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DETERMINANTS OF CORPORATE INCOME TAX: THE ROLE OF PROFITABILITY, LEVERAGE, AND LIQUIDITY WITH OPERATING COSTS AS MODERATING VARIABLE

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ABSTRACT

Objective: This study aims to examine the effects of profitability, leverage, and liquidity on corporate income tax, with operating costs as a moderating variable, among mining companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2025 period.

Research Design & Methods: This study employs a quantitative approach, using secondary data from the annual financial reports of mining companies. A purposive sampling method was used to choose 10 companies, resulting in 70 firm-year observations. The data analysis involved descriptive statistics, classical assumption tests, multiple regression analysis, and Moderation Regression Analysis (MRA). Furthermore, the importance of the indirect effect was evaluated through the Sobel test at a 5% significance level.

Findings: The research results indicate that profitability, assessed by ROA, significantly and positively affects corporate income tax. On the other hand, leverage (DAR) and liquidity (CR) do not show a notable direct impact on corporate income tax. Additionally, operating expenses have a substantial effect on corporate income tax and serve an important moderating function. The results of the Sobel test indicate that operating expenses significantly moderate the relationships between profitability, leverage, liquidity, and corporate income tax. Specifically, operating expenses amplify the positive effect of profitability on tax liability while significantly transmitting the effects of leverage and liquidity on corporate income tax.

Implications: These findings indicate that mining companies must focus on improving profitability and operational cost efficiency to optimize financial performance and manage tax obligations effectively.

Contribution & Value Added: This study expands the corporate taxation literature by integrating profitability, leverage, liquidity, and operating costs into a single framework. It also provides empirical evidence on the moderating role of operating costs in explaining corporate income tax behavior in the mining sector. This area remains relatively unexplored in emerging markets.

Keywords: Corporate Income Tax, Profitability, Leverage, Liquidity, Operating Costs.

JEL codes: H25, G32, M41
Article type: research paper

INTRODUCTION

Taxes are the primary source of government revenue and play a strategic role in funding national development, infrastructure, public services, and economic stability (Kusrina and Fatimah, 2021). One of the key components of tax revenue is corporate income tax derived from a company's operational activities (Jezek, 2014). The mining sector is one of the sectors that makes a significant contribution to the national economy and government revenue (Maulana and Andni, 2024). In this context, corporate income tax (PPh) serves as a crucial fiscal instrument because it is levied on the profits generated by business entities operating within Indonesian jurisdiction (Aliyani and Machdar, 2024). The high level of exploration and exploitation of mineral and coal resources means that mining companies have significant profit potential, which in turn affects the amount of corporate income tax paid to the government (Nangoy, 2024).

Government revenue data from the mineral and coal mining sector shows significant fluctuations in recent years. Revenue from mineral and coal resources grew by an average of 63.9% during the 2020–2023 period, peaking at 147.1% in 2022 due to a surge in global coal prices (Hakim, 2024). However, in 2024, revenue from

mineral and coal resources is projected to contract by 21% to Rp102.06 trillion and decline further to Rp87.48 trillion in 2025 (BPS, 2026). The decline was driven by a moderation in mineral and coal commodity prices on the international market.

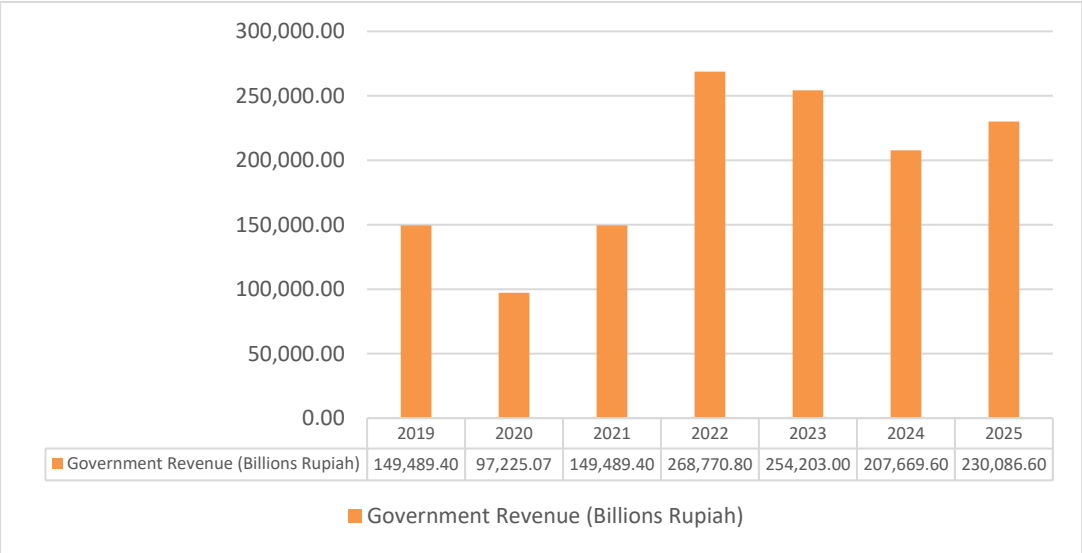

Figure 1. Trends in Corporate Income Tax Revenue in Indonesia, 2019–2025

Source : Badan Pusat Statistik (BPS, 2026)

The amount of corporate income tax paid by a company is influenced by various internal factors, particularly the company's financial condition. Profitability reflects a firm's capacity to produce earnings from its overall assets. The higher a company's profitability, the greater the taxable income generated, which can potentially increase the company's corporate income tax liability (Li et al., 2021). Previous research has shown that profitability is positively related to corporate income tax, as increases in profits expand a company's tax base (Lazar, 2014; Muhmad et al., 2024). Meanwhile, the study by Alkurdi et al. (2024) shows a negative effect on corporate tax.

Apart from profitability, the capital structure of a company, indicated by the debt-to-equity ratio (DAR), is a significant factor affecting corporate taxation. The use of debt within the capital structure can lead to deductible interest expenses, thereby lowering the taxable income of the company. According to the trade-off theory, companies employ debt as a means of tax optimization to decrease their tax burden. However, some studies have found that leverage negatively affects corporate taxes because debt financing generates interest expense, which can reduce a company's taxable income (Shakibjoo and Hassanzadeh, 2016; Waluyo, 2018). However, other studies have found that leverage does not significantly affect corporate tax avoidance (Hamilah, 2020; Nejad and Wasiuzzaman, 2015).

Another factor that influences corporate income tax is a company's liquidity. Liquidity reflects a company's ability to meet its short-term obligations, including tax obligations. Companies with high liquidity tend to have a better ability to pay taxes than companies with low liquidity. Several studies have found that liquidity positively affects tax compliance, as companies with high liquidity are better able to meet their tax obligations (Hashani et al., 2022; Song and Yuan, 2024). Conversely, other studies suggest that liquidity may actually increase tax noncompliance and has no significant effect on aggressive corporate tax avoidance (Han Kim et al., 2022). In addition, companies with low liquidity tend to face financial constraints that can increase the risk of corporate tax default (Fu et al., 2024; Hashani et al., 2022). On the other hand, liquidity is also seen as a way to increase a company's flexibility in tax planning, although certain financial conditions may limit such practices (Han Kim et al., 2022; Wang, 2022).

On the other hand, operating expenses are a key factor that can either strengthen or weaken the relationship between a company's financial condition and corporate income tax. In the mining industry, operating costs tend to be high because they involve exploration, production, distribution, the use of heavy equipment, and environmental costs. High operating costs can affect a company's taxable income, which ultimately impacts the amount of corporate income tax it pays (Z. Chen et al., 2019; Tao et al., 2022). This study builds on the research by Salamah et al. (2016) and Firdiansyah et al. (2019) which found that profitability and operating costs have a significant impact on corporate income tax. Other studies have also shown that leverage and operating costs interact to influence a company's profitability and risk (Marozva, 2026).

Numerous investigations have been carried out regarding the factors that influence corporate income tax. Nevertheless, the majority of earlier studies concentrated on the manufacturing, trade, and consumer goods

industries, whereas research on the mining sector is still somewhat sparse. In addition, previous studies have generally examined only the direct effects of profitability, leverage, and liquidity on taxes, without considering the role of operating costs as a moderating variable. These results reveal a notable research gap that requires additional exploration, particularly regarding mining companies, which have different operational and capital structures than other sectors.

This research intends to examine how profitability, leverage, and liquidity impact corporate income tax, using operating expenses as a moderating variable, within mining firms listed on the Indonesia Stock Exchange. This study is expected to make a theoretical contribution to the literature on taxation and financial accounting, as well as provide practical implications for companies and the government regarding the management of corporate tax policies.

LITERATURE REVIEW

Agency theory explains the contractual relationship between the principal (company's owner or, in the context of taxation, government) and the agent (company's management) (Magdalena et al., 2024). The principal delegates decision-making authority to the agent to carry out the company's activities (Febriana and Kurniawati, 2023). Conflicts arise when agents act not in the principal's best interests but in their own self-interest, which is often triggered by information asymmetry.

When it comes to taxation, management often seeks to minimize the tax burden to maximize after-tax profits, which can increase their compensation or the value of the company's stock (Agustin et al., 2024). However, this action runs counter to the government's interests, which rely on tax revenue to fund government spending. Management can use internal information not available to tax authorities to engage in legal but aggressive tax avoidance practices (Magdalena et al., 2024). In the mining sector, this information asymmetry is often linked to technical costs that are difficult for tax authorities to verify, such as underground exploration costs or the substantial costs of maintaining heavy equipment.

Profitability

According to Husnan (2014), profitability is a company's ability to generate profits at a given level of sales, assets, and equity. Return on Assets (ROA) was chosen as a proxy because it reflects a company's overall ability to generate profits from each unit of assets it holds (Agustin et al., 2024).

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

Theoretically, there is a positive correlation between ROA and corporate income tax; the higher the profit generated, the higher the taxable income after fiscal adjustments (Pratama et al., 2026). However, mining companies with very high ROAs often become the focus of tax audits, which encourages them to be more careful or even more creative in their tax planning to protect their profit margins (Enforcea, 2026).

Leverage (Debt to Asset Ratio)

According to Sartono (2008), leverage indicates the use of debt to finance investments. Leverage describes the extent to which a company uses debt to fund its operations and investments (Hery, 2016). The leverage ratio is a metric used by companies to indicate how much of their assets is financed by debt (Riswandari and Bagaskara, 2020). Debt-to-Asset Ratio (DAR) measures the proportion of total liabilities to total assets of a company.

$$DAR = \frac{Total\ \ Liability}{Total\ Aset}$$

The use of debt provides benefits in the form of tax protection (tax shield) because the interest expense on debt is generally a cost that can be deducted from gross income (deductible expense) (Agustin et al., 2024). The higher the DAR, the greater the interest expense, which in turn reduces earnings before taxes (EBT) and the amount of taxes payable. However, excessive leverage also increases the risk of financial distress, which in the mining sector can be triggered by a sudden drop in commodity prices (Mahadewi and Astuti, 2025).

Liquidity (Current Ratio)

Liquidity assesses a firm's capability to settle its short-term obligations as they arise. The Current Ratio (CR) is a liquidity indicator that compares current assets to current liabilities (Setyapurnama, 2025).

$$CR = \frac{Current\ Assets}{Current\ Liabilities}$$

Tax authorities often view the current ratio as an indicator of a company's ability to pay taxes. Companies with a high current ratio have cash reserves or liquid assets that allow them to pay their tax bills on time without

disrupting their operating cash flow (Setyapurnama, 2025). However, in the mining industry, current assets are often dominated by mining inventories, whose liquidity is highly dependent on global market demand (Putri et al., 2024). If inventory piles up and doesn't sell, the CR will appear artificially high, with no real cash flow to support tax payments.

Operating costs

Operating expenses are expenditures incurred in connection with a company's operations, including sales and administrative expenses, advertising costs, and repair and maintenance costs (Magdalena et al., 2024). Jusuf (2017) states that operating expenses are costs not directly related to the company's products but associated with the company's daily operations.

$$Cost\ Operation\ (CO) = Sale\ Expenses + Administrative\ and\ General\ Expenses$$

The mining sector's costs include crucial components such as general survey costs, exploration costs, feasibility studies, production operating costs, and post-mining costs. Operating costs act as a moderating variable because they directly influence the conversion of operating profit into taxable profit (Hendrik and Rahmawati, 2021). Efficient management of operating expenses can amplify the impact of profitability on taxes. Conversely, uncontrolled operating expenses can negate the tax benefits of leverage or high profitability. An increase in operating expenses is often correlated with a decline in net income, which automatically reduces the corporate income tax liability (Purdiansyah and Nurasik, 2018).

Corporate Income Tax

Under Law No. 36 of 2008, which is the fourth amendment to Law No. 7 of 1983, Article 1 states: "Income Tax (PPh) is a tax imposed on taxpayers on income received or earned during the tax year." (Hendrik and Rahmawati, 2021).

$$Corporate\ Income\ Tax\ (CIT) = Fiscal\ Profit\ x\ Corporate\ Income\ Tax\ Rate$$

METHODS

This research adopts a quantitative method with an associative type model to examine the impact of profitability, financial leverage and liquidity on corporate tax, with operating costs acting as a moderating variable, within mining companies listed on the Jakarta Stock Exchange (IDX). The data used in this study consists of secondary data in the form of companies' annual financial statements obtained from the IDX and each company's annual reports for the period 2019–2025.

The sample for this study includes all companies in the mining sector that are listed on the IDX from 2019 to 2025. The method of sampling employed was purposive sampling, using specific criteria to ensure that the sample aligns with the study's objectives. The sampling procedure is presented in the following table 1.

Table 1. Research sampling procedure

No	Description	Amount
1	Companies in the mining sector listed on the Indonesia Stock Exchange (IDX) from 2019 to 2025	62
2	Companies that do not use the rupiah as their currency	(35)
3	Companies that experienced losses during the 2019–2025 period	(16)
4	Companies that failed to release full financial statements during the 2019–2025 timeframe	(1)
	Number of Research Samples	10
	Number of Observation Years	7
	Number of Research Data	70

Data Analysis Model

The data analysis method used in this study is quantitative, conducted in SPSS version 25. The analysis begins with descriptive statistics aimed at providing an overview of the characteristics of the research variables, which consist of profitability (ROA), leverage (DAR), liquidity (CR), operating expenses, and corporate income tax, as measured by their minimum, maximum, mean, and standard deviation values. Subsequently, classical assumption tests were carried out, comprising assessments for normality, multicollinearity, and heteroscedasticity, to verify that the regression model fulfilled the statistical criteria and was appropriate for application in the research.

Prior to hypothesis testing, a standard assumption test is performed to verify that the regression model fulfills the statistical criteria and is appropriate for the research. In this study, hypothesis testing utilizes Moderated Regression Analysis (MRA) to investigate how profitability, leverage, and liquidity influence corporate income tax,

with operating expenses acting as the moderating variable. The regression model in this study consists of two structural equations.

Substructural 1:

$$CO = \alpha + \beta 1ROA + \beta 2DAR + \beta 3CR + \varepsilon 1$$

Substructural 2:

$$CIT = \alpha + \beta 1ROA + \beta 2DAR + \beta 3CR + \beta 4CO + \varepsilon$$

Description:

CIT = Corporate Income Tax

ROA = Profitability

DAR = Leverage

CR = Liquidity

CO = Operating Cost

α = Constant

β = Regression Coefficient

ε = Error term

Hypothesis tests were conducted using the coefficient of determination (R^2) to assess the ability of independent variables to explain the dependent variable, a simultaneous test (F-test) to evaluate the combined effect of independent variables on corporate tax, a partial test (t-test) to ascertain the individual effect of each independent variable, and a moderation test to analyze the capacity of operating costs to moderate the relationship between profitability, leverage, liquidity, and corporate tax. Decisions are based on the significance threshold: the hypothesis is accepted if the significance level is below 0.05 and rejected if it exceeds 0.05.

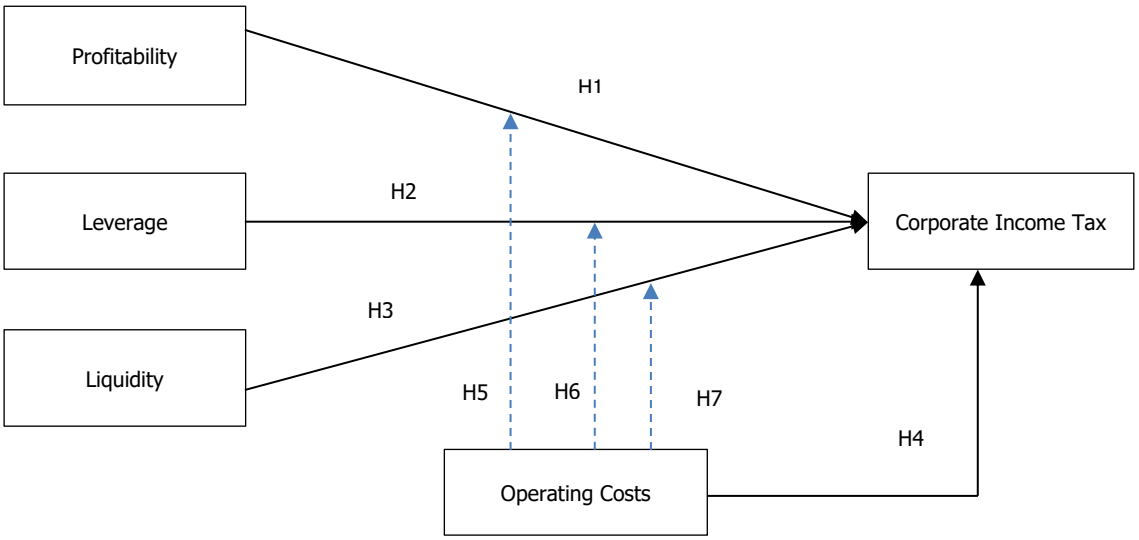

Figure 2. Framework

Hypothesis Development

Profitability, as indicated by Return on Assets (ROA), reflects a company's capacity to produce earnings from its overall assets. The higher a company's ROA, the greater its taxable income, which in turn increases the company's corporate income tax liability (Barbera et al., 2020). However, other studies show that highly profitable companies tend to engage in tax planning to reduce their corporate tax liability (Muhmad et al., 2024). Furthermore, companies with high ROA are also known to have larger book-tax differences as part of their corporate tax efficiency strategy (Barbera et al., 2020; Nordin et al., 2024). On the other hand, companies with high profitability and low debt levels tend to bear a heavier tax burden because they do not benefit from the tax shield provided by interest on debt (Rodriguez, 2004). Thus, profitability is believed to affect a company's corporate income tax.

H1: Profitability has a significant effect on corporate income tax.

Leverage, as measured by the Debt-to-Asset Ratio (DAR), indicates the extent to which debt is used to finance a company's assets. In tax theory, the use of debt provides a tax shield through interest expense deductions, which can reduce a company's taxable income (Fatica et al., 2013; Hemmelgarn and Teichmann, 2014). The higher a company's leverage, the greater its potential to reduce corporate income tax (Dwenger and Steiner, 2014; Fonseca and Dias, 2019). Previous research has also shown that higher tax rates encourage companies to increase their leverage in order to reap the tax benefits of debt (Heider and Ljungqvist, 2015; Tan, 2013). However, the impact of leverage on taxes can be influenced by non-debt tax shields, such as depreciation, which can reduce a company's reliance on debt as a tax efficiency strategy (Sheikh and Qureshi, 2014). In addition, the dynamic trade-off theory explains that companies will balance the tax benefits of debt with the risk of financial distress due to the company's high leverage (Heider and Ljungqvist, 2015; Molina, 2005). Thus, leverage is suspected to have an impact on corporate income tax.

H2: Leverage has a significant effect on corporate income tax.

Liquidity, as measured by the Current Ratio (CR), indicates a company's ability to meet its short-term obligations, including tax obligations. Companies with high liquidity tend to be better able to meet their tax obligations, thus lowering their tax aggressiveness (Boateng et al., 2025; Chiachio and Martinez, 2019). Conversely, companies facing liquidity constraints tend to adopt more aggressive tax avoidance strategies to maintain their cash reserves (Boateng et al., 2026; Law and Mills, 2015). Previous research has also shown that strong liquidity can improve corporate oversight and governance, thereby curbing excessive tax avoidance practices (Y. Chen et al., 2019). In addition, companies with high liquidity are considered better able to adapt to changes in tax policy and maintain their financial stability (Baum et al., 2012; Hashani et al., 2022). Thus, liquidity is believed to affect a company's corporate income tax.

H3: Liquidity has a significant effect on corporate income tax.

Operating costs reflect a company's economic losses from operating activities and can affect its taxable income. The structure of operating expenses, particularly high fixed costs, can increase the volatility of cash flow and operating income, thus impacting the company's ability to manage its tax obligations (Kulchania, 2016; Landa, 2013). In addition, high operational costs can affect taxable income because not all costs can be tax deductible fiscally, thus increasing the company's tax burden (Wu and Cheng, 2021). Previous research also shows that efficient operational cost management can increase EBIT and the company's financial performance, which ultimately affects the company's tax obligations (Nagashree et al., 2025; Yao and Yang, 2026). On the other hand, tax compliance costs and tax avoidance strategies can also increase a company's operational costs if they are not managed effectively (Joseph et al., 2017; Stamatopoulos et al., 2017). Thus, operational costs are suspected to have an impact on corporate income tax.

H4: Operational costs have a significant effect on corporate income tax.

Company profitability is the main factor influencing the amount of corporate income tax, as tax is imposed on the company's taxable profit (Detquizan-Ramirez et al., 2024; Lilford and Guj, 2021). Companies with high levels of profitability tend to have larger tax liabilities, although some companies carry out tax optimization to reduce their tax burden (Lee et al., 2025). On the other hand, operating costs play a significant role in influencing a company's profitability. Efficient operational cost management can improve profitability, thereby increasing taxable profit (Chacon-Manco et al., 2025; Surtikanti et al., 2023). Conversely, high operating costs can reduce corporate profits and reduce corporate tax liabilities. Furthermore, research on cost stickiness shows that operating cost dynamics can influence the relationship between sales growth and corporate profitability, thus suggesting that operating costs can also moderate the relationship between profitability and corporate income tax (Lefebvre, 2025; Parast et al., 2026).

H5: Operating costs moderate the effect of profitability on corporate income tax.

Leverage indicates the extent to which a company uses debt to finance its assets. The higher the company's leverage, the greater the interest expense available to reduce taxable profit, thereby lowering the corporate income tax. Companies also use debt to meet the company's operational cost needs (Sekartaji and Arifin, 2024). On the other hand, operational costs are thought to be able to strengthen or weaken the influence of leverage on corporate income tax because high operational costs can encourage companies to increase the use of debt followed by greater interest expenses, thereby reducing the company's taxable profit. Sembiring and Sitanggang (2024) research shows that operational costs significantly influence corporate income tax. The Trade-Off Theory further reinforces this relationship, illustrating that firms utilize debt to gain a tax benefit from interest payments. Consequently, operating expenses are believed to influence the impact of leverage on corporate income tax.

H6: Operating costs moderate the effect of leverage on corporate income tax.

Liquidity reflects a company's ability to meet its short-term obligations, including tax liabilities. Companies with high liquidity are typically better positioned to fulfill their tax obligations due to adequate working capital. Conversely, low liquidity can adversely affect a company's ability to comply with its financial and tax obligations.

Research by Anam and Zuardi (2018) shows that liquidity negatively impacts corporate income tax. Conversely, operating costs are thought to either strengthen or weaken the effect of liquidity on corporate income tax, as operational cost efficiency can improve a company's ability to meet its tax obligations. Thus, operating costs are thought to moderate the effect of liquidity on corporate income tax.

H7: Operating costs moderate the effect of liquidity on corporate income tax.

RESULT

Research Data Description

This descriptive study, based on 70 observations, reveals a relatively stable profitability of companies, measured by the ROA (return on assets) variable. The DAR (debt-to-assets ratio) variable shows an average value of 0.0911 and a standard deviation of 0.06815. The DAR variable has an average value of 0.383 and a standard deviation of 0.1894, indicating a moderate level of indebtedness. The CR (current ratio) variable displays an average of 2.7094 and a standard deviation of 3.39299, reflecting a relatively high liquidity, despite a significant variability in the data. Operating costs (CO) average 11.3066 with a standard deviation of 0.8395, while corporate tax (CIT) averages 24.2943 with a standard deviation of 2.52684. In general, most variables have standard deviation values that are smaller than the mean, indicating that the research data tends to be homogeneous and stable.

Table 2. Descriptive Statistics

Variable	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance
ROA	70	0.31	0.01	0.31	6.38	0.0911	0.06815	0.005
DAR	70	0.79	0.04	0.83	26.81	0.383	0.1894	0.036
CR	70	21.26	0.23	21.49	189.66	2.7094	3.39299	11.512
CO	70	2.83	10	12.83	791.47	11.3066	0.8395	0.705
CIT	70	10.01	18.85	28.86	1700.6	24.2943	2.52684	6.385
Valid N (listwise)	70							

Classic assumption test
Normality test

According to the results of the Kolmogorov-Smirnov normality test for a single sample, the asymptotic significance value (two-tailed) was 0.200 for regression model 1 and 0.200 for regression model 2. Since this value exceeds the significance threshold of 0.05, it can be concluded that the residual data from both regression models follow a normal distribution. Therefore, the regression model in this study meets the normality assumption and can be utilized for hypothesis testing.

Table 3. Normality Test

	Unstandardized Residual
Asymp. Sig. (2-tailed) regression model 1	0.200
Asymp. Sig. (2-tailed) regression model 2	0.200

Multicollinearity Test

Based on multicollinearity test results, every independent variable in the regression analysis shows a tolerance exceeding 0.10 and a Variance Inflation Factor (VIF) beneath 10. In regression model 1, the ROA variable shows a tolerance of 0.912 and a VIF of 1.097, the DAR variable has a tolerance of 0.634 and a VIF of 1.576, and the CR variable exhibits a tolerance of 0.685 and a VIF of 1.460. In regression model 2, the ROA variable indicates a tolerance of 0.815 and a VIF of 1.226, the DAR variable has a tolerance of 0.598 and a VIF of 1.672, the CR variable shows a tolerance of 0.615 and a VIF of 1.626, and the CO variable presents a tolerance of 0.775 and a VIF of 1.290. Therefore, it can be concluded that the variables analyzed do not exhibit any signs of multicollinearity, confirming the validity of the regression model. The DAR variable, with a tolerance of 0.634 and a VIF of 1.576, is suitable for use in research.

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Table 4. Multicollinearity Test Results

Independent Variables	Dependent Variable	Tolerance	VIF
ROA	CO	0.912	1.097
DAR	CO	0.634	1.576
CR	CO	0.685	1.460
ROA	CIT	0.815	1.226
DAR	CIT	0.598	1.672
CR	CIT	0.615	1.626
CO	CIT	0.775	1.290

Heteroscedasticity Test

Based on the scatterplots for the first and second regression models, the data points are randomly distributed above and below 0 on the Y-axis and do not form a specific pattern, such as a wavy, widening, or narrowing pattern. This indicates that there are no symptoms of heteroscedasticity in the first regression model.

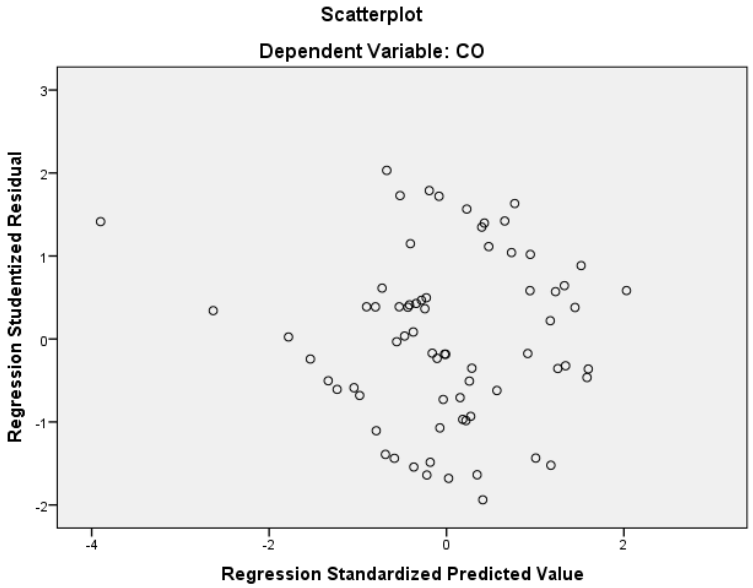

Figure 3. Heteroscedasticity Model 1

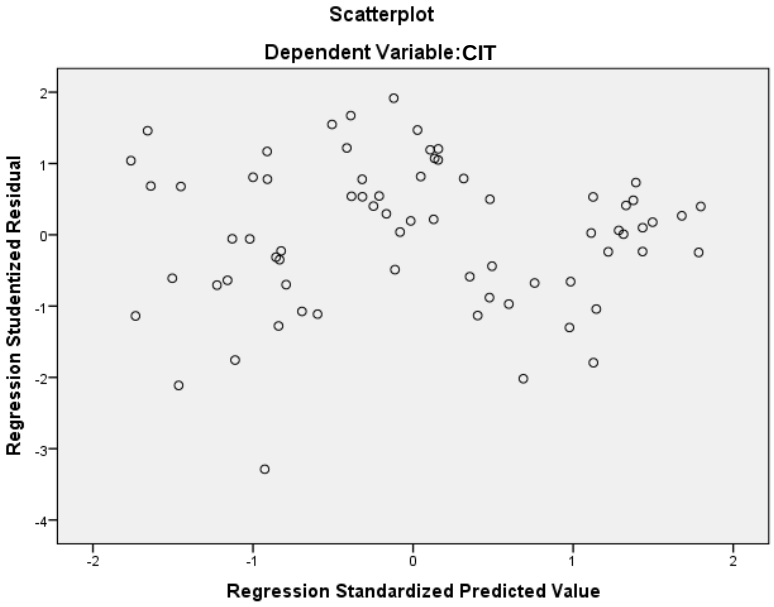

Figure 4. Heteroscedasticity Model 2

Determination Coefficient Test

Based on Table 5, the coefficient of determination test, Model 1 obtained an Adjusted R Square value of 0.190 or 19%. This indicates that the profitability (ROA), leverage (DAR), and liquidity (CR) variables are able to explain 19% of the variation in operational costs, while other variables outside the research model explain the remaining 81%. In addition, Std. Error of the Estimate value of 0.75576 indicates the level of prediction error of the first regression model.

Table 5. Coefficient of Determination Test

Model	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.225	0.190	0.75576
2	0.857	0.849	0.98311

Meanwhile, in model 2, The Adjusted R Square value was 0.849, which corresponds to 84.9%. This shows that the factors profitability (ROA), leverage (DAR), liquidity (CR), and operational expenses accounted for 84.9% of the changes in corporate income tax, while the other 15.1% was affected by variables not included in the study. The Std. Error of the Estimate value of 0.98311 indicates that the second regression model has a relatively small level of prediction error so that the model is considered quite good at explaining the dependent variable.

F Statistical Test

Based on the results of the simultaneous test (F-test), Model 1 yielded an F-value of 6.380 with a significance level of 0.001. Since the significance level is less than 0.05, it can be concluded that the variables of profitability (ROA), leverage (DAR), and liquidity (CR) have a significant simultaneous effect on operating costs.

Table 6. F-Test

Model	F	Sign
1	6.380	0.001
2	97.707	0.000

Meanwhile, in Model 2, an F-value of 96.252 was obtained with a significance level of 0.000. A significance value smaller than 0.05 indicates that the variables of profitability (ROA), leverage (DAR), liquidity (CR), and operating costs simultaneously have a significant effect on corporate income tax. Thus, the regression model in this study is suitable for hypothesis testing.

T-Test

According to the results of the partial t-test conducted on the initial regression model, the profitability variable (ROA) shows a coefficient of 3.906 and a significance level of 0.007 < 0.05, indicating that profitability has a positive and significant effect on operating expenses. The financial leverage variable (DAR) presents a coefficient of -1.210 with a significance level of 0.049 < 0.05, demonstrating that financial leverage has a negative and significant impact on operational costs. In conclusion, the liquidity variable (CR) reveals a coefficient of -0.089 with a significance level of 0.008 < 0.05, indicating that liquidity has a negative and significant effect on operating costs.

Table 7. T-Test

Independent Variable	Dependent Variable	B	Sig (1-tailed)	Conclusion
ROA	CO	3.906	0.007	Accepted
DAR	CO	-1.210	0.049	Accepted
CR	CO	-0.089	0.008	Accepted
ROA	ITC	5.275	0.008	Accepted
DAR	ITC	1.440	0.079	Not accepted
CR	ITC	0.007	0.878	Not accepted
CO	ITC	2.654	0.000	Accepted

In the second regression model, the return on assets (ROA) variable shows a coefficient of 5.275 and a significance level of 0.008, which is less than 0.05. This indicates that profitability has a positive and significant effect on corporate tax. The financial leverage (DAR) variable has a coefficient of 1.440 and a significance level of 0.079, which is greater than 0.05, suggesting that financial leverage has a positive but not significant effect on corporate tax. The liquidity (CR) variable presents a coefficient of 0.007 and a significance level of 0.878, which is also greater than 0.05, indicating that liquidity has a positive but not significant effect on corporate tax. Furthermore, the coefficient for the operating expenses (CO) variable is 2.654, with a significance level of 0.000, which is less than 0.05; thus, operating expenses have a positive and significant effect on the company's corporate tax.

Path Analysis and Sobel Test

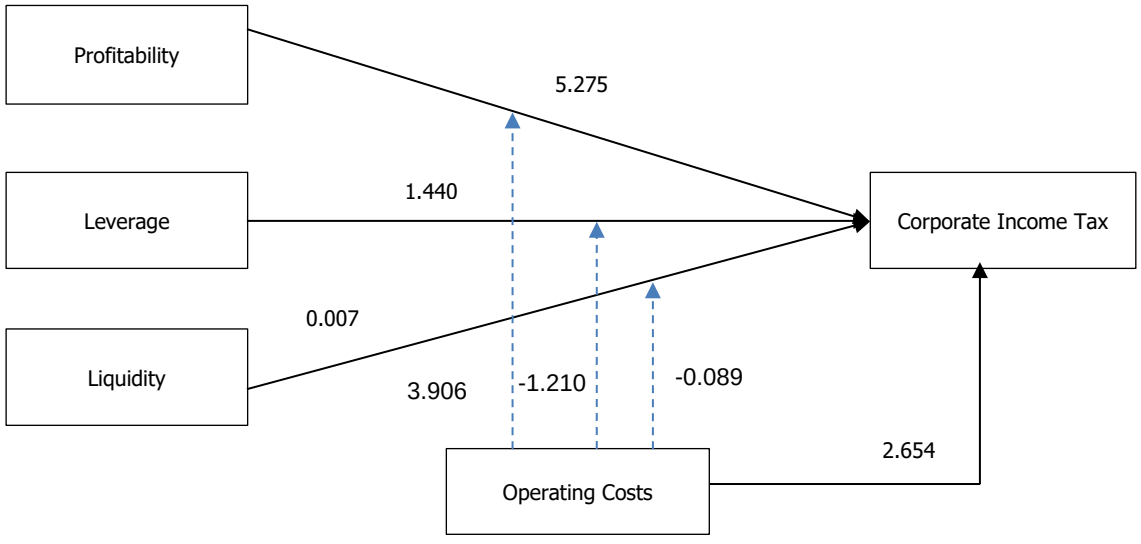

Figure 5. Sobel test results

Based on Figure 5, the indirect effect of profitability (ROA) on corporate income tax (CIT) through operating costs (CO), it is obtained from the multiplication of the ROA → CO coefficient of 3.906 with the CO → CIT coefficient of 2.654, resulting in an indirect effect of 10.365. This indicates that profitability indirectly has a positive effect on corporate income tax through the company's operating costs.

Furthermore, the indirect effect, the influence of leverage (DAR) on corporate income tax (CIT) through operating costs (CO) is obtained from the result of multiplying the DAR → CO coefficient of -1.210 by the CO → CIT coefficient of 2.654, resulting in an indirect effect of -3.211. This value indicates that leverage indirectly has a negative effect on corporate income tax through the company's operating costs.

Meanwhile, the indirect effect of liquidity (CR) on corporate income tax (CIT) through operating costs (CO) is obtained from the multiplication of the CR → CO coefficient of -0.089 with the CO → CIT coefficient of 2.654, resulting in an indirect effect of -0.236. This value indicates that liquidity indirectly has a negative effect on corporate income tax through operating costs.

Table 8. Processing results with path analysis

Variable	Test statistic	Std. Error	p-value	Conclusion
ROA-CO-ITC	2.755180	3.762558	0.005866	Accepted
DAR-CO-ITC	-1.992110	1.612030	0.046359	Accepted
CR-CO-ITC	-2.742960	0.086114	0.006089	Accepted

The Sobel test was performed to investigate the indirect (intervening) effect in this research utilizing the Calculation for the Sobel Test quantpsy, specifically by analyzing the B value and standard error in the unstandardized coefficients table. According to the findings from the path analysis and the Sobel Test, the operational costs (CO) variable has been demonstrated to mediate the relationship between profitability (ROA), leverage (DAR), and liquidity (CR) concerning corporate income tax (CIT). In the relationship between DAR and ITC through CO, a statistical test value of -1.992110 was obtained with a p-value of 0.046359 < 0.05, so that operational costs were able to significantly mediate the effect of leverage on corporate income tax. Moreover, the correlation between ROA and ITC via CO yields a statistical test value of 2.755180, accompanied by a p-value of 0.005866, which is less than 0.05. This indicates that operational costs significantly mediate the impact of profitability on corporate income tax.

Meanwhile, the association between CR and CIT through CO produced a test statistic of -2.742960 and a p-value of 0.006089, which is less than 0.05. This suggests that operational costs significantly mediate the impact of liquidity on corporate income tax. Consequently, the results of the Sobel Test demonstrate that operational costs play a crucial mediating role in the relationship among leverage, profitability, and liquidity concerning corporate income tax.

DISCUSSION

The Effect of Profitability on Corporate Income Tax

The results of the hypothesis tests indicate that profitability has a positive and significant effect on corporate tax, with a coefficient of 5.275 and a significance level of 0.008 < 0.05. These findings suggest that the more an enterprise is able to generate profits from its assets, the higher the corporate tax it is required to pay, due to the increase in its taxable income, which serves as the basis for calculating this corporate income tax. The findings of this study are consistent with tax theory, which states that increased profitability leads to higher corporate tax liabilities. In the mining sector, high profitability is generally driven by increased production, higher commodity prices, and improved operational efficiency, all of which contribute to higher corporate profits. This study is consistent with the findings of Pamungkas et al. (2021) and Kismanah et al. (2022) who found that return on assets has a significant effect on corporate income tax liability. This contrasts with the study conducted by Nainggolan and Febriansyah (2021), which found that the Return on Assets variable had no significant effect on Corporate Income Tax Liabilities. This indicates that the higher the return on assets held by companies in the sub-sector, the greater the impact on corporate income tax, as higher profits directly affect the tax burden borne by the company.

The Effect of Leverage on Corporate Income Tax

The findings from the hypothesis testing reveal that leverage exerts a positive yet statistically insignificant influence on corporate income tax, evidenced by a coefficient of 1.440 and a significance level of 0.079, which exceeds the threshold of 0.05. These findings imply that the extent of a company's debt usage does not have a meaningful impact on corporate income tax within the mining industry. This situation indicates that the company has not yet fully utilized debt as a tax-saving strategy, using interest expense as a tax shield. In theory, leverage can provide tax benefits by reducing taxable income through interest expenses (Dwenger and Steiner, 2014; Fleckenstein et al., 2020; Hemmelgarn and Teichmann, 2014), However, in mining companies, this relationship tends to be weak because debt is primarily used to support the company's operational and investment needs. Additionally, the impact of leverage on taxes is influenced by company-specific factors such as profitability, business risk, company growth, and non-debt tax shields, making the relationship between leverage and taxes insignificant

(Acedo-Ramirez et al., 2013). The results of this study also show that highly leveraged companies still have significant tax liabilities if they are able to generate high profits.

The Effect of Liquidity on Corporate Income Tax

The findings from the hypothesis test suggest that liquidity exerts a positive yet statistically insignificant impact on corporate income tax, reflected by a coefficient of 0.007 and a significance level of 0.878, which exceeds the threshold of 0.05. This implies that the levels of corporate liquidity have not had a meaningful effect on corporate income tax for companies within the mining sector. In theory, companies with high levels of liquidity tend to have better ability to fulfill tax obligations and are less likely to engage in tax avoidance practices because the company's financial condition is relatively stable (Boateng et al., 2025; Chiachio and Martinez, 2019). However, in mining companies, liquidity levels do not always reflect the company's profit, which serves as the basis for tax assessment. The findings of this study are consistent with previous research by Anam and Zuardi (2018); Widanto and Pramudianti (2021) who found that liquidity does not affect the amount of corporate income tax payable.

The Effect of Operating Expenses on Corporate Income Tax

The findings from the hypothesis testing reveal that operating costs exert a positive and significant influence on corporate income tax, evidenced by a coefficient of 2.654 and a significance level of 0.000, which is less than 0.05. This indicates that as a company's operating costs increase, so too does its corporate income tax within the mining sector. This situation indicates that high operating costs at mining companies generally go hand in hand with increased operational activity, production, and revenue, so that the company's profits continue to rise, leading to higher corporate income taxes. Operational efficiency can reduce a company's operating costs, thereby indirectly affecting its tax burden (Nagashree et al., 2025). The results of this study are consistent with previous research by Anam and Zuardi (2018); Firdiansyah et al. (2019); Salamah et al. (2016), which concluded that, in part, operating costs have a significant effect on the amount of corporate income tax payable.

The effect of profitability on corporate income tax, moderated by operating expenses

The results of the test suggest that operating expenses considerably influence the relationship between profitability and corporate income tax. This is supported by a Sobel Test statistic of 2.755180 and a p-value of 0.005866, which is less than 0.05, as well as an indirect effect value of 10.365. These results indicate that the higher a company's profitability, coupled with efficient operational cost management, the higher its corporate income tax. Efficient operational cost management can increase a company's profits, resulting in a higher tax liability. However, if operational cost management is inefficient, even if the company has high income, its tax liability will be low due to high operational costs. The results of this study are in line with those of Firdiansyah et al. (2019); Salamah et al. (2016) who stated that operational costs have a significant effect on corporate income tax and that operational cost efficiency can increase company profits, resulting in higher taxes paid by the company. However, the research results of Anggraini and Kusufiyah (2020) show that companies that are unable to reduce operational costs still experience a decline in operating profits even though they have high sales.

The effect of leverage on corporate income tax with operating costs being a moderating factor

The findings from the test indicate that operational expenses considerably influence the impact of leverage on corporate income tax. This is supported by the Sobel Test statistic of -1.992110, with a p-value of 0.046359, which is less than 0.05, and an indirect effect value of -3.211. These results indicate that high operational costs encourage companies to increase their use of debt to finance operations, thereby incurring interest expenses that can reduce taxable profits and lower corporate income tax. Efficiently managed company operating costs can cover all company activities, eliminating the need for debt. However, inefficient management and minimal equity can force companies to borrow to cover operational costs. High corporate debt, coupled with high interest costs, can then reduce profits, which are the basis for calculating corporate income tax. Sartono (2010) stated that operating leverage arises because a company has fixed operating costs. Operating costs associated with operational leverage can also affect a company's capital structure, where high operational leverage increases the sensitivity of earnings to changes in revenue and influences the company's financial leverage decisions (Babar and Habib, 2022; Grau and Reig, 2020; Tao et al., 2022).

The effect of liquidity on corporate income tax with operating costs being a moderating factor

The findings from the test indicate that operational expenses considerably influence the relationship between liquidity and corporate income tax. This is supported by the Sobel Test statistic of -2.742960, a p-value of 0.006089 which is less than 0.05, and an indirect effect value of -0.236. These results indicate that liquidity negatively impacts corporate income tax through a company's operating costs. High liquidity enables a company to meet operational needs with current assets, supporting more efficient cost management and affecting taxable profit. However, the liquidity ratio does not always reflect the extent of a company's profitability for taxation purposes. The presence of operating costs as a moderating variable indicates that a company's operations are a significant factor in determining the amount of corporate income tax. Under economic pressure, companies tend to increase their cash

usage for operational needs, resulting in higher operating costs and a lower impact of liquidity on taxes. Therefore, companies need to manage operating costs efficiently to maintain liquidity and meet their tax obligations. This study's findings are also supported by previous research, which suggests that tax policy can impact a company's liquidity and tax payments, and that good corporate governance can improve a company's operational liquidity (Graham and Kim, 2009; Hashani et al., 2022; Islam, 2025).

CONCLUSION

This study investigates the determinants of corporate income tax in mining companies listed on the Jakarta Stock Exchange for the period 2019-2025, analyzing the impact of profitability (ROA), financial leverage (DAR), and liquidity (CR), with operational costs acting as a moderating factor. The findings indicate that profitability has a positive and significant effect on corporate tax, suggesting that higher profitability increases taxable income and, consequently, tax liabilities. Conversely, financial leverage and liquidity do not have a significant direct effect on corporate income tax, indicating that the use of debt and short-term financial capacity are not the primary determinants of corporate tax payments in the mining sector. The results also reveal that operational costs have a positive and significant effect on corporate income tax. Furthermore, operational costs significantly moderate the relationship between profitability, financial leverage, liquidity, and corporate income tax. Specifically, operational costs enhance the effect of profitability on corporate income tax and play an important mediating role between financial leverage, liquidity, and tax liabilities. These findings confirm that operational costs are crucial in explaining how a company's financial situation translates into tax liabilities.

These findings imply that corporate management should focus not only on increasing profitability but also on managing operational costs efficiently, as operational efficiency can affect financial performance and tax liabilities. For investors, profitability and operational cost management can serve as important indicators in assessing a company's future performance and sustainability. For policymakers, these research findings provide evidence that operational activities and cost structure are important determinants of corporate tax revenue, particularly in the mining industry. Despite these contributions, this study is limited to mining companies and a specific set of financial variables. Therefore, future research is recommended to include other determinants such as firm size, sales growth, capital intensity, corporate governance, tax avoidance practices, and ESG factors, as well as broader industry coverage and longer observation periods to gain more comprehensive insights into the determinants of corporate income tax.

REFERENCES

Acedo-Ramirez, M. A., Ayala-Calvo, J. C., & Rodríguez-Osés, J. E. (2013). Capital structure of small companies in the Spanish footwear sector: relevant factors. *SERIEs, 4*(2), 155–173. https://doi.org/10.1007/s13209-012-0085-8

Agustin, R. A., Pandowo, H., & Kusumaningrum, D. (2024). Pengaruh Return On Asset (Roa), Leverage, Intensitas Modal, Dan Ukuran Perusahaan Terhadap Agresivitas Pajak. *Jurnal Ekonomi, Akuntansi, Dan Perpajakan, 1*(4), 15–29. https://doi.org/10.61132/jeap.v1i4.359

Aliyani, T., & Machdar, N. M. (2024). Determinan Pajak Penghasilan Badan Terutang Berdasarkan Biaya Operasional, Perencanaan Pajak dan Penjualan Bersih. *Socius: Jurnal Penelitian Ilmu-Ilmu Sosial, 2*(5), 116–121. https://doi.org/10.5281/zenodo.14522893

Alkurdi, A., Almarayeh, T., Bataineh, H., Al Amosh, H., & Khatib, S. F. A. (2024). Corporate profitability and effective tax rate: the moderating role of board gender diversity. *Journal of Islamic Accounting and Business Research, 15*(1), 153–171. https://doi.org/10.1108/JIABR-05-2022-0122

Anam, C., & Zuardi, L. R. (2018). Analisis Rasio Likuiditas, Rasio Solvabilitas, Dan Biaya Operasional Terhadap Pajak Penghasilan Badan Terutang (Sektor Pertambangan Di BEI Tahun 2011-2016*). Margin Eco : Jurnal Ekonomi Dan Perkembangan Bisnis, 2*(1), 43–68. https://ejournal.unwaha.ac.id/index.php/margin/article/view/198

Anggraini, D., & Kusufiyah, Y. V. (2020). Dampak Profitabilitas, Leverage dan Biaya Operasional Terhadap Pajak Penghasilan Badan (Studi Empiris Pada Perusahaan Food and Beverage Yang Terdaftar di Bursa Efek Indonesia). *Jurnal Ekonomi Dan Bisnis Dharma Andalas, 22*(1), 32–47. https://jurnal.unidha.ac.id/index.php/JEBD/article/view/76

Babar, M., & Habib, A. (2022). Product market competition and operating leverage: International evidence. *Journal of Corporate Accounting & Finance, 33*(3), 189–216. https://doi.org/10.1002/jcaf.22558

Barbera, A., Merello, P., & Molina, R. (2020). Determinants of corporate effective tax rates: evidence from the euro area. *Academia Revista Latinoamericana de Administración, 33*(3/4), 427–444. https://doi.org/10.1108/ARLA-12-2019-0238

Baum, C. F., Chakraborty, A., Han, L., & Liu, B. (2012). The effects of uncertainty and corporate governance on

firms' demand for liquidity. *Applied Economics, 44*(4), 515–525. https://doi.org/10.1080/00036846.2010.508733

Boateng, K., Omane-Antwi, K. B., & Queku, Y. N. (2025). Liquidity Constraints and Tax Liability Targeting of Banks in Ghana: Analysis of Persistence and Distance to Target. *Foundations of Management, 17*(1), 247–272. https://doi.org/10.2478/fman-2025-0017

Boateng, K., Omane-Antwi, K. B., & Queku, Y. N. (2026). Liquidity Constraint and Tax Planning Activity Nexus in The Ghanaian Banking Sector. *African Journal of Applied Research, 12*(1), 150–173. https://doi.org/10.26437/bwmjys10

BPS. (2026). Realisasi Pendapatan Negara (Milyar Rupiah), 2025. *Badan Pusat Statistik*. https://www.bps.go.id/id/statistics-table/2/MTA3MCMy/realisasi-pendapatan-negara--milyar-rupiah-.html

Chacon-Manco, F. R., Vivanco-Vivanco, X. J., & Coaguila-Reyes, C. D. P. (2025). Incidence of Operating Costs on the Profitability of an Agro-industrial Company 2021-2023. *Proceedings of the 23rd LACCEI International Multi-Conference for Engineering, Education and Technology (LACCEI): "Engineering, Artificial Intelligence, and Sustainable Technologies in Service of Society."* https://doi.org/10.18687/LACCEI2025.1.1.1973

Chen, Y., Ge, R., Louis, H., & Zolotoy, L. (2019). Stock liquidity and corporate tax avoidance. *Review of Accounting Studies, 24*(1), 309–340. https://doi.org/10.1007/s11142-018-9479-6

Chen, Z., Harford, J., & Kamara, A. (2019). Operating Leverage, Profitability, and Capital Structure. *Journal of Financial and Quantitative Analysis, 54*(1), 369–392. https://doi.org/10.1017/S0022109018000595

Chiachio, V. F. de O., & Martinez, A. L. (2019). Effects of the Fleuriet model and liquidity ratios on tax aggressiveness. *Revista de Administração Contemporânea, 23*(2), 160–181. https://doi.org/10.1590/1982-7849rac2019180234

Detquizan-Ramirez, L. Y., Ullilen-Goña, S. E., Puican Rodriguez, V. H., Ferré López, D. I., Salazar Asalde, A., & García Vera, W. R. (2024). Impact of tax benefits on Peruvian companies' financial results. *Sapienza: International Journal of Interdisciplinary Studies, 5*(3), e24056. https://doi.org/10.51798/sijis.v5i3.747

Dwenger, N., & Steiner, V. (2014). Financial leverage and corporate taxation: evidence from German corporate tax return data. *International Tax and Public Finance, 21*(1), 1–28. https://doi.org/10.1007/s10797-012-9259-3

Enforcea. (2026). Ketentuan Pajak untuk Industri Pertambangan di Indonesia. *enforcea.com*. https://enforcea.com/Blog/ketentuan-pajak-untuk-industri-pertambangan-di-indonesia

Fatica, S., Hemmelgarn, T., & Nicodème, G. (2013). The Debt-Equity Tax Bias: Consequences and Solutions. *Reflets et Perspectives de La Vie Économique, Tome LII*(1), 5–18. https://doi.org/10.3917/rpve.521.0005

Febriana, F. B., & Kurniawati, L. (2023). Analysis of Determinants Affecting the Effective Tax Rate (ETR) (Empirical Study of Mining Sector Manufacturing Companies Listed on the Indonesia Stock Exchange in 2018-2021). *The International Journal of Business Management and Technolog, 7*(1), 507–518.

Firdiansyah, M. A., Sudarmanto, E., & Fadillah, H. (2019). Pengaruh Profitabilitas Dan Biaya Operasional Terhadap Beban Pajak Penghasilan Badan Terutang Pada Perusahaan Perdagangan Eceran Yang Terdaftar Di BEI (Periode 2013-2017). *Jurnal Online Mahasiswa (JOM) Bidang Akuntansi, 5*(1). https://jom.unpak.ac.id/index.php/akuntansi/article/view/1058

Fleckenstein, M., Longstaff, F. A., & Strebulaev, I. A. (2020). Corporate Taxes and Capital Structure: A Long-Term Historical Perspective. *Critical Finance Review, 9*(1–2), 1–28. https://doi.org/10.1561/104.00000069

Fonseca, D., & Dias, P. (2019). The Impact of the New Tax Framework for Corporate Financing of 2013 on Leverage. *2019 14th Iberian Conference on Information Systems and Technologies (CISTI)*, 1–8. https://doi.org/10.23919/CISTI.2019.8760767

Fu, Y., He, F., Li, J., & Zan, B. (2024). Commonality in liquidity and corporate default risk - Evidence from China. *Research in International Business and Finance, 69*, 102280. https://doi.org/10.1016/j.ribaf.2024.102280

Graham, J. R., & Kim, H. (2009). The Effects of the Length of the Tax-Loss Carryback Period on Tax Receipts and Corporate Marginal Tax Rates. *National Tax Journal, 62*(3), 413–427. https://doi.org/10.17310/ntj.2009.3.04

Grau, A., & Reig, A. (2020). Operating leverage and the cost of debt in European agri-food firms. *Spanish Journal of Agricultural Research, 18*(3), e0109. https://doi.org/10.5424/sjar/2020183-16254

Hakim, L. N. (2024). Penerimaan Negara Sektor Minerba 2025 Diproyeksi Makin Susut. *IMA (Indonesian Amining Association)*. https://ima-api.org/penerimaan-negara-sektor-minerba-2025-diproyeksi-makin-susut/

Hamilah, H. (2020). The Effect of Commissioners, Profitability, Leverage, and Size of the Company to Submission Timeliness of the Financial Statements Tax Avoidance as an Intervening Variable. *Systematic Reviews in*

Pharmacy, 11(1). https://doi.org/10.5530/srp.2020.1.45

Han Kim, E., Lu, Y., Shi, X., & Zheng, D. (2022). How does stock liquidity affect corporate tax noncompliance? Evidence from China. *Journal of Comparative Economics, 50*(3), 688–712. https://doi.org/10.1016/j.jce.2022.01.008

Hashani, M., Bajrami, R., & Ukshini, K. (2022). The impact of tax changes on the liquidity of construction companies in the developing market. *Journal of Governance and Regulation, 11*(2, special issue), 234–243. https://doi.org/10.22495/jgrv11i2siart3

Heider, F., & Ljungqvist, A. (2015). As certain as debt and taxes: Estimating the tax sensitivity of leverage from state tax changes. *Journal of Financial Economics, 118*(3), 684–712. https://doi.org/10.1016/j.jfineco.2015.01.004

Hemmelgarn, T., & Teichmann, D. (2014). Tax reforms and the capital structure of banks. *International Tax and Public Finance, 21*(4), 645–693. https://doi.org/10.1007/s10797-014-9321-4

Hendrik, A. K. S., & Rahmawati, M. I. (2021). Pengaruh Profitabilitas dan Leverage Terhadap Pajak Penghasilan Badan dengan Biaya Operasional sebagai Variabel Moderating. *Jurnal Ilmu Dan Riset Akuntansi (JIRA), 10*(3). https://jurnalmahasiswa.stiesia.ac.id/index.php/jira/article/view/3847

Hery. (2016). Analisis laporan keuangan. PT Gramedia Widya Sarana Indonesia.

Husnan, S. (2014). Manajemen Keuangan Teori dan Penerapan (Keputusan Jangka Panjang) (Keempat). *BPFE UGM*.

Islam, A. U. (2025). Does corporate governance performance affect the firm's operational liquidity? A study of S&P, BSE 500 firms. *Journal of Management and Governance, 29*(3), 669–697. https://doi.org/10.1007/s10997-024-09712-0

Jezek, F. (2014). Comparative Research in the Area of Corporate Income Tax. *Procedia - Social and Behavioral Sciences, 110*, 997–1005. https://doi.org/10.1016/j.sbspro.2013.12.946

Joseph, K., O'Brien, T., & Correa, H. (2017). Tax strategies and organisational communication in MNC supply chains: case studies. *International Journal of Logistics Research and Applications, 20*(2), 105–128. https://doi.org/10.1080/13675567.2016.1206065

Jusuf, J. (2017). Analisis Kredit untuk Credit (Account) Officer. PT. Gramedia Pustaka Utama.

Kismanah, I., Kimsen, K., & Ramadhan, M. D. (2022). Pengaruh Profitabilitas, Tingkat Utang dan Biaya Operasional terhadap Pajak Penghasilan Badan. *Journal of Accounting Science and Technology, 2*(1). https://jurnal.umt.ac.id/index.php/JAST/article/view/5660

Kulchania, M. (2016). Cost Structure and Payout Policy. *Financial Management, 45*(4), 981–1009. https://doi.org/10.1111/fima.12133

Kusrina, B. L., & Fatimah, P. D. F. (2021). Liquidity, Profitability and Operational Costs on Corporate Income Tax. *Ilomata International Journal of Tax and Accounting, 2*(4), 236–245. https://doi.org/10.52728/ijtc.v2i4.335

Landa, M. (2013). Analysis of operating costs variability in selected sectors of the Czech Republic for the period 2007-2010. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis, 60*(2), 165–174. https://doi.org/10.11118/actaun201260020165

Law, K. K. F., & Mills, L. F. (2015). Taxes and Financial Constraints: Evidence from Linguistic Cues. *Journal of Accounting Research, 53*(4), 777–819. https://doi.org/10.1111/1475-679X.12081

Lazar, S. (2014). Determinants of the Variability of Corporate Effective Tax Rates: Evidence from Romanian Listed Companies. *Emerging Markets Finance and Trade, 50*(sup4), 113–131. https://doi.org/10.2753/REE1540-496X5004S4007

Lee, J., Jung, S., & Cho, H. (2025). Managerial ability and tax avoidance adjustment toward the optimal level. *Spanish Journal of Finance and Accounting / Revista Española de Financiación y Contabilidad, 54*(1), 57–85. https://doi.org/10.1080/02102412.2024.2380954

Lefebvre, V. (2025). Looking at the relationship between growth and profitability: the role of cost stickiness as a strategic liability. *Journal of Accounting & Organizational Change, 21*(1), 70–93. https://doi.org/10.1108/JAOC-06-2023-0107

Li, B., Liu, C., & Sun, S. T. (2021). Do corporate income tax cuts decrease labor share? Regression discontinuity evidence from China. *Journal of Development Economics, 150*(January), 102624. https://doi.org/10.1016/j.jdeveco.2021.102624

Lilford, E., & Guj, P. (2021). Corporate Income Tax Provisions and Fiscal Incentives Specific to Mining. *In Modern*

Approaches in Solid Earth Sciences (pp. 71–100). https://doi.org/10.1007/978-3-030-49821-4_5

Magdalena, Y., Agustiawan, A., & Armel, R. S. (2024). Pengaruh Struktur Modal, Profitabilitas dan Biaya Operasional terhadap Pajak Penghasilan Badan Terhutang pada Perusahaan Pertambangan (Periode 2020-2022). *EKONOMIKA45 : Jurnal Ilmiah Manajemen, Ekonomi Bisnis, Kewirausahaan, 12*(1), 434–454. https://doi.org/10.30640/ekonomika45.v12i1.3581

Mahadewi, B. P., & Astuti, T. D. (2025). Analisis Pengaruh ROA, CR, dan Sales Growth (SG) Terhadap Financial Distress pada Perusahaan Sub Sektor Pariwisata dan Rekreasi di BEI Selama Masa Pemulihan Pasca-Covid-19 (2022–2024). *El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam, 6*(6), 2439 – 245. https://doi.org/10.47467/elmal.v6i6.8266

Marozva, G. (2026). Firm Performance, Liquidity and Capital Structure Nexus: Evidence from the PMG Panel-ARDL Approach. *Risks, 14*(3), 61. https://doi.org/10.3390/risks14030061

Maulana, M. I., & Andni, R. (2024). The Influence of Financial Ratios on Stock Prices of Mining Sector Companies in ISSI 2019-2023 Period. *Jurnal Ilmiah Ekonomi Islam, 10*(3), 3254–3261. https://doi.org/10.29040/jiei.v10i3.15187

Molina, C. A. (2005). Are Firms Underleveraged? An Examination of the Effect of Leverage on Default Probabilities. *The Journal of Finance, 60*(3), 1427–1459. https://doi.org/10.1111/j.1540-6261.2005.00766.x

Muhmad, S. N., Kassim, C. K. H. C. K., & Sallem, N. R. M. (2024). The Mediation Effects of Financial Distress on the Relationship between Capital Intensity and Return on Assets Towards Corporate Tax Avoidance. *Management and Accounting Review, 23*(3). https://doi.org/10.24191/MAR.V23i03-17

Nagashree, Sheethal, B. R., Angadi, P., Sowbhagya, Patil, D. T., & Behera, R. (2025). An Analysis of GST's Impact on Logistics Management and Operational Costs in India. *In Studies in Systems, Decision and Control* (pp. 567–584). https://doi.org/10.1007/978-3-031-87372-0_49

Nainggolan, E. P., & Febriansyah, A. R. (2021). Pengaruh Rasio Profitabilitas Dan Biaya Operasional Terhadap Pph Badan Terutang Pada Perusahaan Sub Sektor Makanan Dan Minuman Yang Terdaftar Di Bei Tahun 2015 – 2019. *Seminar Nasional Teknologi Edukasi Dan Humaniora 2021*, Ke-1, 1–33. https://d1wqtxts1xzle7.cloudfront.net/90186934/firza_2C_5._edisah_27-33.pdf_filename_UTF-8firza_2C_5._edisah_27-33-libre.pdf?1661339670=&response-content-disposition=inline%3B+filename%3DPengaruh_Rasio_Profitabilitas_dan_Biaya.pdf&Expires=1779251947&Signa

Nangoy, F. (2024). Indonesia launches nickel, tin online tracking system. *Reuters*. https://www.reuters.com/markets/commodities/indonesia-launches-nickel-tin-online-tracking-system-2024-07-22/

Nejad, N. R., & Wasiuzzaman, S. (2015). Multilevel Determinants of Capital Structure: Evidence from Malaysia. *Global Business Review, 16*(2), 199–212. https://doi.org/10.1177/0972150914564274

Nordin, N., Hamid, N. A., Rasit, Z. A., Razak, F. A., & Mohamad, A. B. (2024). Examining determinants of book-tax difference: Insights from Malaysian multinational corporations. *Journal of Ecohumanism, 3*(3), 16–26. https://doi.org/10.62754/joe.v3i3.3262

Pamungkas, L. B., Sumiyarti, S., Anggraini, N., & Muin, M. R. (2021). Pengaruh Profitabilitas dan Struktur Modal Terhadap PPh Badan Terutang pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Tahun 2015-2019. *Jurnal Apresiasi Ekonomi, 9*(2), 167–179. https://doi.org/10.31846/jae.v9i2.386

Parast, M., Golgeci, I., & Golmohammadi, D. (2026). Balancing operational efficiency and service quality: how strategy shapes performance in the US airline industry. *International Journal of Operations & Production Management, 46*(2), 240–261. https://doi.org/10.1108/IJOPM-02-2024-0131

Pratama, R. D., Junaidi, A., & Yuniarti, R. (2026). Determinants of Stock Returns with Tax Risk as a Moderating Variable. *Jurnal Akuntansi, Keuangan, Dan Manajemen, 7*(2), 461–482. https://doi.org/10.35912/jakman.v7i2.6126

Purdiansyah, A., & Nurasik, N. (2018). Pengaruh Biaya Operasional dan Beban Pajak terhadap Kemampuan Laba Bersih dengan Persediaan sebagai Variabel Moderasi Perusahaan Makanan dan Minuman yang terdaftar di BEI tahun 2014-2016. *Indonesian Journal of Law and Economics Review, 1*(2). https://doi.org/10.21070/ijler.v1i2.3106

Putri, N. D., Fathurahman, M. A., Hartianti, A., & Budianto, E. (2024). The Impact of Current Ratio, Inventory Turnover, on Return on Assets In Listed Mining Sector Companies on IDX In 2019-2022. *Journal Reseach of Social Science, Economics and Management, 3*(10), 1687–1698. https://doi.org/10.59141/jrssem.v3i08.559

Riswandari, E., & Bagaskara, K. (2020). Agresivitas pajak yang dipengaruhi oleh kompensasi eksekutif, koneksi

politik, pertumbuhan penjualan, leverage, dan profitabilitas. *Jurnal Akuntansi, 10*(3), 261–274. https://doi.org/10.33369/j.akuntansi.10.3.261-274

Rodriguez, E. F. (2004). Los Factores Condicionantes de la Presión Fiscal Empresarial Española a Partir de la Información Contable. Especial Mención a las Decisiones Financieras. *Spanish Journal of Finance and Accounting / Revista Española de Financiación y Contabilidad, 33*(120), 125–159. https://doi.org/10.1080/02102412.2004.10779516

Salamah, A. A., Pamungkas, M. G. W. E. N., & Yogi, K. (2016). Pengaruh Profitabilitas Dan Biaya Operasional Terhadap Pajak Penghasilan Badan (Studi Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Periode 2012-2014). *Jurnal Perpajakan (JEJAK), 9*(1), 1–10.

Sartono. (2010). Manajemen Keuangan Teori dan Aplikasi. BPFE UGM.

Sartono, A. (2008). Manajemen Keuangan. BPFE UGM.

Sekartaji, C. D. P., & Arifin, A. (2024). Pengaruh Leverage, Profitabilitas, Dan Struktur Modal Terhadap Pajak Penghasilan Badan Dengan Biaya Operasional Sebagai Variabel Moderasi Studi Kasus Sektor Perusahaan Keuangan. *Jurnal Revenue : Jurnal Ilmiah Akuntansi, 5*(1), 235–250. https://doi.org/10.46306/rev.v5i1.413

Sembiring, Y. C. B., & Sitanggang, S. (2024). Pengaruh Profitabilitas Dan Biaya Operasional Terhadap Pajak Penghasilan Badan Pada Pt Multi Bintang Indonesia Tbk Tahun 2012-2021. *Jurnal Riset Akuntansi & Keuangan*, 63–72. https://doi.org/10.54367/jrak.v10i1.3523

Setyapurnama, Y. S. (2025). Pengukuran Rasio Keuangan Terhadap Penghindaran Pajak Menggunakan Profitabilitas, Leverage, Likuiditas dan Ukuran Perusahaan. *Ekonomi, Keuangan, Investasi Dan Syariah (EKUITAS), 6*(4), 575–583. https://doi.org/10.47065/ekuitas.v6i4.7104

Shakibjoo, M. D., & Hassanzadeh, M. (2016). Investigation of the effect of leverage and CEO education on shareholders return of companies in Tehran stock exchange. *International Business Management, 10*(8), 1497–1502. https://doi.org/10.3923/ibm.2016.1497.1502

Sheikh, N. A., & Qureshi, M. A. (2014). Crowding-out or shying-away: impact of corporate income tax on capital structure choice of firms in Pakistan. *Applied Financial Economics, 24*(19), 1249–1260. https://doi.org/10.1080/09603107.2014.925053

Song, X., & Yuan, M. (2024). Save It for a Rainy Day: Evidence from State Corporate Income Tax Rate Changes. *The Journal of the American Taxation Association, 46*(2), 123–149. https://doi.org/10.2308/JATA-2023-018

Stamatopoulos, I., Hadjidema, S., & Eleftheriou, K. (2017). Corporate Income Tax Compliance Costs and their Determinants: Evidence from Greece. In Advances in Taxation (pp. 233–270). *Emerald Publishing Limited*. https://doi.org/10.1108/S1058-749720170000024006

Surtikanti, S., Saepudin, A., Hassaan, H., Aris Astuti, W., & Anggadini, S. D. (2023). Determinant of net income in indonesia mining companies. *Journal of Eastern European and Central Asian Research (JEECAR), 10*(4), 630–637. https://doi.org/10.15549/jeecar.v10i4.1358

Tan, Q. (2013). Impact of the Corporate Income Tax Reform on Capital Structure Choices: Evidence from Data of Chinese Listed Firms. *In The 19th International Conference on Industrial Engineering and Engineering Management* (pp. 713–723). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-37270-4_67

Tao, Q., Zahid, Z., Mughal, A., & Shahzad, F. (2022). Does operating leverage increase firm's profitability and bankruptcy risk? Evidence from China's entry into WTO. *International Journal of Finance & Economics, 27*(4), 4705–4721. https://doi.org/10.1002/ijfe.2395

Waluyo, W. (2018). Do Efficiency of Taxes, Profitability and Size of Companies affect Debt? A Study of Companies Listed in the Indonesian Stock Exchange. *European Research Studies Journal, XXI*(Issue 1), 331–339. https://doi.org/10.35808/ersj/951

Wang, Q. (2022). Income Tax Planning as a Tool for Achieving Financial Stability. *Engineering Economics, 33*(5), 496–506. https://doi.org/10.5755/j01.ee.33.5.29785

Widanto, R. K., & Pramudianti, M. (2021). Pengaruh Likuiditas, Solvabilitas, Profitabilitas, Dan Biaya Operasional Terhadap Beban Pajak Penghasilan Badan Terutang (Pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi yang Terdaftar di BEI Tahun 2016-2017). *Liability, 3*(1), 36–54. https://journal.uwks.ac.id/index.php/liability/article/view/1372

Wu, X., & Cheng, H. (2021). Transaction Costs and Corporate Tax Stickiness: Based on Big Data Analysis. *E3S Web of Conferences, 253*, 02005. https://doi.org/10.1051/e3sconf/202125302005

Yao, M., & Yang, S. (2026). Digital business model innovation, operational efficiency, and corporate financial performance. *Finance Research Letters, 91*, 109445. https://doi.org/10.1016/j.frl.2025.109445