

Unveiling Tax Avoidance: The Mediating Role of Sustainability Reporting Quality in Board Influence

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Abstract—This study investigates the effect of board size on tax avoidance in Indonesian public companies, with sustainability reporting quality (SRQ) as a mediating variable. Using panel data from 48 energy sector firms listed on the Indonesia Stock Exchange from 2017 to 2023, multiple linear regression analysis is employed. Drawing on agency theory, this study examines whether board size enhances monitoring effectiveness and reduces information asymmetry, thereby constraining managerial tax behavior. The results show that board size does not have a significant direct effect on tax avoidance, indicating that governance structure alone is insufficient to influence complex tax decisions in capital-intensive industries. However, board size has a significant positive effect on sustainability reporting quality, suggesting stronger oversight and improved disclosure quality. Despite this, sustainability reporting quality does not have a significant effect on book-tax differences, and its mediating role in the relationship between board size and tax avoidance is rejected. Among control variables, only profitability ROA significantly affects tax avoidance, highlighting financial performance as the dominant agency-related driver of managerial tax decisions. Overall, the findings suggest that agency pressures arising from profitability outweigh governance and sustainability disclosure mechanisms in shaping corporate tax behavior.

Keywords: Tax Avoidance; Board Size; Sustainability Report Quality; Agency Theory; Energy Companies

1. INTRODUCTION

Tax avoidance is a critical issue within tax systems, directly impacting a nation's ability to collect public revenue. In Indonesia, the majority of state revenue is sourced from taxes, as emphasized in Law No. 28 of 2007 on General Provisions and Tax Procedures (KUP), which defines tax as a mandatory contribution that must be fulfilled by every individual and legal entity. These tax revenues are allocated to support development programs and enhance public welfare (Yudistira et al., 2025). The energy sector plays a vital role in state revenue, with the mineral and coal subsector contributing 140.486 trillion in 2024, or 123.70% of its target (Minerba, 2025). Despite this substantial contribution, revenue optimization remains suboptimal; for instance, the mineral subsector contributed only 87.49% of its target (Hidayatullah, 2024). The significant contribution of the energy sector to the economy has not been followed by the optimization of state revenue, one of which is due to tax avoidance practices.

Globally, various cases have exposed widespread tax avoidance in the energy sector. Shell was alleged to have engaged in tax avoidance in the United Kingdom between 2018 and 2021 by not paying corporate income tax for several consecutive years. This was made possible through substantial tax rebates provided by the UK government to cover decommissioning costs for oil fields in the North Sea. For instance, in 2018, Shell received a rebate of approximately USD 115 million Voice, (2021), with similar amounts reported in subsequent years 2018 to 2020 (Thomas, 2021). Although Shell publicly declared its commitment to tax transparency in its Sustainability Report, public criticism emerged, arguing that the report did not fully reflect the company's aggressive tax practices. As a result, Shell was accused of using its sustainability reporting as a legitimacy strategy commonly referred to as tax washing to mitigate reputational damage associated with its tax avoidance behavior (Drugmand, 2020). The 2016 Panama Papers, and the 2021 Pandora Papers revealed extensive use of offshore entities for tax evasion. Indonesian energy firms, such as PT Buana Inti Energi, PT Elnusa, PT Sugih Energy Tbk, (ICIJ, 2021; Indonesia Corruption Watch, 2021). PT Adaro Energy Tbk was also suspected of engaging in tax avoidance 2009 to 2017 (Global witness 2019). The recurring phenomenon emphasizes the urgency of in-depth research to understand the determinants of tax avoidance, its economic impact, and the development of effective mitigation strategies in the tax system to ensure fiscal sustainability and equity.

Koay and Sapiei (2025) and also Sulistyawati and Rahmawati (2024) found that board size does not have a significant influence on tax avoidance. This finding suggests that the number of board members is not necessarily correlated with a firm's tendency to engage in tax avoidance. From the perspective of agency theory, while the board is meant to monitor management and protect shareholder interests, a larger board does not always enhance oversight. Instead, it may lead to coordination problems and reduced effectiveness in controlling managerial actions, including aggressive tax strategies. This implies that board size alone is insufficient; what matters more is how effectively the board performs its governance role. The inclusion of sustainability report quality (SRQ) as a mediating variable is intended to explain the pathway through which board size may influence tax avoidance. The choice of SRQ is particularly relevant to the energy sector, which serves as the focus of this study. Given the sector's substantial environmental footprint and its frequent exposure to public and regulatory scrutiny, sustainability reporting plays a critical role in signaling corporate accountability and transparency. From an agency theory perspective, sustainability reporting quality reflects the effectiveness of board monitoring in enhancing transparency and accountability, which may help constrain managerial opportunism, including tax avoidance. The mixed and insignificant findings on the direct relationship between board size and tax avoidance therefore indicate the presence of such a mediating mechanism. High-quality sustainability reports are

not only a reflection of a firm's commitment to responsible practices but may also serve as a governance tool to reduce opportunistic behavior such as tax avoidance.

Agency Theory posits that information asymmetry between managers and shareholders enables managerial opportunism such as tax avoidance. High-quality sustainability reporting enhances corporate transparency and strengthens external monitoring mechanisms, thereby reducing information asymmetry. As managerial discretion becomes more constrained, firms with superior sustainability report quality are expected to exhibit lower levels of tax avoidance. The board of directors plays a critical role in ensuring that sustainability reports are not merely a formality, but rather reflect a genuine commitment to accountability. An effective board promotes transparency and integrity in reporting and oversees tax strategies to ensure they do not undermine corporate legitimacy. However, studies have shown that when board oversight is weak, sustainability reports often serve a symbolic purpose and are used to shape public perception rather than reflect actual corporate performance. Therefore, the effectiveness of sustainability reporting as a legitimacy tool largely depends on the quality of corporate governance, particularly the oversight provided by the board of directors. However, as shown in studies by (Alta'any et al., 2024; Erin et al., 2022). Paradoxically, firms with high quality sustainability reports may exploit transparency not to reduce unethical behavior, but rather to legitimize or conceal aggressive tax planning framing such practices within broader narratives of corporate responsibility to mitigate stakeholder criticism (Fuadah et al., 2022). These findings highlight a critical tension in corporate accountability although strong governance structures contribute to high quality sustainability reporting, firms may exploit these disclosures as strategic instruments to reinforce legitimacy while simultaneously engaging in questionable or aggressive tax practices.

This study investigates the mediating role of Sustainability Report Quality (SRQ) in the relationship between board size and tax avoidance among Indonesian energy companies a sector with significant environmental impact and public scrutiny. While prior research finds no direct link between board size and tax avoidance, this study explores SRQ as a potential mechanism linking board governance to corporate tax behavior. SRQ plays a paradoxical role: it is designed to enhance transparency and accountability, yet may also be used strategically to legitimize firms while masking aggressive tax strategies. This dual function as both a tool for genuine disclosure and symbolic legitimacy has been underexplored, especially in the context of the energy sector in developing countries. By examining this gap, the study offers insights into how corporate governance and sustainability reporting interact in influencing tax-related decisions, contributing to the literature on governance, legitimacy theory, and responsible corporate behavior.

2. RESEARCH METHODS

2.1 Literature Review and Hypothesis Development

2.1.1 Agency Theory

Agency theory introduced by Jensen and Meckling (1976), the correlation between owners and managers in a company is characterized by the delegation of operational responsibilities from the owners to the managers. This delegation creates a gap between ownership and control, which can lead to conflicts of interest (Matinheikki et al., 2022). When the objectives of the principal and the agent are aligned, the agent is more likely to fulfill their responsibilities in accordance with the principal's interests. However, agency conflicts can arise when agents act in ways that deviate from the principal's interests, making decisions that are more favorable to themselves (Aji and Wulandari, 2022).

2.1.2 Tax Avoidance

Tax avoidance is a strategic approach used by management to legally reduce the company's tax obligations (Hanlon and Heitzman 2010). According to Khelil and Khlif, (2023); Swandhana and Santoso, (2023), tax avoidance is conducted within the boundaries regard to applicable tax laws and regulations. This perspective aligns with the view of Febriansyah and Oktafiani, (2021), which asserts that tax avoidance is a type of tax planning involving various strategies to reduce tax liabilities without violating the provisions set by tax authorities. The phenomenon of tax avoidance reflects the conflict of interest between principals and agents as explained in agency theory. Managers as agents have the advantage of information asymmetry and authority in strategic decision making (Suripto 2021).

2.1.3 Board of Directors

According to the viewpoint articulated by Fama and Jensen, (1983) the board of directors plays a critical role in mitigating agency conflicts between managers and shareholders, particularly in firms with dispersed ownership. A larger board can enhance the monitoring and oversight functions, thereby reducing the risk of managerial opportunism and aligning managerial actions with shareholder interests. Board size influences the board effectiveness in carrying out its core functions monitoring control, advising service, and strategic decision-making strategy. Board size influences the board effectiveness in carrying out its core functions monitoring control, advising service, and strategic decision-making strategy (Roffia, Simón-Moya, and Sendra García 2022). A larger board is expected to provide broader expertise and more effective supervision, which supports the interests of shareholders. As such, larger boards may lead to decisions that better protect stakeholders' rights and improve overall corporate governance (Koay and Sapiei, 2025).

2.1.4 Sustainability Reports Quality

The quality of sustainability reports represents a company's dedication to managing its environmental, social, and economic impacts, sustainability quality serve as a monitoring mechanism that enhances transparency and accountability, thereby helping to align managerial actions with shareholder interests (Moses, Che-Ahmad, and Abdulmalik 2020). High quality sustainability reporting can reduce agency costs by providing relevant non-financial information that stakeholders use to assess managerial performance. In this context, sustainability reports are not merely tools for meeting public expectations but function as instruments for reinforcing trust and minimizing conflicts between principals and agents (Silvera, Heriyani, and Sahara 2024).

2.1.5 The Relationship of Board Size to Tax Avoidance

Agency theory highlights the conflict of interest between principals and agents, where managers tend to make decisions that benefit themselves, such as engaging in tax avoidance, to enhance reported profits and personal compensation. A larger board of directors is presumed to provide stronger oversight, thereby enhancing compliance with laws and regulations and ultimately reducing the likelihood of tax avoidance. Furthermore, more effective supervision can help mitigate the conflict of interest between managers and shareholders, aligning managerial actions with corporate objectives. Although some prior studies have reported inconsistent or insignificant findings regarding the relationship between board size and tax avoidance (Koay and Sapiei 2025; Sulistyawati and Rahmawati 2024), agency theory remains the primary theoretical foundation for predicting this relationship. Therefore, this study prioritizes the theoretical expectation that larger boards are associated with lower levels of tax avoidance due to their enhanced monitoring capacity.

H1 Board size significant negative effect on Tax Avoidance

2.1.6 The Relationship of Board Size to Sustainability Reports Quality

From an agency theory perspective, sustainability reporting quality reflects the effectiveness of board monitoring in reducing information asymmetry between managers and shareholders. A larger board of directors enhances collective oversight over disclosure practices, increasing managerial accountability and limiting discretionary or opportunistic reporting behavior. Stronger supervision encourages more comprehensive, reliable, and transparent sustainability disclosures, thereby improving sustainability reporting quality. Prior studies support this view by showing that board size strengthens internal governance and monitoring functions, which in turn enhance the quality of sustainability reporting (Alta'any et al. 2024; Erin et al. 2022). These findings reinforce the role of board size as an internal governance mechanism that improves sustainability reporting quality through enhanced oversight and reduced information asymmetry.

H2 Board size has a significant positive effect on the quality of Sustainability Reports Quality.

2.1.7 The Relationship of Sustainability Reports to Tax Avoidance

From an Agency Theory perspective, high-quality sustainability reporting is expected to reduce tax avoidance by enhancing transparency and strengthening external monitoring, thereby constraining managerial opportunism. However, as noted by (Fuadah et al. 2022), sustainability disclosures may also be used instrumentally to divert stakeholders' attention from controversial corporate practices, such as aggressive tax avoidance. In this context, sustainability reporting functions not merely as a transparency-enhancing mechanism, but also as a legitimizing tool that allows firms to maintain a positive public image while continuing tax avoidance activities. This suggests that the effectiveness of sustainability report quality in curbing tax avoidance depends on whether such disclosures genuinely enhance monitoring or are strategically employed for legitimacy purposes.

H3 Sustainability Reports Quality has a significant positive effect on Tax Avoidance

2.1.8 The Relationship of Board Size on Tax Avoidance with Sustainability Reports Quality Mediation

Taken together, the inconclusive evidence on the direct relationship between board size and tax avoidance suggests that board monitoring may not operate uniformly across all managerial decisions. From an agency theory perspective, the effectiveness of board oversight depends not only on its structural composition but also on the governance channels through which monitoring is exercised. Larger boards may enhance monitoring capacity by bringing diverse expertise, broader experience, and greater specialization, thereby strengthening oversight over disclosure practices. However, board influence on strategic outcomes such as tax avoidance is unlikely to occur through direct intervention; instead, it may be transmitted through formal governance mechanisms that discipline managerial behavior. Sustainability reporting quality represents one such mechanism. High-quality sustainability disclosures reflect the board's commitment to transparency, accountability, and stakeholder engagement. By improving the credibility and comprehensiveness of non-financial reporting, boards reduce information asymmetry and increase external scrutiny from regulators, investors, and other stakeholders. Enhanced transparency elevates reputational and legitimacy costs associated with aggressive tax strategies, thereby constraining managerial discretion in tax-related decisions. Accordingly, sustainability reporting quality functions as an intermediary governance channel through which board size exerts its monitoring role. Rather than directly limiting tax avoidance, larger boards are expected to strengthen sustainability reporting practices, which in turn impose reputational and transparency-based constraints on opportunistic tax behavior. Therefore, sustainability reporting quality is hypothesized to mediate the relationship between board size and tax avoidance.

H4 Sustainability Reports Quality mediates the relationship between board size and tax avoidance.

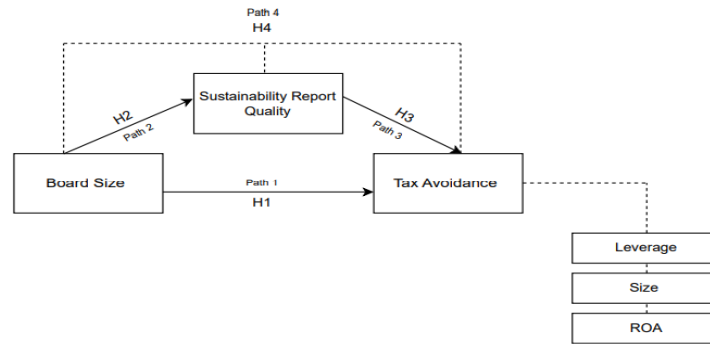


Figure 1. Conceptual Framework of Research Model

2.2 Basic Research Framework

This study employs a quantitative research approach focusing on energy sector companies listed on the Indonesia Stock Exchange (IDX) during the period 2017–2023. Secondary data were obtained from annual reports and financial statements published by the companies and the IDX website. A purposive sampling technique was applied to select firms that met the research criteria, particularly the availability and completeness of data related to tax avoidance and sustainability reporting variables. Due to differences in initial public offering (IPO) years, variations in disclosure practices, and incomplete availability of annual reports across firms, the dataset forms an unbalanced panel with unequal observation periods among companies. The initial observation period spanning seven years (2017–2023) resulted in 197 firm-year observations from 48 energy sector companies. However, to ensure the reliability of the analysis and meet the assumptions of normality, a diagnostic screening using the skewness and kurtosis test was conducted. The results identified several extreme data points that skewed the distribution. Consequently, 49 outliers were identified and removed from the dataset, consisting of 37 outliers from H1, 12 outliers from H2, while H3 and H4 showed no outliers. Following the removal of these outliers, the final sample used for empirical analysis consisted of 148 firm-year observations. As a result of the data characteristics, panel model specification tests did not provide a reliable basis for selecting fixed effects or random effects models. Therefore, this study employs pooled multiple regression analysis (ordinary least squares) to examine the relationships among variables. To address potential violations of classical regression assumptions, including heteroskedasticity and non-normality of residuals remaining after outlier treatment, the empirical analysis applies robust standard errors to obtain consistent statistical inference. This study examines the structural relationships between board size (BSIZE), sustainability report quality (SRQ), and tax avoidance measured by book–tax differences (BTD). Specifically, the analysis investigates the direct effect of BSIZE on BTD (Path 1), the effect of BSIZE on SRQ (Path 2), the effect of SRQ on BTD (Path 3), and the indirect effect of BSIZE on BTD through SRQ (Path 4). The sample selection process is summarized in Table 1.

Tabel 1. Observation Criteria

Criteria Sampling	Companies
Companies traded on the Indonesia Stock Exchange over the 2017-2023	90
Companies excluded due to incomplete tax disclosure and reporting limitations	(42)
Final sample companies	48

Source: Sources: Indonesia Stock Exchange

2.2.1 Tax Avoidance

In this study, researchers used Book-Tax Differences (BTD) as a tool to evaluate of tax avoidance, this indicator captures the gap between accounting profit presented to shareholders and taxable income reported to tax authorities. To assess Book-Tax Differences, the taxable profit is subtracted from accounting profit before tax, which is then normalized by total assets to control for company scale. Accounting profit before tax is sourced from the accompanying notes to the financial statements whereas taxable profit, determined by dividing the current tax expense by the applicable corporate tax rate (Rashid et al., 2024; Yusriva and Paramitalaksmi, 2024).

$$BTD = \frac{\text{Net Income} - \text{Taxable Income}}{\text{Total Assets}} \tag{1}$$

2.2.2 Board Size

Board size (BSIZE), representing the total number of people occupying board seats, is an important indicator of internal control capabilities in corporate governance. In this study, the size is determined by the total number of board members revealed in the company's annual report each year (Koay and Sapiei, 2025; Sulistyawati and Rahmawati, 2024).

$$\text{Board Size} = \text{Total Board Size} \tag{2}$$

2.2.3 Sustainability Reporting Quality

The quality of sustainability reporting quality (SRQ) is measured on a scale from 0 to 4 (Al-Shaer and Zaman, 2016; Erin et al., 2022). The sustainability reporting score ranges from 0 to 4, where 0 indicates no report; 1, the presence of a report; 2, a report supported by a sustainability committee; 3, a report assured by a non-audit third party; and 4, a report assured by a Big Four audit firm.

2.2.4 Leverage

To measure leverage, this study employs the Debt to Equity Ratio (DER), computed by dividing total liabilities by total equity. It is serves as a control variable in the research model. This step is crucial to address potential methodological bias that may arise due to the diversity in capital structures among the companies under study (Aji and Wulandari, 2022; Sulistyawati and Rahmawati, 2024).

$$DER = \frac{Total\ Liability}{Total\ Equity} \tag{3}$$

2.2.5 Firm Size

Firm size (SIZE) as a reflection of the company economic capabilities, operational complexity, and strategic market position. Firm size, measured by the natural logarithm of total assets, serves as a control variable to account for its influence on the likelihood of tax avoidance (Almasarwah et al. 2022; Koay and Sapiei 2025; Salehi et al. 2024; Stanley and Widianingsih 2025)

2.2.6 ROA

Return on Assets (ROA), as measured as net income divided by total assets, is used in this study to evaluate asset profitability. ROA as a variable incorporated as a control to explore the impact of operational efficiency on tax avoidance practices (Almasarwah et al., 2022; Amidu et al., 2019; Sulistyawati and Rahmawati, 2024).

$$ROA = \frac{Net\ Income}{Total\ Assets} \tag{4}$$

2.3 Statistical Techniques

Multiple Linear Regression Analysis

This study develops two models to Assess how board size influences tax avoidance. The first model tests, mediating role of sustainability responsibility quality (SRQ), the model also incorporate control variables such as DER, firm size, and ROA to reduce estimation bias. In both models, multiple linear regression is utilized to analyze the relationships among the independent, mediating, and dependent variables. The regression equation is given below

Model

$$BTD = \alpha + \beta_1 BSIZE + \beta_2 DER + \beta_3 SIZE + \beta_4 ROA + \epsilon \tag{5}$$

$$SRQ = \alpha + \beta_1 BSIZE + \beta_2 DER + \beta_3 SIZE + \beta_4 ROA + \epsilon \tag{6}$$

$$BTD = \alpha + \beta_1 SRQ + \beta_2 DER + \beta_3 SIZE + \beta_4 ROA + \epsilon \tag{7}$$

$$BTD = \alpha + \beta_1 BSIZE + \beta_2 SRQ + \beta_3 DER + \beta_4 SIZE + \beta_5 ROA + \epsilon \tag{8}$$

Following Judd and Kenny (1981), It is highlighted that mediation can occur even in the absence of a significant direct between variables X and Y. The first step is a normality test on residuals using the ladder of powers to determine suitable variable transformation. Outliers are then detected and removed using residual boxplots. A linearity test follows, where linearity is met if the Prob > F value exceeds 0.05. Multicollinearity is checked via Mean VIF, with values under 10 indicating acceptable levels. Heteroscedasticity is tested to detect unequal error variance. A p-value below 0.05 signals heteroscedasticity, prompting the use of robust standard errors. Autocorrelation is checked using the Durbin-Watson test, with reference to the DW table in the du value. If the test statistic is below du, then this indicates an autocorrelation problem. If autocorrelation is detected, robust standard errors are applied to address the issue and ensure the accuracy of the statistical inference. To examine mediation, this study uses path analysis, followed by the Sobel test to assess the significance of mediation paths. A standardization value above 1.96 indicates significance at the 95% confidence level. Before proceeding to the regression and mediation analysis, descriptive statistics are presented to provide an overview of the characteristics and distribution of the research variables.

3. RESULTS AND DISCUSSION

Table 2. Descriptive Statistics Results

Variable	Obs	Mean	Std. Dev.	Min	Max
BTD	148	.0745092	.1100161	-.396302	.4113055
BSZIE	148	3.810811	1.439725	0	8

Variable	Obs	Mean	Std. Dev.	Min	Max
SRQ	148	.5878378	.7277685	0	3
ROA	148	.0576378	.0961668	-.4011	.3645
DER	148	1.298041	1.909897	-1.735859	15.04707
SIZE	148	1.11e+13	2.52e+13	9.76e+08	1.15e+14

Prior to performing the diagnostic tests, a data screening process was conducted to ensure the reliability of the empirical analysis. From the initial dataset of 197 firm-year observations, outliers were identified using standardized residual criteria and the skewness and kurtosis test. A total of 49 outliers were removed to mitigate the influence of extreme values, consisting of 37 outliers in Path 1 and 12 outliers in Path 2, while no outliers were detected in Paths 3 and 4. Consequently, the final sample used for all subsequent estimations, descriptive summaries, and classical assumption tests consisted of 148 firm-year observations. The descriptive statistics presented in Table 2 summarize the characteristics of the variables used in this study based on 148 firm-year observations. The Book–Tax Difference (BTD) has a mean value of 0.0745, indicating that, on average, firms report accounting income that is slightly higher than taxable income, indicating that, on average, accounting income slightly exceeds taxable income. The standard deviation of BTD (0.1100) and its wide range, from –0.3963 to 0.4113, reflect substantial variation in tax positions across firms and years. Board size (BSIZE) has an average value of 3.81 members, implying that most firms operate with relatively small boards, although the maximum value of 8 members indicates that some firms maintain larger board structures. The Sustainability Reporting Quality (SRQ) variable shows a mean score of 0.5878, suggesting a moderate level of sustainability disclosure, with some firms providing no disclosure at all (minimum value of 0) and others achieving higher reporting quality (maximum value of 3). Regarding control variables, the average Return on Assets (ROA) is 0.0576, indicating that firms generate approximately 5.8% profit from their total assets on average, although profitability varies considerably, as reflected by values ranging from losses (–0.4011) to relatively strong performance (0.3645). The Debt-to-Equity Ratio (DER) has a mean of 1.2980, suggesting that, on average, firms rely more on debt financing than equity, with substantial dispersion across observations. The average total assets of companies in the sample amount to approximately IDR 11.1 trillion, with a minimum value of IDR 976 million and a maximum reaching approximately IDR 115 trillion. The relatively large standard deviation indicates substantial variation in firm size, reflecting the presence of companies with highly diverse operational scales, ranging from relatively small firms to very large energy sector companies.

Table 3. Classical Assumptions Model

Description	Path 1	Path 2	Path 3	Path 4
Normality Test	0.3437	0.0103	0.2383	0.2156
Multicollinearity Test	1.18	1.18	1.09	1.25
Heteroscedasticity Test	0.7519	0.0002	0.5181	0.4442
Autocorrelation Test*	2.038564	.0034836	2.102226	2.079581

The results of the classical assumption tests are presented in Table 3. The normality test indicates that the residuals are normally distributed for Paths 1, 3, and 4, as evidenced by p-values greater than 0.05. However, Path 2 fails the normality test, with a p-value below the conventional significance level. It is important to note that normality is not a strict requirement in multiple linear regression, as the normality assumption primarily applies to the distribution of residuals and is mainly relevant for statistical inference rather than coefficient estimation. As explained by (Ahmad 2025), empirical data in applied research rarely follow a perfect normal distribution, and violations of the normality assumption tend to affect the validity of significance tests rather than the magnitude or direction of regression coefficients. Accordingly, the Ordinary Least Squares (OLS) estimators remain consistent despite deviations from normality, particularly in samples of moderate size. Prior to estimation, outlier observations were identified and treated using standardized residual criteria to mitigate the influence of extreme values. Consequently, 37 outliers were removed from Path 1 and 12 outliers from Path 2, while no outliers were detected or removed in Paths 3 and 4. The multicollinearity test results show that all models meet the multicollinearity assumption, with variance inflation factor (VIF) values well below the commonly accepted threshold. The heteroskedasticity test indicates the presence of heteroskedasticity only in Path 2, while Paths 1, 3, and 4 do not exhibit this issue. In addition, the autocorrelation test reveals the presence of autocorrelation in Paths 1, 3, and 4, based on the Durbin–Watson statistics falling outside the acceptable range. To address potential violations of classical assumptions, including heteroskedasticity, autocorrelation, and non-normality of residuals, robust standard errors are applied in all regression models to ensure consistent and reliable statistical inference.

Table 4. Hypothesis Testing Model 1

Description	Path 1	Path 2	Path 3	Path 4
BSIZE	-.0001606	-	-	-.0008724
	0.873	-	-	0.423
SRQ	-	.2126406	.0027261	.0033476
	-	0.000	0.138	0.094

Description	Path 1	Path 2	Path 3	Path 4
ROA	1.127261	1.208061	1.12426	1.123217
	0.000	0.073	0.000	0.000
DER	-.0007847	.0116051	-.0007131	-.0008236
	0.295	0.715	0.330	0.269
SIZE	.0005632	-.20874	.0006695	.001262
	0.733	0.025	0.660	0.457
Prob > f	0.0000	0.0000	0.0000	0.0000
R -Squared	0.9796	0.1849	0.9799	0.9760

The regression results indicate that board size (BSIZE) does not have a significant direct effect on book–tax differences (BTD), as shown in Path 1 ($p > 0.05$); therefore, H1 is rejected, as this finding suggests that variations in board size are not directly associated with differences in corporate tax outcomes; rather, ROA significantly drives BTD. The control variable ROA shows a significant effect in this path, indicating that profitability is a more dominant driver of tax differences than board structure. However, the results show that BSIZE has a positive and significant effect on sustainability reporting quality (SRQ) in Path 2 thus, H2 is accepted, indicating that larger boards tend to enhance the quality of sustainability disclosures, possibly due to stronger monitoring mechanisms and greater diversity of expertise, supported by significant effects from ROA and Firm Size. Despite this relationship, SRQ does not have a significant effect on BTD in Path 3, ($p > 0.05$), leading to the conclusion that H3 is rejected implying that higher sustainability reporting quality does not necessarily translate into lower or higher book–tax differences, while ROA remains a significant predictor of BTD. Consequently, the mediation analysis confirms that SRQ does not mediate the relationship between BSIZE and BTD in Path 4; therefore, H4 is rejected, indicating that sustainability reporting quality is not the mechanism through which board size influences corporate tax behavior instead, tax behavior is more influenced by ROA than by board size or reporting quality."

Tabel 5. Sobel Test

Description	SRQ
Sobel test statistic	-

The mediation test for SRQ was not performed due to its non-significant relationship. This indicates that sustainability reporting quality (SRQ) does not function as a mediating variable in the relationship between board size (BSIZE) and book-tax differences (BTD), as it fails to meet the prerequisite conditions for mediation.

3.1 Discussion

The empirical findings indicate that board size does not have a significant effect on tax avoidance. Although agency theory predicts that a larger board enhances monitoring capacity and collective strategic decision-making, the evidence suggests that this prediction does not operate uniformly across contexts. In particular, the effectiveness of monitoring depends not only on structural attributes but also on the locus of decision-making authority within the firm. From an agency perspective, boards are expected to reduce opportunistic managerial behavior through oversight mechanisms. However, tax planning decisions are typically formulated and executed at the executive level, particularly within the finance function and under the direction of top management. The board’s role is generally supervisory rather than operational. Consequently, increasing the number of directors may expand formal oversight capacity but does not necessarily increase direct involvement in highly technical tax strategy formulation. This structural distance between the board and operational tax execution may weaken the expected monitoring effect predicted by agency theory. Moreover, board size reflects formal governance structure but does not inherently capture the quality, expertise, or risk orientation of individual directors.

Tax avoidance strategies require specialized knowledge in taxation, regulatory interpretation, and financial structuring. Without relevant expertise or active engagement in tax-related oversight, additional board members may not materially influence corporate tax behavior. Thus, agency theory’s prediction assumes effective monitoring transmission, yet in this context, the transmission mechanism between board structure and tax strategy appears limited. In addition, compliance with regulatory requirements does not automatically ensure governance effectiveness. Under Regulation Otoritas Jasa Keuangan, (2014) Number 33/POJK.04/2014 pasal 2 ayat 1 public companies are required to appoint at least two members to the board of directors. While firms satisfy this structural requirement, such compliance emphasizes formal legitimacy rather than substantive control quality. Therefore, variation in board size beyond the minimum threshold may not significantly alter tax-related oversight. Furthermore, the results show that only ROA has a significant effect on tax avoidance, while DER and firm size are not significant. This finding suggests that financial capacity, particularly profitability, provides managers with greater discretion and flexibility in pursuing tax strategies. Consistent with agency theory, higher profitability expands managerial latitude in allocating resources to efficiency-enhancing or tax-minimizing strategies. Accordingly, in this sectoral context, financial performance appears to be a more decisive determinant of tax behavior than formal governance structure such as board size. Therefore, H1 is rejected (Koay and Sapiei, 2025; Sulistyawati and Rahmawati, 2024),

The research confirms that board size has a significant positive effect on SRQ which contradicts inconsistent with prior studies (Alta'any et al., 2024; Erin et al., 2022). Therefore, H2 is accepted. From an agency perspective, an increase in board size enhances monitoring intensity over managerial reporting activities, thereby reducing information asymmetry between management and stakeholders. The improvement in sustainability reporting quality reflects strengthened governance discipline, as managers face greater scrutiny regarding the credibility and completeness of disclosed information. In this context, larger boards function as a governance mechanism that constrains managerial discretion in sustainability reporting. Regarding the control variables, profitability (ROA) shows a positive and significant effect on SRQ, indicating that firms with stronger financial performance possess greater capacity to support reporting systems and disclosure practices. Firm size (SIZE) exhibits a significant negative effect, which may reflect the greater organizational complexity faced by larger firms that potentially weakens coordination in sustainability reporting. Meanwhile, leverage (DER) does not have a significant effect, suggesting that debt-related monitoring is not directly associated with sustainability disclosure quality in this context. The findings emphasize that governance structure, particularly board size, plays a substantive role in improving sustainability reporting quality, while financial characteristics serve primarily as supporting contextual factors.

The results show that sustainability reporting quality (SRQ) has a insignificant negative but effect on book-tax differences (BTD) , This finding is contrary to previous studies (Fuadah et al., 2022) hence, H3 is rejected Although high-quality sustainability reporting is generally associated with ethical commitment and enhanced transparency, the empirical evidence suggests that SRQ does not significantly constrain tax avoidance behavior. From an agency perspective, sustainability reporting quality represents a transparency-based monitoring mechanism intended to reduce information asymmetry between managers and stakeholders. However, the insignificant relationship indicates that disclosure quality alone may not possess sufficient disciplining power to directly influence managerial tax decisions. Tax planning strategies are typically shaped by financial incentives, regulatory complexity, and managerial discretion at the operational level, which may not be substantially affected by improvements in sustainability disclosure practices. This finding suggests that transparency-oriented governance mechanisms do not automatically translate into behavioral control over complex financial decisions such as tax avoidance. Within the agency framework, monitoring mechanisms differ in their effectiveness depending on whether they influence reporting transparency or directly intervene in decision-making authority. In this context, sustainability reporting appears to enhance information disclosure without necessarily restricting managerial discretion in tax strategy formulation. Regarding the control variables, ROA shows a significant effect on tax avoidance, indicating that financial performance is more closely associated with managerial tax behavior. In contrast, leverage (DER) and firm size do not exhibit significant effects in this model. The findings imply that financial incentives play a more decisive role in shaping tax behavior than disclosure-based governance mechanisms such as sustainability reporting quality.

The results indicate that sustainability reporting quality (SRQ) does not mediate the relationship between board size and tax avoidance. This finding suggests that an increase in monitoring capacity through board size is not automatically translated into reporting mechanisms capable of influencing corporate tax policies. Within the framework of agency theory, the board of directors is positioned as the primary monitoring mechanism responsible for mitigating managerial opportunism, including aggressive tax avoidance practices. Theoretically, stronger oversight is expected to be reflected in corporate control instruments, including more transparent and accountable reporting practices. However, the findings of this study reveal that this assumption of integration does not fully hold. Strengthening board structure does not systematically enhance sustainability reporting quality in ways that are relevant to constraining tax avoidance practices. Accordingly, the causal pathway assumed in agency theory—whereby board monitoring is reflected in reporting practices and ultimately suppresses opportunistic behavior—is not supported in this context. These findings imply that governance mechanisms may operate in a partial and non-reinforcing manner. Board oversight may be effective within certain organizational domains, yet it does not automatically become internalized within sustainability reporting policies that materially affect fiscal decision-making. Therefore, the absence of a mediating effect does not merely represent a statistically insignificant relationship; rather, it indicates that the effectiveness of governance in constraining tax avoidance does not necessarily operate through sustainability reporting channels as theoretically presumed. This further suggests that the assumption of linearity embedded in agency theory may oversimplify the complex relationship among board structure, reporting practices, and corporate tax decisions. Meanwhile, ROA, DER, and firm size are included as control variables to ensure that the estimated relationships are not confounded by firms' financial characteristics. Given their role as control variables, these factors are not the primary focus of interpretation in this study.

4. CONCLUSION

This study shows that board size does not have a significant effect on tax avoidance, although it has a positive effect on sustainability reporting quality. This finding indicates that improvements in monitoring capacity through board structure are more strongly reflected in enhanced disclosure practices than in the control of strategic tax decisions. In addition, sustainability reporting quality does not affect tax avoidance and does not mediate the relationship between board size and tax avoidance, suggesting that the transmission pathway assumed within the Agency Theory framework is not empirically supported. Profitability (ROA) is found to be positively associated with tax avoidance, while leverage and firm size are not significant. These findings indicate that financial performance factors are more relevant in explaining

variations in tax behavior than sustainability reporting mechanisms. Thus, the results provide limited support for Agency Theory: board monitoring mechanisms are effective in enhancing reporting transparency, but they do not automatically translate into fiscal discipline. This suggests that the assumed linear relationship between monitoring, transparency, and the reduction of opportunistic behavior needs to be understood in a more contextualized manner. Conceptually, this study contributes to the governance and taxation literature by demonstrating that sustainability reporting quality is not an effective linking mechanism between board structure and corporate tax policy. The findings imply that tax decisions are likely influenced by strategic and economic considerations that lie outside the domain of sustainability reporting. Therefore, future research should examine governance mechanisms that are more directly involved in corporate tax policy formulation in order to better understand how agency conflicts in the taxation context can be more effectively mitigated.

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