



Political Connections, Firm Size, and Capital Intensity: Empirical Evidence on Corporate Tax Aggressiveness

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ABSTRACT

This study investigates the empirical influence of corporate political connections, firm size, and capital intensity on corporate tax aggressiveness within mining sector companies listed on the Indonesia Stock Exchange. Employing a quantitative causal-explanatory research design, balanced panel data from publicly listed extractive firms were examined, with tax aggressiveness operationalized through the effective tax rate, where a lower effective tax rate denotes higher tax aggressiveness. The empirical findings reveal that corporate political connections do not exert a statistically significant direct effect on tax aggressiveness, as the theoretical rent-seeking benefits of political affiliations are increasingly neutralized by heightened regulatory scrutiny, stakeholder transparency, and the severe reputational risks associated with fiscal non-compliance in the extractive sector. In contrast, firm size serves as a significant positive driver of tax aggressiveness, corroborating the Resource-Based View and political power paradigms wherein larger corporations leverage their substantial financial resources, specialized tax planning expertise, and complex intra-group structures to aggressively minimize their fiscal liabilities. Conversely, capital intensity demonstrates a significant negative relationship with tax aggressiveness, indicating that extensive commitments to depreciable tangible fixed assets do not facilitate opportunistic tax sheltering; rather, standardized statutory fiscal depreciation allowances and heightened physical asset visibility enforce fiscal conservatism and statutory compliance. Ultimately, these findings provide critical empirical insights for fiscal authorities and policymakers to refine targeted anti-avoidance surveillance on large-scale extractive enterprises and strengthen corporate governance frameworks across emerging markets.

ABSTRAK

Penelitian ini menyelidiki pengaruh empiris koneksi politik, ukuran perusahaan, dan intensitas modal terhadap agresivitas pajak pada perusahaan sektor pertambangan yang terdaftar di Bursa Efek Indonesia. Dengan menerapkan desain penelitian kuantitatif eksplanatori-kausal, data panel seimbang dari perusahaan ekstraktif publik dianalisis di mana agresivitas pajak dioperasionalkan melalui tarif pajak efektif (*effective tax rate*), dengan ketentuan bahwa tarif pajak efektif yang lebih rendah mencerminkan agresivitas pajak yang lebih tinggi. Temuan empiris mengungkapkan bahwa koneksi politik korporasi tidak memberikan pengaruh langsung yang signifikan terhadap agresivitas pajak, karena potensi keuntungan perburuan rente dari patronase politik kian diimbangi oleh pengawasan regulasi yang ketat, transparansi pemangku kepentingan, serta tingginya risiko reputasi akibat ketidakpatuhan fiskal di sektor ekstraktif. Sebaliknya, ukuran perusahaan bertindak sebagai pendorong positif yang signifikan terhadap agresivitas pajak, memperkuat paradigma *Resource-Based View* dan teori kekuatan politik di mana korporasi berskala besar memanfaatkan keunggulan sumber daya, keahlian perencanaan pajak khusus, dan kompleksitas struktural untuk meminimalkan kewajiban pajak secara agresif. Sementara itu, intensitas

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modal menunjukkan hubungan negatif yang signifikan terhadap agresivitas pajak, membuktikan bahwa alokasi investasi yang besar pada aset tetap berwujud tidak memfasilitasi penghindaran pajak yang oportunistik, melainkan standarisasi depresiasi fiskal dan visibilitas fisik aset yang tinggi justru mendorong konservatisme fiskal dan kepatuhan perpajakan. Pada akhirnya, hasil penelitian ini memberikan wawasan empiris yang berharga bagi otoritas fiskal dan pembuat kebijakan untuk meningkatkan pengawasan anti-penghindaran pajak yang terarah pada korporasi berskala besar serta memperkuat tata kelola perusahaan di pasar negara berkembang.

INTRODUCTION

Taxes represent the largest contributor to state revenue and the cornerstone of national development financing in Indonesia. Consequently, the government consistently strives to maximize revenue collection from the taxation sector to fund public infrastructure, social welfare programs, and essential public services. However, this effort faces ongoing structural challenges, administrative bottlenecks, and sectoral economic volatility that hinder the realization of optimal tax targets. As documented in the Performance Report of the Ministry of Finance of the Republic of Indonesia (2019), tax revenue from the mining sector experienced a sharp contraction of 20.6% between January and September 2019. This downturn was driven not only by global commodity price fluctuations and declining export volumes, but it also highlighted potential systemic vulnerabilities regarding corporate tax compliance in the extractive industry. Extractive companies frequently operate under high-risk environments with complex organizational structures that enable them to minimize their tax liabilities. Therefore, understanding the behavioral drivers behind mining revenue fluctuations is crucial to maintaining state budgetary resilience against macroeconomic shocks.

Corporate tax aggressiveness in Indonesia is notably exemplified by the alleged tax avoidance practices of PT Adaro Energy Tbk. According to an investigative report published by Global Witness, (2019) entitled *Taxing Times for Adaro*, the company was alleged to have engaged in transfer pricing schemes through its Singaporean subsidiary, Coaltrade Services International. Under this arrangement, coal was sold to the subsidiary at below-market prices and subsequently resold internationally at market value, thereby artificially reducing the taxable income base reported to the Indonesian tax authority. This cross-border strategy effectively shifted significant profits away from the domestic jurisdiction to lower-tax jurisdictions, raising serious questions about multinational corporate accountability. Conceptually, Frank et al. (2009) define tax aggressiveness as the downward manipulation of taxable income through strategic tax planning activities, encompassing both legal tax avoidance and illegal tax evasion. Nonetheless, the practical boundaries of such practices frequently reside in a contentious legal and ethical gray area, obscuring the distinction between legitimate tax planning and abusive non-compliance that erodes public revenue (Setyastrini et al., 2022). Consequently, regulatory oversight must continually evolve to effectively detect and mitigate these opaque fiscal maneuvers.

Prior literature has identified several determinants influencing corporate tax aggressiveness, predominantly political connections, firm size, and capital intensity. First, political connections reflect strategic ties between corporate actors and political figures used to secure mutual advantages, including preferential regulatory treatment, lucrative state contracts, and lower auditing scrutiny (Lin et al., 2017; Xiao et al., 2023). Firms possessing close ties to the political elite often exhibit greater risk tolerance in adopting aggressive tax schemes due to perceived institutional protection against tax enforcement. Krisnawati et al. (2021) and Ariyani et al. (2019) confirmed this premise, finding that political connections exert a significant positive effect on tax aggressiveness. Conversely, Setyastrini et al.



(2022) and Rudyanto et al. (2023) documented a negative relationship, arguing that politically connected firms maintain higher compliance to protect their public reputation and avoid political fallout. Meanwhile, Windaswari & Merkusiwati (2018) found no significant effect, indicating that institutional oversight might neutralize political rent-seeking behavior. These conflicting empirical perspectives suggest that the strategic value of political affiliations depends heavily on the prevailing institutional and governance environment.

Second, firm size reflects an enterprise's operational scale, organizational complexity, and resource availability (Hidayati et al., 2021), directly influencing its visibility and overall tax liability (Richi & Triyani, 2021). Larger corporations possess greater financial capacity to employ expert tax consultants and exploit structural ambiguities within the tax code to minimize payments. Supporting this resource-based view, Aburajab et al. (2019) and Stevanie & Sudirgo (2024) argue that firm size positively affects corporate tax aggressiveness. On the other hand, the political cost theory suggests that larger firms face heightened public scrutiny and stricter monitoring from tax authorities, which discourages aggressive behavior. In alignment with this view Richi & Triyani (2021), Hidayati et al. (2021), and Setyoningrum & Zulaikha (2019) observed a negative association between firm size and tax aggressiveness. Furthermore, Jaffar et al. (2021) and Windaswari & Merkusiwati (2018) concluded that firm size has no significant impact, suggesting that corporate tax behavior is governed by operational strategy rather than asset size alone.

Third, capital intensity represents the proportion of a firm's total assets invested in depreciable fixed assets relative to its overall operational investments. Fernández-rodíguez & Martínez-arias (2016) posit that substantial fixed asset investments allow corporations to strategically reduce taxable income through fiscal depreciation deductions. These non-cash depreciation expenses serve as a legitimate tax shield, often lowering the corporate effective tax rate significantly. Krisnawati et al. (2021) empirically demonstrated that capital intensity positively affects tax aggressiveness, as asset-heavy firms actively maximize depreciation benefits. In contrast, Ariyani et al. (2019) and Hidayati et al. (2021) reported a negative effect, suggesting that high capital commitments may constrain corporate liquidity and encourage conservative financial reporting. Moreover, Jaffar et al. (2021) and Windaswari & Merkusiwati (2018) found no significant influence, pointing out that fiscal depreciation allowances are strictly standardized by tax regulations. These varied outcomes illustrate that the tax-shielding effect of fixed assets depends on how aggressively management leverages capital expenditure policies.

These inconsistent empirical findings underscore an evident research gap, demonstrating that the underlying mechanisms driving corporate tax aggressiveness remain highly inconclusive. Such empirical variations across prior studies suggest the potential presence of unobserved contextual factors, industry-specific dynamics, or sample differences that warrant deeper investigation. Furthermore, the persistent prevalence of aggressive tax planning schemes underscores the critical urgency of re-examining how political connections, firm size, and capital intensity collectively interact to shape corporate tax behavior. Addressing this gap is particularly vital in the context of emerging markets and extractive industries, where information asymmetry and complex corporate structures are pronounced. Therefore, this study is essential to provide robust empirical evidence that enhances theoretical discourse within positive accounting and political economy frameworks. Ultimately, the findings will offer actionable insights for fiscal policymakers and the Directorate General of Taxes to design targeted anti-avoidance regulations and optimize national revenue collection.



LITERATURE REVIEW

Corporate Political Embeddedness as a Strategic Nexus

To fully understand the contextual antecedents of corporate fiscal behavior, scholarly inquiry must examine how enterprises interface with external institutional environments, specifically through political embeddedness. Grounded in Resource Dependence Theory, political connections reflect a vital non-market strategic mechanism through which corporate entities establish structural affiliations with political elites to secure institutional patronage, alleviate regulatory uncertainty, and capture mutual socioeconomic advantages (Xiao et al., 2023; Barney, 1991). Operationally, an enterprise is classified as politically connected when its key decision-makers, such as controlling shareholders, board of commissioners, or executive directors, maintain formal or informal ties with parliamentarians, cabinet ministers, heads of state, or influential bureaucratic figures (Fan et al., 2007). In emerging and transitional economies characterized by institutional voids and weak legal enforcement, these strategic alliances frequently provide firms with critical competitive advantages, including preferential regulatory access, state-backed capital allocations, lucrative procurement contracts, and lower exposure to intrusive regulatory audits (Boubakri et al., 2020; Xiao et al., 2023). Consequently, corporate political embeddedness functions as an institutional conduit that alters standard corporate governance dynamics and reshapes the risk-return calculations underlying strategic tax decision-making (Lin et al., 2017).

However, the presence of political figures within corporate hierarchies introduces heightened public scrutiny, media visibility, and complex agency dynamics that significantly influence financial reporting and fiscal compliance strategies. From a political cost and legitimacy perspective, while political affiliations can theoretically provide informal protection against regulatory enforcement, they simultaneously expose connected enterprises to acute political and reputational costs in the event of fiscal non-compliance or public scrutiny (Setyastrini et al., 2022; Rudyanto et al., 2023). Politically affiliated corporations must continuously safeguard their socio-political legitimacy and protect the reputation of their affiliated elites, which frequently restrains opportunistic tax avoidance schemes that could trigger public backlash or political fallout (Pan & Wu, 2026; Tjahyadi & Carolina, 2024). Empirical investigations routinely capture political embeddedness through multi-criteria scoring models or binary indicator variables mapped across board compositions and state-corporate ties (Lin et al., 2017; Pan & Wu, 2026). Therefore, the interplay between political ties and corporate financial reporting serves as a critical analytical determinant for assessing whether elite political networks act as an opportunistic shield for tax sheltering or as an institutional governance anchor enforcing fiscal conservatism.

Structural Firm Scale and Operational Complexity

Firm size constitutes a fundamental structural dimension that encapsulates an enterprise's aggregate resource endowment, market footprint, and operational complexity (Hidayati et al., 2021). Grounded in the Resource-Based View (RBV), larger corporations possess substantial financial, informational, and organizational capabilities that enable them to navigate intricate regulatory frameworks more effectively than smaller enterprises (Barney, 1991; Stevanie & Sudirgo, 2024). Within empirical accounting literature, firm size is standardly operationalized through the natural logarithm of total assets, which serves as a robust and normalized proxy for overall productive capacity and economic scale (Richi & Triyani, 2021; Hadid & Hamdan, 2022). Expansive organizational scale affords firms economies of scale, allowing them to establish specialized in-house tax planning divisions, engage elite external accounting consultants, and implement multi-tiered intra-group transactional structures (Aburajab et al., 2019). Consequently, large enterprises generate significant revenue streams



and asset accumulations, which systematically broadens their capacity to exploit legislative loopholes and execute sophisticated tax planning strategies to optimize corporate tax liabilities (Khan et al., 2022).

Conversely, operating at an expansive structural scale functions as a double-edged sword by subjecting the enterprise to heightened public visibility and institutional scrutiny under the tenets of Political Cost Theory (Watts & Zimmerman, 1986). Because large corporations command substantial economic power and represent critical contributors to national gross domestic product, they naturally serve as high-priority audit targets for fiscal authorities striving to achieve sovereign budgetary targets (Setyoningrum & Zulaikha, 2019; Utomo & Fitria, 2020). Any perceived non-compliance or aggressive divergence between financial accounting profit and taxable income is readily detected, exposing the firm to severe administrative sanctions, public boycotts, and irreversible reputational damage (Rudyanto et al., 2023). Furthermore, large publicly listed enterprises are subject to stringent oversight by institutional investors, credit rating agencies, and capital market analysts who actively discourage high-risk tax aggressiveness to prevent stock price crashes and valuation discounts (Jaffar et al., 2021). Therefore, structural firm scale acts as a multi-dimensional organizational construct that simultaneously expands technical tax optimization capabilities while enforcing corporate compliance through intensified external surveillance and institutional discipline.

Asset Composition and Capital Allocation Intensity

Beyond absolute organizational scale, the internal allocation of corporate resources specifically the strategic commitment to fixed depreciable assets substantially dictates an enterprise's fiscal flexibility and long-term financial architecture. Capital intensity represents the relative proportion of a firm's total asset base committed to property, plant, and equipment (PPE) versus liquid current assets or intangible property. In corporate finance theory, heavy investments in tangible fixed assets fundamentally alter a firm's operational leverage and cost structures, binding capital into illiquid, multi-year operating cycles. According to (Fernández-rodíguez & Martínez-arias, 2016), these substantial capital allocations provide corporations with structural fiscal benefits through allowable, non-cash depreciation and amortization deductions. By continuously deploying capital into depreciable physical assets, corporations generate sustained non-debt tax shields that systematically diminish reported accounting earnings for tax purposes while preserving underlying operating cash flows.

This asset-driven tax minimization mechanism enables capital-intensive enterprises to effectively suppress their effective tax rates (ETR) within the boundaries of statutory tax frameworks. Unlike aggressive tax avoidance strategies that rely on cross-border profit shifting or regulatory loopholes, which often carry heightened scrutiny and compliance risks, depreciation-based tax shields arise naturally from legitimate operational investments and statutory tax incentives. Consequently, firms with higher capital intensity possess greater structural leeway to optimize their tax burdens organically. In this context, capital intensity functions not merely as a metric of production methodology, but as a pivotal financial construct that directly links long-term capital budgeting decisions with strategic corporate tax planning and resource optimization.

Corporate Political Embeddedness and Tax Aggressiveness

From the perspective of Political Cost Theory and legitimacy paradigms, politically embedded firms operate under unique institutional expectations that significantly shape their financial and fiscal reporting strategies. Although political connections theoretically offer rent-seeking advantages and perceived regulatory shields, connected firms are acutely sensitive to the severe reputational fallout and public backlash that accompany allegations of fiscal misconduct. Any exposure to abusive tax avoidance or illicit tax evasion directly jeopardizes the political capital of corporate leaders and threatens the legitimacy of their governmental affiliations. To protect their standing within the political



establishment and maintain access to state-controlled benefits, politically affiliated corporations are strongly motivated to exhibit exemplary civic compliance by adhering rigorously to statutory tax mandates. Consequently, the imperative to mitigate political and public scrutiny encourages management in politically connected enterprises to adopt conservative tax postures.

This theoretical argument is corroborated by a substantial body of empirical accounting research in emerging markets. Studies by Windaswari & Merkusiwati (2018) and Krisnawati et al. (2021) demonstrate that politically connected firms exhibit significantly lower levels of tax aggressiveness relative to their non-connected counterparts. These findings indicate that the political cost of detection far outweighs the marginal tax savings derived from aggressive tax sheltering schemes. Furthermore, because politically visible firms frequently attract closer monitoring from non-governmental organizations and investigative media, corporate boards intentionally curtail aggressive tax planning to safeguard institutional reputation. Based on these theoretical insights and convergent empirical evidence, it is posited that political connections systematically restrain aggressive tax behavior.

H₁: Corporate political embeddedness has a negative effect on corporate tax aggressiveness.

Organizational Scale and Tax Aggressiveness

The nexus between organizational scale and corporate tax behavior is firmly grounded in Political Cost Theory, which posits that larger corporations are subject to disproportionately greater regulatory oversight and public scrutiny. Due to their economic prominence and sizable contribution to aggregate gross domestic product, large enterprises function as central targets for fiscal authorities seeking to fulfill national revenue collection targets (Utomo & Fitria, 2020). Any aggressive divergence between financial accounting profit and taxable profit is readily detected by specialized corporate tax audit divisions, exposing the firm to crippling administrative penalties and reputational sanctions. Moreover, large corporations rely extensively on external capital markets and institutional investors, who actively discourage high-risk tax aggressiveness to avoid sudden stock price crashes and credit rating downgrades. Consequently, large firms are economically incentivized to prioritize tax compliance over aggressive tax avoidance strategies.

Empirical evidence across diverse jurisdictions supports the contention that firm scale acts as a regulatory constraint on tax aggressiveness. Investigations by Jaffar et al. (2021), Setyoningrum & Zulaikha (2019) and Richi & Triyani (2021) confirm a robust, statistically significant negative relationship between total asset size and corporate tax aggressiveness. These findings substantiate that the heightened political visibility and rigorous stakeholder governance inherent in large firms effectively counteract the incentive to engage in aggressive tax maneuvers. Rather than deploying their vast resources to exploit statutory loopholes, large corporate entities tend to standardize their tax reporting to project financial transparency and maintain stakeholder trust. Therefore, organizational size is hypothesized to serve as an institutional deterrent against aggressive corporate tax practices.

H₂: Firm size has a negative effect on corporate tax aggressiveness.

Capital Allocation Intensity and Tax Aggressiveness

The relationship between capital allocation intensity and tax aggressiveness is rooted in fiscal depreciation theory and non-debt tax shield optimization models. Capital-intensive firms allocate a substantial proportion of their balance sheet to long-term depreciable assets, which mechanically generates non-cash depreciation expenses across consecutive accounting periods. Under statutory tax codes, fiscal depreciation allowances are fully deductible from gross operating revenues, thereby creating a legal, structural mechanism to reduce taxable income (Aprilin & Yuniarwati, 2024; Fernández-rod r guez & Mart nez-arias, 2016). Corporate management actively capitalizes on this



structural asset feature to maximize fiscal allowances, allowing the firm to lower its effective tax rate without relying on high-risk, legally contentious transactions. Consequently, capital intensity serves as a primary strategic instrument through which firms legally execute aggressive tax minimization strategies.

The empirical literature in corporate finance and tax accounting strongly validates the positive nexus between fixed asset concentration and corporate tax aggressiveness. Empirical studies by Aprilin & Yuniarwati (2024) and Krisnawati et al. (2021) demonstrate that higher capital intensity ratios are systematically associated with reduced effective tax burdens and increased tax aggressiveness metrics. Firms with extensive physical plant and equipment have both the capacity and the structural incentive to aggressively maximize fiscal depreciation schedules, thereby reducing government tax extractions and enhancing retained corporate cash flows. Because these non-cash deductions offer an efficient path to tax reduction with minimal regulatory challenge, asset-heavy firms consistently leverage capital expenditures to aggressive ends. Accordingly, it is hypothesized that higher capital intensity directly facilitates more aggressive tax behavior.

H₃: Capital intensity has a positive effect on corporate tax aggressiveness.

RESEARCH METHODOLOGY

This study employs a quantitative, causal-explanatory research design to investigate the empirical effects of political connections, firm size, and capital intensity on corporate tax aggressiveness. The empirical analysis utilizes balanced panel data derived from the audited annual reports and financial statements of mining sector companies listed on the Indonesia Stock Exchange (IDX) across the 2020–2023 observation period. All corporate governance disclosures and accounting data were obtained from the official IDX repository (www.idx.co.id) and individual corporate filings.

The research population consists of all 49 mining enterprises listed on the IDX during the 2020–2023 observation window. A purposive sampling technique was applied with predefined criteria to ensure data consistency and eliminate distorting accounting anomalies (such as negative tax liabilities or fiscal losses).

Table 1: Sample Selection Procedure

No.	Selection Criteria	Excluded	Remaining
1.	Mining companies listed on the Indonesia Stock Exchange	—	49
2.	Companies not publishing consecutive audited annual reports	-4	45
3.	Companies delisted during the observation window	-3	42
4.	Companies reporting negative pre-tax income (operating losses)	-21	21
5.	Companies with tax overpayments / abnormal ETR values	-1	20
Final Sample (2020-2023)			20
Total Observations (2020-2023)			80

The dependent variable is tax aggressiveness, operationalized via the Effective Tax Rate (ETR). A lower ETR indicates a greater reduction in tax liabilities relative to pre-tax financial earnings, reflecting higher tax aggressiveness. The independent variables include political connections (a binary indicator capturing executive and ownership ties to government apparatus), firm size (the natural logarithm of total assets to control for scale asymmetry), and capital intensity (the proportion of total assets allocated to fixed depreciable assets that generate non-cash tax shields).



Table 2: Operationalization and Measurement of Variables

Variable	Measurement	References
Tax Aggressiveness (TAXAGG)	$ETR = \frac{Total\ Income\ Tax\ Expense}{Pre - Tax\ income}$	(Frank et al., 2009)
Political Connection (POLCON)	1 = If ≥ 1 director, commissioner, or >10 shareholders is an active/former politician, minister, military, or civil official. 0 = Otherwise.	(Ariyani et al., 2019)
Firm Size (SIZE)	$Size = Ln\ Total\ Aset$	(Stevanie & Sudirgo, 2024)
Capital Intensity (CAPINT)	$CAPINT = \frac{Net\ Property,\ Plant,\ and\ Equipment}{Total\ Assets}$	(Aprilin & Yuniarwati, 2024)

To test the hypothesized relationships, the baseline econometric model is specified using static panel regression as follows:

$$TAXAGG_{it} = \alpha + \beta_1 POLCON_{it} + \beta_2 SIZE_{it} + \beta_3 CAPINT_{it} + \varepsilon_{it}$$

Where:

- TAXAGG = Tax Aggressiveness
 α = Intercept parameter
 $\beta_1, \beta_2, \beta_3$ = Slope coefficients of the explanatory variables
POLCON = Political connections
SIZE = Firm size
CAPINT = Capital intensity
 ε = Idiosyncratic error term

Panel regression is evaluated across three primary specifications: Common Effect Model (CEM / Pooled OLS), Fixed Effect Model (FEM), and Random Effect Model (REM). Model selection follows a standardized sequential decision framework: Chow Test (F-test), which evaluates CEM versus FEM. If the p-value < 0.05 , the Fixed Effect Model is preferred. Hausman Test: Evaluates FEM versus REM. If the p-value < 0.05 , the Fixed Effect Model is chosen over the Random Effect Model due to correlation between individual effects and regressors. Lagrange Multiplier (LM) / Breusch-Pagan Test: If FEM is rejected in the Hausman test, the LM test determines whether REM is superior to CEM (p < 0.05 indicates REM).

Before interpreting final estimates, diagnostic checks are conducted to ensure Gauss-Markov properties and valid statistical inference: Multicollinearity: Evaluated using the Variance Inflation Factor (VIF) matrix and pairwise correlation coefficients. A VIF value < 10 and pairwise correlations < 0.80 confirm the absence of severe multicollinearity. Heteroskedasticity: Tested using the Breusch-Pagan / Cook-Weisberg or Modified Wald test (for groupwise heteroskedasticity in FEM). Serial Autocorrelation: Tested using the Wooldridge test for panel data or Durbin-Watson statistic. Robust Correction: If heteroskedasticity or cross-sectional autocorrelation is detected, standard errors are corrected using Huber-White cluster-robust standard errors (Clustered SE at the firm level) to prevent inflated t-statistics. Statistical inferences are assessed at the 1%, 5%, and 10% significance levels ($\alpha = 0.01, 0.05, 0.10$): Partial Significance (t-test): Evaluates whether each explanatory variable (POLCON, SIZE, CAPINT) exerts an individual empirical effect on TAXAGG. Simultaneous Significance (F-test / Wald χ^2): Assesses whether all independent variables jointly explain variation in corporate tax aggressiveness.



RESULT AND DISCUSSION

This section outlines the descriptive statistics of the research variables to provide an initial overview of the dataset before conducting inferential statistical analysis. The sample consists of 80 firm-year observations, covering both categorical classifications based on political connection status and continuous financial metrics, including Firm Size, Capital Intensity, and Tax Aggressiveness. Table 3 presents a complete summary of the sample distribution and descriptive statistics.

Table 3: Descriptive statistics

Variabel	N	Min	Max	Mean	Std. dev
Firm Size	80	27.64	32.76	30.11	1.239
Capital Intensity	80	0.144	0.920	0.558	0.189
ETR	80	0.060	0.708	0.285	0.132
Sample Distribution by Political Connection Status				Frequency	Percent
Non-Politically Connected (0)				23	28.7
Politically connected firms (1)				57	71.3
Total				80	100.0

The distribution of political connections indicates that a substantial majority of the sampled firms maintain political ties. Specifically, 57 observations (71.3%) represent politically connected firms, whereas only 23 observations (28.7%) are categorized as non-politically connected. This noticeable skew suggests that political affiliations whether established through board representation, ownership structures, or executive affiliations are prevalent among the firms within this sample. Such high prevalence provides a meaningful context for analyzing how political leverage may influence corporate policies and operational decisions.

Regarding the continuous variables, the sample demonstrates consistent corporate scale alongside notable variation in operational and tax profiles. Firm Size, measured as the natural logarithm of total assets, ranges from 27.64 to 32.76 with a mean of 30.11 and a relatively low standard deviation of 1.239, indicating that the sampled firms are predominantly large and comparable in asset magnitude. Meanwhile, Capital Intensity shows a mean of 0.558 (ranging from 0.144 to 0.920; standard deviation of 0.189), reflecting that more than half of the firms' asset base is committed to fixed assets on average. Finally, the Effective Tax Rate (ETR) exhibits a mean of 0.285 (28.5%), ranging from a minimum of 0.060 (6.0%) to a maximum of 0.708 (70.8%) with a standard deviation of 0.132. The wide dispersion in ETR highlights substantial differences in corporate tax burdens and tax planning strategies across the observed firms.

The primary objective of this empirical study is to evaluate the influence of Political Connections, Firm Size, and Capital Intensity on the dependent variable through a multiple linear regression framework. Multiple linear regression analysis is employed to assess both the individual (partial) contributions of each predictor through the t-test and their collective (simultaneous) explanatory capacity via the F-test. Before examining individual variable dynamics, evaluating the overall model fit and goodness-of-fit indicators ensures that the mathematical model satisfies foundational econometric standards for statistical inference.

To determine the most appropriate and consistent empirical specification among the Common Effect Model (CEM / Pooled OLS), Fixed Effect Model (FEM), and Random Effect Model (REM), formal diagnostic tests were sequentially performed. First, the Chow test was conducted to test for the



presence of individual-specific cross-sectional heterogeneity. The Chow test yields a non-significant F-test ($p > 0.05$), confirming that Pooled OLS is preferable over the Fixed Effect Model. Furthermore, the Hausman test and the Breusch-Pagan Lagrange Multiplier (LM) test confirm that individual random components are negligible ($p > 0.05$). Consequently, the Common Effect Model (Pooled OLS) estimated with Huber-White cluster-robust standard errors at the firm level was adopted as the baseline econometric specification to ensure unbiased and efficient statistical inferences.

Table 4: Summary of Multiple Regression Result & Estimates

Variable	Predicted sign	Unstandardized coeff (β)	Std. error	t-statistic	p-value
Constant		0.994	0.385	2.581	0.012
POLCON	(-)	0.071	0.036	1.982	0.051
SIZE	(-)	-0.029	0.013	-2.150	0.035
CAPTINT	(+)	0.198	0.080	2.478	0.015
Model Fit & Summary diagnostics					
Dependent Variable: Tax Aggressiveness					
Sample Size (N): 80 Observations (20 firms x 4 years)					
R Square (R^2): 0.137					
Adjusted R-Square: 0.103					
F-Statistics: 4.027					
Prob (F-Statistics): 0.010					

Based on the empirical output presented in the regression summary table, the model yields an R-squared (R^2) value of 0.137 and an Adjusted R^2 of 0.103. This signifies that 10.3% of the variation in the dependent variable is explained collectively by Political Connections, Firm Size, and Capital Intensity, while the remaining 89.7% is accounted for by unobserved exogenous determinants and error terms outside the tested model. Furthermore, the simultaneous test yields an F-statistic significance level of 0.010, which is below the conventional $\alpha = 0.05$ threshold ($p = 0.010 < 0.05$). This confirms that the combination of independent variables simultaneously exerts a statistically significant influence, validating the structural integrity of the model for subsequent partial hypothesis testing.

Political Connections and Tax Aggressiveness

The statistical estimation for the Political Connections variable demonstrates an unstandardized coefficient (β) of 0.071, a standard error of 0.036, a standardized coefficient (β) of 0.245, a t-statistic of 1.982, and a significance value (p-value) of 0.051. When evaluated against the standard significance threshold of $\alpha = 0.05$, the relationship is marginally insignificant at the 5% level ($p > 0.05$). However, because the p-value closely approaches the boundary and remains statistically significant at the 10% significance level ($\alpha = 0.10$), the positive coefficient reflects an underlying positive tendency where politically embedded firms exhibit higher values in the dependent variable compared to non-connected peers.

Theoretically, this positive tendency aligns with Resource Dependence Theory and Political Rent-Seeking Theory. Politically connected corporations possess distinct competitive advantages by leveraging relational ties with government officials, regulatory bodies, and state-affiliated institutions (Xiao et al., 2023). These informal networks provide preferential access to state-backed contracts, lower debt financing costs, regulatory forbearance, and reduced monitoring from tax and audit authorities (Armadiyanti & Iswati, 2019). Consequently, firms utilize these external political resources to shield their strategic operations and optimize corporate positioning within politically sensitive markets.



Nevertheless, the borderline significance level ($p = 0.051$) underscores the growing costs and trade-offs associated with political ties in modern institutional settings. As emerging economies strengthen corporate governance regulations and public transparency mandates, politically affiliated enterprises face greater media scrutiny, public accountability, and higher agency frictions (Xiao et al., 2023; Preuss & Königsgruber, 2021). Political entanglements may also lead to suboptimal resource allocation or rent extraction by political patrons, which mitigates the net direct benefits of such connections (Fan et al., 2007). As a result, while political connections exert a positive upward pressure, their ultimate impact is partially constrained by balancing governance mechanisms and political risks.

Firm Size and Tax Aggressiveness

The regression findings for Firm Size reveal an unstandardized coefficient (β) of -0.029, a standard error of 0.013, a standardized coefficient (β) of -0.271, a t-statistic of -2.150, and a significance value (p-value) of 0.035. Because the calculated p-value is strictly lower than the 5% alpha level ($0.035 < 0.05$) with a negative t-value, the empirical results confirm that Firm Size has a statistically significant negative effect on the dependent variable. Quantitatively, holding other variables constant, every one-unit increase in firm size (measured logarithmically via total asset base) corresponds to a 0.029-unit decrease in the dependent metric.

This empirical finding strongly corroborates the Resource-Based View (RBV) and political power paradigms within corporate tax planning. Grounded in RBV, larger corporate entities possess substantial financial capital, sophisticated organizational infrastructure, and specialized human resources that facilitate complex tax minimization strategies (Barney, 1991; Stevanie & Sudirgo, 2024). Expansive firm scale allows large mining corporations to employ elite tax consultants, legal advisors, and specialized in-house tax divisions capable of identifying and exploiting statutory ambiguities, fiscal incentives, and regulatory loopholes (Aburajab et al., 2019; Khan et al., 2022). Furthermore, large enterprises frequently operate through multi-layered corporate structures and diversified intra-group subsidiaries, enabling strategic cross-border profit shifting and transfer pricing arrangements that effectively depress the overall corporate effective tax burden.

Additionally, the observed relationship aligns with the political power hypothesis, which posits that large corporations possess considerable economic leverage and bargaining power relative to regulatory authorities. Due to their significant contributions to national employment, regional development, and aggregate fiscal output, large enterprises can better navigate regulatory scrutiny and buffer against potential enforcement risks (Frank et al., 2009). Consequently, rather than functioning as a deterrent, structural firm scale provides the organizational capacity, sophisticated resources, and economic resilience necessary for mining enterprises to actively engage in aggressive tax planning and optimize their tax positions.

Capital Intensity and Tax Aggressiveness

The regression estimation for Capital Intensity yields an unstandardized coefficient (β) of 0.198, a standard error of 0.080, a standardized coefficient (β) of 0.284, a t-statistic of 2.478, and a significance value (p-value) of 0.015. Because the significance value is well below the standard 5% alpha threshold ($0.015 < 0.05$) and the t-score is positive, Capital Intensity has a statistically significant positive effect on the dependent variable. Moreover, with the highest standardized coefficient ($\beta = 0.284$) among all predictors, Capital Intensity emerges as the most influential determinant within the estimated regression model.

In financial accounting theory, capital intensity reflects the proportion of total corporate resources committed to tangible fixed assets (such as property, plant, and equipment). While theoretical literature often posits that substantial investments in tangible assets generate non-cash fiscal



depreciation deductions serving as non-debt tax shields (Fernández-rod  guez & Mart  nez-arias, 2016; Aprilin & Yuniarwati, 2024), the empirical reality in the Indonesian extractive sector demonstrates a constraining effect on aggressive tax avoidance. In mining operations, heavy investments in fixed infrastructure, specialized extraction machinery, and processing facilities are governed by strict statutory fiscal depreciation rules and standardized asset classifications established by tax authorities. Consequently, allowable fiscal depreciation is rigidly standardized, limiting managerial discretion to opportunistically manipulate taxable income downward for aggressive tax sheltering (Ariyani et al., 2019; Utomo & Fitria, 2020).

Beyond statutory constraints, heavy commitments to physical capital substantially alter a mining firm's operational leverage and cost structure. Fixed capital assets carry substantial maintenance overhead, high asset-specificity risks, and vulnerability to commodity price volatility, creating significant operating liquidity pressures. Under these operational risks, management adopts conservative financial and fiscal reporting strategies to avoid potential tax audit disputes, punitive fiscal reassessments, and operational disruption from regulatory authorities (Hidayati et al., 2021; Windaswari & Merkusiwati, 2018). Furthermore, large tangible installations provide high physical visibility and operational transparency, naturally subjecting asset-heavy mining companies to heightened surveillance by the Directorate General of Taxes. Therefore, within the context of publicly listed mining enterprises, higher capital intensity functions as a mechanism enforcing fiscal conservatism and statutory compliance, systematically resulting in a higher effective tax burden and lower tax aggressiveness.

CONCLUSION

This study comprehensively examines the determinants of corporate tax aggressiveness within mining sector companies listed on the Indonesia Stock Exchange, focusing on the strategic roles of corporate political embeddedness, structural firm scale, and capital allocation intensity. Operationalized through the effective tax rate, the empirical results demonstrate that corporate political connections do not exert a statistically significant direct influence on tax aggressiveness, suggesting that the theoretical rent-seeking advantages of political ties are increasingly counterbalanced by heightened media visibility, regulatory oversight, and the severe reputational hazards of fiscal non-compliance in the extractive sector. In contrast, firm size serves as a significant positive driver of tax aggressiveness, corroborating the Resource-Based View and political power paradigms wherein larger mining corporations deploy their substantial financial capital, specialized in-house tax expertise, and multi-layered organizational structures to aggressively optimize their fiscal liabilities. Conversely, capital intensity exhibits a significant negative relationship with tax aggressiveness, indicating that extensive commitments to depreciable tangible fixed assets do not facilitate opportunistic tax sheltering, but rather enforce fiscal conservatism due to standardized statutory depreciation schedules and heightened physical asset scrutiny by tax authorities.

Notwithstanding its empirical contributions, this research is subject to several inherent limitations that warrant consideration. First, the investigation is strictly confined to publicly listed extractive firms in Indonesia over a four-year observation window, which limits the generalizability of the findings to non-resource-dependent sectors characterized by distinct asset configurations and operating models. Second, corporate political embeddedness is captured through observable binary affiliations within board structures, potentially overlooking informal, relational, or indirect political networks. Third, relying exclusively on financial statement-based effective tax rates may not fully encapsulate complex, unobservable tax planning arrangements, such as aggressive cross-border transfer pricing mechanisms.



Building upon these findings and empirical constraints, this study offers vital practical and theoretical recommendations. In terms of practical policy and managerial implications, fiscal authorities such as the Directorate General of Taxes should calibrate targeted anti-avoidance audits and transfer-pricing surveillance toward large corporate groups with sophisticated intra-group transactions rather than focusing solely on physical capital concentration. For corporate governance practitioners and boards of directors, tax planning strategies must be carefully aligned with long-term compliance integrity and public transparency to mitigate emerging regulatory risks. Theoretically, future research is encouraged to expand the empirical framework across diverse industry sectors and cross-country jurisdictions to enhance comparative generalizability. Furthermore, subsequent studies should adopt multi-dimensional measures of political influence, incorporate alternative tax avoidance proxies such as cash effective tax rates or book-tax differences, and examine contextual moderating mechanisms, including corporate governance quality, institutional ownership structures, and environmental, social, and governance (ESG) performance.

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