonesia highly depends on income tax, value-added tax, regional taxes, and others. However, tax revenue still faces challenges, including low levels of taxpayer compliance and a large informal sector. This causes a gap between tax potential and its realisation.

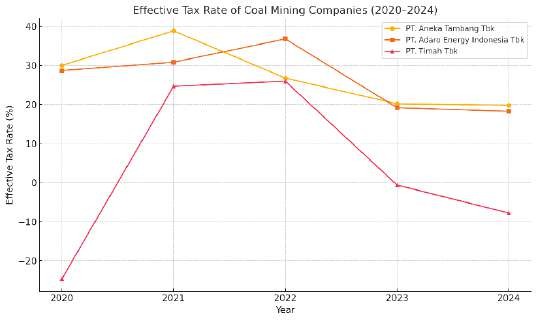
Tax planning is an essential strategy in managing tax obligations legally and efficiently. Romdania et al. (2022) Tax planning is an accounting and financial strategy that minimizes the tax burden without violating the rules. Fuadi et al. (2024) added that tax planning covers all tax management functions, from planning and reporting to supervision. With effective tax planning, companies can manage their finances better and support national economic goals.

One of the factors that influences tax planning is the ownership. According to Teguh & Nyale (2024) This structure reflects the company's share ownership distribution, which can be institutional or managerial ownership. Institutional ownership is owned by financial institutions such as banks and insurance, while managerial ownership refers to shares owned by company managers. Several studies, such as Arianandini & Ramantha (2018), and Fuadi et al. (2024) show that managerial ownership can affect tax planning, while different results were found by Teguh & Nyale (2024), who stated that only managerial ownership has an effect, not institutional.

Another factor is dividends, namely the decision to distribute profits to shareholders. According to Solikin & Slamet (2022) dividends affect investment decisions and corporate tax strategies. High dividend payments reduce the chances of companies engaging in aggressive tax planning. Research by Rezkyanuarita et al. and Isnaini & Arianti (2022) shows that dividends affect tax aggressiveness, but differs from the findings of Harahap et al. (2023) which states the opposite.

Capital intensity also affects tax planning. The higher the company's investment in fixed assets, the greater the depreciation burden, reducing taxable profit. Romdania et al. (2022) stated that capital intensity can reduce the effective tax rate. However, Dewi & Oktaviani (2021) showed an adverse effect of capital intensity on tax avoidance.

This study focuses on coal mining sub-sector companies listed on the Indonesia Stock Exchange (IDX). This sub-sector is important for the Indonesian economy due to its large natural resource wealth. However, this industry is vulnerable to commodity price fluctuations, government policies, and environmental issues. Wijaya & Susilowati (2024) emphasize the importance of assessing company value to understand management strategies in managing risk and creating value.



# Figure 1

**Effective Tax Rate of Coal Mining Companies**

The data shows that the three sub-sector companies experienced fluctuations in the Effective Tax Rate (ETR) during 2020–2024. PT. Aneka Tambang Tbk and PT. Adaro Energy Indonesia Tbk showed a fluctuating ETR pattern due to changes in commodity prices, while PT. Timah Tbk recorded a negative ETR in several years due to low tin prices, which impacted the company's profits. These fluctuations highlight the importance of examining the factors that influence tax planning practices within mining companies, making it a relevant and compelling topic for further research.

# Method

This study uses a quantitative approach to measure and analyze the relationship between variables that influence tax planning in coal companies objectively and measurably. This approach allows researchers to collect large amounts of data through observations of financial report data from 23 companies during 2020- 2024, which can then be analyzed statistically. Using this method, researchers can test hypotheses, identify patterns or tendencies in tax planning behaviour, and draw conclusions that can be generalized to a broader population. Data quantification also helps measure how much influence factors such as ownership, dividends, and capital intensity have on positive, neutral, or negative sentiment expressed in financial reports. This approach is relevant because it provides more accurate, systematic, and scientifically accountable results.

# Result and Discussion

Based on the results of the anova test explained previously, it can be concluded that the regression model used in this study has statistical significance. This is indicated by the calculated F value of 6.251 with a significance level of 0.001, which is smaller than the significance limit of 0.05. In other words, there is a significant simultaneous influence of all independent variables studied on the dependent variable, namely Tax Planning, which is measured by the Effective Tax Rate (ETR). These results indicate that combining the three independent variables, namely Ownership Structure, Dividend Policy, and Capital Intensity Ratio, can explain the company's effective tax rate variations. Thus, this model can be considered valid for explaining and predicting factors that influence tax planning practices in companies.

# Table 1 Anova Test

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVAa** | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 3918.235 | 3 | 1306.078 | 6.251 | .001b |
| Residual | 23190.774 | 111 | 208.926 |  |  |
| Total | 27109.009 | 114 |  |  |  |
| a. Dependent Variable: Effective Tax Rate | | | | | | |
| b. Predictors: (Constant), Capital Intensity Ratio, Dividend Payout Ratio, Institutional Ownership | | | | | | |

(Source: data processing result, 2025)

Institutional ownership, dividends, and capital intensity each play an essential role in influencing a company’s tax planning strategies. Institutional ownership refers to the percentage of company shares owned by financial institutions such as mutual funds, insurance companies, or pension funds. These institutional investors tend to be more sophisticated and have stronger monitoring capabilities than individual investors. As a result, their presence often pushes management toward more transparent and responsible tax behavior. Institutional owners are typically more concerned with long-term performance and reputational risk, which may reduce the likelihood of aggressive or risky tax avoidance practices.

Meanwhile, dividend policy, which determines how much of a company's profit it distributes to its shareholders, also has implications for tax planning. A firm that pays high dividends often signals financial health and stable earnings, which may increase scrutiny from tax authorities. Thus, firms may adopt more conservative and well-structured tax planning strategies to avoid penalties or reputational damage. In contrast, firms with lower dividend payouts may retain earnings for reinvestment, potentially allowing more flexibility in managing taxable income.

Capital intensity, which refers to the extent of a company’s investment in fixed assets such as machinery and equipment, can influence the depreciation deductions a company can claim. These deductions can lower taxable income, making capital gains a valuable tool in tax planning. Although capital intensity may not always significantly affect tax planning when examined in isolation, it contributes to the broader strategy when combined with ownership structure and financial policy. Collectively, these factors demonstrate how corporate governance and investment structure are closely tied to tax-related decision-making.

# Table 2 Partial Test

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | 50.049 | 8.023 |  | 6.238 | .000 |
| Institutional Ownership | .365 | .092 | .352 | 3.974 | .000 |
| Dividend Payout Ratio | .132 | .065 | .181 | 2.039 | .044 |
| Capital Intensity Ratio | .047 | .059 | .070 | .794 | .429 |
| a. Dependent Variable: Effective Tax Rate | | | | | | |

(Source: data processing result, 2025)

# Y = 50,049 + 0,365 b1 + 0,132 b2 + 0,047 b3

The multiple linear regression analysis results show that the Institutional Ownership variable has a coefficient of 0.365 with a significance value 0.000. This shows institutional ownership positively and significantly affects the Effective Tax Rate (ETR). This means that the greater the institutional ownership in a company, the higher the effective tax rate paid. This can be caused by institutions' tendency to encourage companies to comply more with tax obligations. Based on the results of the partial test (t-test), it can be interpreted that the ownership structure, as measured by institutional ownership, significantly influences tax planning (corporate tax planning). This is indicated by a significance value of 0.000, much smaller than the significance level of 0.05, and a t-value of 3.974, which means the strength of the statistical influence. This finding shows that institutional shareholders in the company's ownership structure play a vital role in strategic decision-making, including the efficiency of tax burden management. The greater the institutional ownership, the stronger the management supervision regarding tax compliance and strategy. In other words, institutional ownership tends to encourage companies to be more active and effective in planning taxes to optimize the tax burden that must be borne. The study results showing that institutional ownership significantly influences tax planning can also be explained through signaling theory. In this context, institutional ownership can be a positive signal regarding the quality of corporate governance, including tax planning. Institutional investors, such as pension funds, insurance companies, and mutual funds, typically have the knowledge, experience, and resources to monitor management performance more intensively. When a company has a high level of institutional ownership, it signals to the market that it is closely monitored and professionally managed, including tax compliance and efficiency. Tax planning carried out effectively and in accordance with legal provisions signals that the company has a healthy financial management strategy and is oriented towards creating long-term value. This increases investor confidence and can positively impact the company's reputation and value in the eyes of the market.

Furthermore, the Dividend Payout Ratio variable has a coefficient of 0.132 with a significance value of

0.044. This means the dividend payout ratio also positively and significantly affects the effective tax rate. Thus, the greater the proportion of profit distributed as dividends, the greater the effective tax rate paid by the company. This may occur because companies that distribute higher dividends tend to have more stable profits

and are subject to greater taxes. Based on the results of the partial test, which shows that the dividend policy proxied by the dividend payout ratio has a significance value of 0.044 and a t value of 2.039, it can be concluded that this variable significantly affects tax planning. Because the significance level is less than 0.05, statistically, the dividend policy has a real relationship with the company's efforts to manage its tax burden. These results indicate that the higher the dividend distribution ratio, the higher the company's tax planning level. This can happen because companies that distribute significant dividends tend to want to maintain investor trust and project an image as a stable and financially healthy company. To support the ability to pay dividends without disrupting liquidity, companies will be encouraged to carry out efficient tax planning to minimize the tax burden legally. In signaling theory, a high dividend policy is a positive signal to investors that the company has substantial cash flow and good financial prospects. Consistent or increasing dividend payments can reflect management's confidence in the company's future performance. However, companies need to ensure cost efficiency through an effective tax planning strategy to maintain the ability to pay dividends.

Meanwhile, the Capital Intensity Ratio variable has a coefficient of 0.047 with a significance value of

0.429. This value shows that the capital intensity ratio does not significantly affect the effective tax rate. In other words, the level of capital intensity in the company's asset structure does not significantly affect the amount of effective tax paid. This could be due to the influence of depreciation or tax incentives on fixed assets owned by the company. Based on the results of the partial test, the Capital Intensity Ratio (CIR) variable has a significance value of 0.429 and a t value of 0.794, both of which indicate that the effect of this variable on tax planning is not statistically significant, because the significance value is greater than the critical limit of 0.05. Thus, it can be concluded that the capital intensity ratio does not partially affect tax planning. This means that the size of the company's investment in fixed assets does not significantly affect the effectiveness of the company's tax planning. If associated with signaling theory, high investment in fixed assets should be a positive signal for investors because it shows that the company has a long-term growth and operational sustainability plan. In addition, in many cases, fixed assets can also provide tax benefits in the form of depreciation, which theoretically can be used in tax planning to reduce taxable income.

# Conclusion and Recommendations

Based on the results of the research and discussion that have been done previously, it can be concluded as follows:

1. Based on the results of the anova test of Ownership Structure (Institutional Ownership), Dividend Policy (Dividend Payout Ratio), and Capital Intensity Ratio have a simultaneous effect on Tax Planning (Effective Tax Rate)
2. This Ownership Structure has a partial effect on Tax Planning. The majority shareholder is usually directly interested in the company's tax efficiency.
3. Dividend Policy has a partial effect on Tax Planning. This is because the decision to distribute or retain profits affects tax management strategies
4. Capital Intensity Ratio does not partially affect Tax Planning. This CIR allows depreciation to reduce taxable income; not all companies maximise this depreciation for tax planning purposes.

Based on the conclusions above, the recommendations that the author can put forward for the future are as follows:

1. Further researchers are advised to add other variables such as leverage, company size, corporate governance, or CSR, which have the potential to provide a more comprehensive picture of tax planning practices. In addition, the scope of time and industrial sectors can also be expanded to increase the generalization of research results.
2. Companies are advised to further optimize the role of institutional shareholders in monitoring and making strategic decisions related to tax policies. Strong institutional ownership can encourage transparency and efficiency in corporate taxes. In addition, the right dividend policy can also be a positive signal for investors and demonstrate the company's commitment to managing its tax burden efficiently.

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