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Research Paper

Tax Avoidance in the Energy Sector: The Influence of Corporate Social Responsibility, Company Size, Profitability

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Abstract

This study examines the relationships among Corporate Social Responsibility (CSR), firm size, and profitability, and tax avoidance, proxied by CETR, in energy sector companies listed on the Indonesia Stock Exchange (IDX) during the period 2021–2023, using multiple linear regression analysis. The total sample used is 69 companies. Empirically, the findings indicate that higher levels of CSR disclosure are associated with lower Cash Effective Tax Rates (CETR), indicating greater levels of tax avoidance. These results provide empirical support for legitimacy-based arguments in the tax avoidance literature, which suggest that CSR disclosure can serve as a strategic mechanism to offset reputational risks arising from aggressive tax practices. In contrast, firm size, as measured by total assets, was found to have no significant effect on tax avoidance, indicating that firm size alone does not determine tax planning behavior in the energy sector. Furthermore, profitability exhibits a significant negative relationship with tax avoidance, indicating that firms with stronger financial performance tend to adopt more conservative tax positions, possibly due to greater regulatory and stakeholder scrutiny. By focusing on energy sector firms and using CETR as a cash-based proxy for tax avoidance, this study extends previous empirical evidence on the heterogeneous roles of CSR and profitability in corporate tax behavior and provides sector-specific insights into the existing tax avoidance literature in the context of emerging markets.

Keywords *Tax Avoidance; Corporate Social Responsibility; Profitability; Company Size; Energy Sector*

INTRODUCTION

Taxes are a fundamental financial obligation for both individuals and corporations, and their collection is essential for funding state activities that promote national development and public welfare. In Indonesia, taxes contributed 44.7% to the national budget in 2021 (Kemenkeu.go.id, 2021), playing a critical role in supporting public infrastructure and ensuring economic stability. Without tax revenue, the government would be forced to rely on debt, potentially jeopardizing the country's financial stability.

The energy sector, a key driver of Indonesia's economy, is characterized by significant revenue generation but also presents challenges in terms of tax compliance and avoidance. This sector, encompassing energy production, distribution, and management, often faces scrutiny regarding its tax practices due to the complexity and profitability of the businesses involved. This research examines how CSR, company size, and profitability affect the level of tax avoidance practices among energy sector companies listed on the IDX, using data from 2021 to 2023.

Table 1. Table of Tax Revenue and Growth

Year	Tax Revenue (Rp Triliun)	Growth (%)
2020	1,072.11	-19.6
2021	1,278.63	19.3
2022	1,716.77	34.3
2023	1,869.23	8.9

Source: Direktorat Jenderal Pajak, 2023

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Industrial companies play a major role as contributors to national tax revenue. In the current competitive business landscape, firms are expected not only to achieve high profitability but also to adhere to tax laws and fulfill their social responsibilities. In reality, however, many companies adopt tax avoidance strategies to lessen their tax obligations. This issue is especially significant in the energy sector, where tax expenses are directly deducted from net profits. Consequently, reducing tax costs becomes an essential approach to safeguarding corporate interests and profitability. To accomplish this, companies frequently engage professional tax consultants to develop effective strategies that remain compliant with existing regulations.

Tax avoidance refers to the legal practice of reducing taxes within the limits of tax laws. Unlike tax evasion, which is illegal, tax avoidance is a legitimate strategy (Riadi, 2022). While tax avoidance itself is not unlawful, it can create negative public perceptions, particularly when pursued aggressively. As a result, companies need to carefully consider the long-term impact of their tax avoidance strategies, especially the reputational risks and potential scrutiny from tax authorities. Large companies, in particular, need to be cautious about engaging in aggressive tax avoidance, as it may tarnish their public image and lead to perceptions of irresponsibility. Thus, corporate tax strategies should balance financial efficiency with transparency, accountability, and social responsibility.

Tax avoidance remains a complex issue, as governments often discourage it despite its legality. In Indonesia, tax avoidance is seen as a challenge, particularly as the country seeks to improve tax compliance and fairness. The government's aim is to foster a tax system that minimizes loopholes and ensures equitable contribution from all sectors.

As a key context, Indonesia, along with more than 40 other nations, is scheduled to adopt the Global Minimum Tax (GMT) in 2025. This initiative is part of the OECD's Global Anti-Base Erosion (GLoBE) initiative, operating within the G20 framework. The GMT introduces a mandatory minimum tax rate of 15% on the effective profits of multinational companies (MNCs). This rule applies to MNCs whose annual revenues reach at least €750 million (or approximately 12–13 trillion Rupiah). The primary goal of this policy is to limit the ability of multinational corporations to shift profits to lower-tax jurisdictions, thereby curbing global tax avoidance.

Indonesia's implementation of the GMT is guided by the Minister of Finance Regulation Number 136 of 2024, signed by Finance Minister Sri Mulyani on December 31, 2024, and effective from January 1, 2025. This regulation outlines the 15% tax rate, reporting requirements, payment obligations, and mechanisms for monitoring and closing tax loopholes (Kementerian Keuangan Republik Indonesia, 2024). The primary goal of the GMT is to establish a more equitable global tax framework by restricting aggressive tax avoidance. This ensures that multinational companies (MNCs) fulfill their appropriate tax contributions. The government anticipates that this policy will not only boost tax revenue but also safeguard domestic companies that already adhere to tax regulations.

A notable example of tax avoidance in Indonesia is PT Adaro Energy Tbk, the country's largest mining company. According to Global Witness (2019), Adaro's Singapore subsidiary, Coaltrade Services International, received unusually low sales commissions, despite over 70% of its coal supply coming from PT Adaro Energy Tbk. PT Adaro reportedly used transfer pricing to reduce its taxable income in Indonesia by selling coal to Coaltrade at artificially low prices and reselling it internationally at a higher price Sugianto (2019). This practice highlights how tax avoidance can be achieved through pricing strategies that exploit international tax differences.

Existing literature has attempted to identify firm-level determinants of corporate tax avoidance, with Corporate Social Responsibility (CSR), company size, and profitability frequently examined as key explanatory variables. CSR, which reflects a firm's ethical, social, and environmental commitments, is theoretically expected to discourage aggressive tax behavior, as socially responsible firms are presumed to prioritize legitimacy and stakeholder trust. However, empirical findings remain inconclusive. Some studies report that higher CSR disclosure is associated with lower levels of tax avoidance, particularly when CSR is measured through environmental and social performance indicators (Suripto, 2021). In contrast, other studies find a positive relationship, suggesting that CSR disclosure may function strategically as a legitimacy tool to mask aggressive tax practices (Kalila & Puspitaningrum, 2025). These mixed results indicate that the relationship between CSR and tax avoidance may depend on the specific dimensions of CSR examined (e.g., environmental vs. social disclosure), the proxies used to measure tax avoidance (e.g., effective tax rate or book-tax differences), and the industrial context.

Similarly, company size is often argued to influence tax avoidance behavior. Larger firms typically possess greater financial resources, more complex organizational structures, and access to specialized tax expertise, which may enable them to engage in more sophisticated tax planning. Nevertheless, prior studies offer conflicting conclusions, with some suggesting that firm size increases tax avoidance (Mayndarto, 2022). While others find no significant effect, possibly due to heightened regulatory oversight and reputational concerns faced by large firms (Aini & Ikram, 2025).

Profitability is another important determinant of tax avoidance, as higher profits generally lead to higher tax liabilities. From an economic perspective, profitable firms may have stronger incentives to reduce their tax burden. Empirical evidence, however, remains inconsistent. While some studies document a positive relationship between profitability and tax avoidance (Asprilla & Adi, 2023), others find that profitability does not significantly influence tax avoidance decisions, indicating that other governance or institutional factors may play a moderating role.

Despite the growing body of literature, prior research has not sufficiently mapped how CSR, company size, and profitability interact to influence tax avoidance specifically within the Indonesian energy sector. Moreover, inconsistencies in empirical findings have not been systematically addressed by considering sectoral characteristics and measurement differences. This gap suggests the need for a more focused investigation that integrates firm characteristics with the unique operational and regulatory environment of the energy industry.

Accordingly, this study aims to analyze the effect of Corporate Social Responsibility (CSR), company size, and profitability on tax avoidance among energy sector companies listed on the Indonesia Stock Exchange (IDX) during the period 2021–2023. Based on this objective, the research is guided by the following research questions:

1. Does Corporate Social Responsibility (CSR) influence tax avoidance in the energy sector companies?
2. Does company size influence tax avoidance in the energy sector companies?
3. Does profitability influence tax avoidance in the energy sector companies?

By addressing these questions, this study seeks to contribute to the empirical literature on corporate tax behavior and provide insights for policymakers and stakeholders in strengthening tax compliance within strategically important sectors.

LITERATURE REVIEW

Agency Theory

Focusing on the relationship between owners (shareholders) and their agents (management), Agency theory emphasizes that aligning these parties' interests is essential for bolstering a company's value. The theory posits that proper incentive structures and strong monitoring mechanisms are crucial to prevent managers from acting in ways that prioritize personal gain over the company's welfare. Within this framework, a contractual relationship is established in which the principal (shareholders) grants authority to the agent (management) to make decisions intended to serve the principal's best interests (Jensen & Meckling, 2012).

Within the framework of agency theory, individuals are assumed to act in their own self-interest, which may generate conflicts between companies and external stakeholders, particularly the government as the tax authority. Managers, acting as agents, may perceive taxes as costs that reduce reported performance and profitability, thereby creating incentives to engage in tax avoidance to improve firm outcomes. This behavior directly conflicts with the government's objective, as the principal, to maximize tax revenue for public expenditure.

Agency theory also provides testable expectations regarding firm characteristics that may influence tax avoidance. CSR can serve as a governance and legitimacy mechanism that restrains managerial opportunism through stakeholder monitoring, potentially reducing tax avoidance, although it may also be used strategically to mask aggressive tax behavior. Company size reflects both greater managerial capacity to implement complex tax planning and increased external scrutiny, leading to ambiguous expectations. Profitability, meanwhile, increases taxable income and thus strengthens managerial incentives to reduce tax burdens through tax avoidance. Accordingly, agency theory supports examining how CSR, company size, and profitability influence corporate tax avoidance behavior.

Although tax avoidance is legal, aggressive strategies can pose risks, including legal challenges and reputational damage, which could harm shareholders in the long term. To guarantee the firm acts in the best interests of its shareholders while reducing associated risks, crucial monitoring and effective supervision are required. One form of oversight is enhancing transparency and accountability through Corporate Social Responsibility (CSR) disclosures. These disclosures can help align the interests of managers and shareholders by providing stakeholders with a clear picture of the company's practices, including its tax strategy. By promoting greater transparency, CSR can reduce the incentive for managers to engage in opportunistic behavior, ultimately fostering trust and long-term value creation.

Tax Avoidance

A lawful strategy used to minimize tax liabilities is known as tax avoidance, which is achieved by exploiting gaps or unclear interpretations found in tax legislation. These so-called "grey areas" lie between actions that are clearly permitted and those that are explicitly prohibited by law. Consequently, companies may utilize these weaknesses in the tax system to reduce their tax burden while remaining within the boundaries of legal compliance.

While tax avoidance does not break the law, it often involves strategies that, although permissible, may contradict the underlying intent of tax laws. The goal of tax avoidance is to lessen the tax burden by exploiting legal loopholes, such as vague or ambiguous provisions in tax regulations, even if this action occasionally contradicts the underlying intent of the law.

According to Merks (2007), as cited in Heriyah (2020), companies typically use the following methods to avoid taxes:

1. Substantive Tax Planning: This involves shifting tax subjects and/or tax objects to jurisdictions with more favorable tax policies or tax havens. By doing so, companies can reduce tax liabilities for certain types of income.
2. Formal Tax Planning: Companies may structure transactions in ways that maintain their economic substance but result in the lowest possible tax burden. This involves utilizing legal forms that minimize taxes while adhering to the letter of the law.
3. Anti-Avoidance Provisions: are utilized by companies in specific transactions, such as transfer pricing, thin capitalization, and those involving treaty-based corporations or lacking genuine business substance, to strategically limit aggressive tax avoidance measures.

A widely used tax avoidance method among multinational corporations is transfer pricing.

To effectively lower their total global tax obligations, companies employ this strategy by adjusting the costs of goods or services exchanged among subsidiaries across countries, intentionally redirecting profits toward entities based in low-tax regions or tax havens through their transfer prices.

Corporate Social Responsibility

According to the World Business Council for Sustainable Development (WBCSD), Corporate Social Responsibility (CSR) is the responsibility of a company to actively promote sustainable economic progress and to improve the quality of life for its business operations as well as for society through the activities it undertakes.

A company's participation in economic progress is defined as CSR, requiring a focus on balancing concurrent concerns related to economic viability, social well-being, and environmental stewardship. The implementation of CSR can influence company management, potentially leading to opportunistic behavior, as it provides opportunities for management to make decisions that are both socially beneficial and financially advantageous.

Identifies three stages that encourage companies to adopt CSR:

1. Corporate Charity: Activities driven by charitable values, often motivated by religious and humanitarian principles.
2. Corporate Philanthropy: A commitment to supporting social justice and helping others, based on universal ethical values.
3. Corporate Citizenship: A socially responsible initiative aimed at achieving social equality through contributions to societal well-being.

The disclosure of Corporate Social Responsibility (CSR) information within annual financial reports serves as a crucial factor that investors consider when forming their investment decisions. The presence of such information signals that the company is committed to its local community, which can enhance the company's reputation and attract investment (Suryaningtyas & Sawitri, 2024).

Company Size

An entity's scale, which varies from small operations up to large corporations, is represented by company size. It reflects the company's operational activities and revenue generation capabilities. Several factors determine company size, including equity, sales, the number of employees, and total assets. Law No. 20 of 2008 establishes a classification system where companies are divided into four groups: micro-businesses, small businesses, medium businesses, and large businesses. One tax avoidance strategy often employed by companies is the use of appropriate accounting practices to lower the effective tax rate (ETR).

Company size also plays a crucial role in enhancing investor confidence. Larger companies, being more well-known, benefit from increased public visibility, which facilitates access to information and, in turn, can boost the company's value (Susanto & Suryani, 2024). Companies with substantial assets tend to attract more investors, and as stock prices rise, so does the company's perceived value.

For large companies, it is essential to drive economic growth to further enhance their value. In general, larger companies have greater access to financing from creditors, which can contribute to increased shareholder value (Erlangga, 2025)

Malik et al. (2022) note that companies with larger total assets typically generate more stable profits than smaller companies. Stable profits can make larger companies more vulnerable to tax avoidance strategies. However, because large companies are more visible to the public and government, they tend to face greater scrutiny, which may encourage them to maintain compliance and ensure the accuracy of their financial reports to reflect actual financial conditions (Wardoyo et al., 2022).

Profitability

Profitability serves as a fundamental determinant in assessing the magnitude of the tax burden that a company is required to bear. In principle, the higher the level of profitability, the greater the taxable income, and consequently, the higher the amount of tax payable. According to Gaol & Siregar (2023), companies that generate higher profits are subject to increased tax obligations due to their enhanced capacity to contribute to fiscal revenues. Conversely, firms that report lower profitability, or even operate at a loss, often face a reduced tax burden or may be exempt from paying income taxes altogether. Furthermore, companies experiencing financial losses can utilize loss carryforward mechanisms, which allow them to offset losses against future taxable income, thereby reducing tax liabilities in subsequent fiscal years. This mechanism provides a tax advantage for loss-making companies and serves as an incentive for business continuity during periods of financial distress.

The effective tax rate (ETR), which represents the ratio of tax expense to pre-tax income, is directly influenced by a firm's profitability and its ability to generate sustainable returns. As an indicator of financial efficiency, profitability is commonly measured using the Return on Assets (ROA) metric, which reflects how effectively a firm utilizes its total assets to generate earnings. Generally, as profitability increases, the company's taxable base expands, leading to higher tax obligations. However, this relationship is not always linear, as firms with higher ROA may actively engage in tax planning or tax avoidance strategies to reduce their effective tax burden. By exploiting available deductions, incentives, and loopholes in the tax system, these firms can effectively lower their ETR despite reporting strong financial performance.

Empirical evidence supports this phenomenon. In a study examining Malaysian firms, Melani et al. (2025) employed the ETR as a proxy to measure tax avoidance behavior and identified a significant inverse relationship between ROA and current ETR. This finding suggests that more profitable firms are often more motivated and better equipped to engage in tax minimization practices, leveraging their financial resources and access to professional tax expertise. As a result, even though profitability theoretically increases tax obligations, in practice, highly profitable companies may experience a lower effective tax rate through deliberate and strategic tax avoidance efforts.

Overall, profitability not only reflects a firm's operational success but also shapes its tax behavior and planning strategies. While profitability increases the potential tax liability, it simultaneously enhances a firm's capability to implement sophisticated tax management approaches aimed at optimizing post-tax returns. Hence, understanding the interplay between profitability, tax avoidance, and ETR is crucial for policymakers, regulators, and investors seeking to evaluate the fairness and effectiveness of corporate taxation systems.

Hypothesis

Corporate Social Responsibility (CSR) signifies a firm's commitment to measuring success not exclusively through profit, but also by factoring in customer satisfaction and the broader social well-being. The link connecting CSR and profitability arises from the way a company seeks to integrate both financial success and social accountability into its core business practices. CSR encompasses initiatives aimed at supporting sustainable economic growth while maintaining harmony among economic, social, and environmental priorities. Tax avoidance, on the other hand, describes the practice of reducing tax responsibilities by taking advantage of gaps or weak points found within existing tax laws.

Deegan et al. (2002) argue that firms involved in tax avoidance tend to enhance and promote their CSR initiatives as a means to attract public approval, in line with the principles of legitimacy theory. This theory posits that companies utilize CSR reporting to justify their actions and preserve a favorable reputation, especially when certain behaviors, such as tax avoidance, might be perceived as socially undesirable. Consequently, adopting this viewpoint, companies engaging in higher levels of tax avoidance are likely to increase their CSR disclosures to maintain or enhance their legitimacy in the public sphere.

Studies conducted by Parhusip and Simarmata (2022) and Retnoningsih et al. (2024) provide evidence that CSR has an influence on tax avoidance. Consistent with the view that companies seek to protect their image and conform to social norms, Lanis & Richardson (2012)Lanis suggest that firms involved in tax avoidance are motivated to increase the openness of their CSR reporting and become more proactive in implementing CSR initiatives.

Presenting a differing view, the research by Makhfuduloh et al. (2018) found no significant impact of CSR on tax avoidance, theorizing that companies engaged in CSR reporting often maintain a strong public reputation that discourages the adoption of aggressive tax avoidance measures.

H1: Corporate Social Responsibility Influences Tax Avoidance

The total asset value of a firm is commonly used as a key indicator for measuring company size, as it reflects the overall scale of operations, resource capacity, and financial stability of an entity. Larger firms generally possess more substantial financial resources, diversified business activities, and stronger market positions, allowing them to maintain operational stability and achieve greater profitability compared to smaller firms. The size of a company often influences its financial management decisions, including taxation strategies, because large firms tend to face higher levels of scrutiny from regulators while simultaneously having greater access to expert tax planning resources.

However, a company's asset composition also plays a crucial role in shaping its financial outcomes and tax position. Assets are subject to depreciation over time, which can reduce reported earnings and subsequently decrease taxable income. This depreciation expense may indirectly encourage firms to engage in tax avoidance practices, as it provides an avenue for minimizing tax liabilities while remaining within the boundaries of legal compliance. Consequently, both company size and the structure of asset ownership can influence the degree to which firms adopt aggressive yet legitimate tax management strategies aimed at optimizing after-tax profits.

Empirical studies have provided varying insights into the relationship between company size and tax avoidance. Research conducted by Ananda et al. (2023) and Widodo and Angraini (2024) revealed that firm size significantly affects tax avoidance behavior. Their findings suggest that larger firms, due to their extensive resources and sophisticated management systems, are more likely to engage in structured tax planning, which may include legal forms of tax avoidance designed to reduce overall tax expenditure. These firms often have the capability to hire professional tax consultants and utilize complex financial arrangements to exploit available tax incentives and loopholes.

In contrast, Sinambela (2022) presented a contradictory perspective, reporting that company size did not have a significant impact on tax avoidance. According to this view, tax avoidance behavior is more strongly driven by other factors, such as management ethics, corporate governance, and profitability levels, rather than firm size alone. This inconsistency in empirical findings highlights that the relationship between company size and tax avoidance may be context-dependent, varying across industries, regulatory environments, and periods of economic change. Hence, further research such as the present study focusing on energy companies is essential to clarify the extent to which firm size influences tax avoidance practices within sectors characterized by capital intensity, regulatory complexity, and environmental accountability.

H2: Company Size Influences Tax Avoidance

A firm's ability to generate revenue from its commercial endeavors is captured by the concept of profitability. This financial health is frequently measured by the Return on Assets (ROA), which assesses how effectively a business deploys its assets to yield profits. Fundamentally, profit represents the residual value when a firm's total income (including revenue and gains) exceeds its total expenditures (including costs and losses). Critically, as profits ascend, a company's corresponding tax liability also increases. Consequently, highly profitable organizations are typically strongly motivated to implement tax avoidance measures as a strategy to lessen their tax burden and ultimately augment the firm's overall valuation.

Highly profitable firms often prioritize the minimization of their tax obligations to boost net profits. A common method employed for this purpose involves capitalizing on existing tax law discrepancies (Prasetya & Muid, 2022). Prasetya and Muid (2022) indicated that increased profitability leads to a greater inclination for firms to engage in tax avoidance strategies, aiming to reduce their tax obligations.

Conversely, multiple studies suggest that highly profitable firms might, in fact, exhibit a greater tendency to meet their tax duties. This behavior stems from the increased scrutiny these companies face from both regulators and stakeholders, which compels them to adopt more cautious tax strategies to preempt legal penalties and reputational harm. In line with this perspective, Mayndarto (2022) found a negative correlation between profitability and tax avoidance, which suggests that financially stronger firms prefer adherence to tax regulations.

Companies achieving high profitability often put into practice sustainability strategies, like CSR, which serve to emphasize tax transparency and affirm their commitment to ethical standards. These strategies can further reduce the incentive for tax avoidance, as they align with broader corporate goals of reputation management and long-term value creation.

H3: Profitability Influences Tax Avoidance

RESEARCH METHOD

This study focuses on energy companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2023 period. The energy sector is selected because of its unique characteristics, such as large asset bases, high capital intensity, and significant environmental responsibilities, which make it a suitable context for examining tax avoidance practices. In addition, firms in this sector are subject to strict regulatory oversight and public scrutiny, increasing the importance of understanding how financial and non-financial factors influence their tax behavior.

The research investigates the relationship between Corporate Social Responsibility (CSR), company size, profitability, and tax avoidance within the energy industry. Given the sector's scale and strategic importance, these factors are expected to play a key role in shaping corporate tax strategies. By analyzing these interactions, the study aims to provide deeper insights into how CSR initiatives and financial performance indicators affect tax avoidance behavior among energy firms in Indonesia.

Data and Type Source

A quantitative research methodology is employed in this study to objectively analyze numerical data and examine the relationships among key financial variables. This approach enables empirical testing of hypotheses and provides measurable, replicable results. Data analysis is conducted using the IBM SPSS Statistics software package, which facilitates descriptive, correlation, and regression analyses to ensure the accuracy and reliability of the findings.

The data utilized in this research are obtained from publicly accessible sources, including annual reports, sustainability disclosures, and audited financial statements of energy companies listed on the Indonesia Stock Exchange (IDX). These documents provide comprehensive information on each firm's financial performance, tax burden, and corporate governance. The use of publicly available secondary data ensures transparency, comparability, and credibility, as these companies adhere to reporting standards set by the Financial Services Authority (OJK) and the IDX. Overall, this methodological framework ensures that the results are empirically grounded and statistically robust.

Population and Sample

The subjects of this research consist of energy sector firms listed on the Indonesia Stock Exchange (IDX) during the period 2021–2023 that published complete financial and sustainability (CSR) reports. A purposive sampling technique was employed based on the following criteria:

1. Firms were continuously listed on the IDX throughout the 2021–2023 fiscal years;
2. Firms published complete annual financial statements and reported positive net income during the study period;
3. Firms consistently disclosed CSR information through sustainability reports aligned with the Global Reporting Initiative (GRI) standards; and
4. Firms provided complete data required to measure all research variables, including CSR, company size, profitability, and tax avoidance.

After applying these selection criteria, the final sample comprised 23 energy sector companies, resulting in 69 firm year observations over the three year study period.

Data Collection Techniques

The research utilizes secondary data obtained from publicly accessible sources, including annual reports, sustainability (CSR) disclosures, and audited financial statements of energy companies listed on the Indonesia Stock Exchange (IDX). The use of secondary data ensures transparency, reliability, and comparability since all listed firms are required to publish these documents in accordance with the reporting standards set by the Financial Services Authority (OJK) and the IDX. This approach also minimizes potential biases associated with primary data collection while allowing for a broader and more objective assessment of company performance across the energy sector.

To evaluate Corporate Social Responsibility (CSR) performance, this study employs the 2021 Global Reporting Initiative (GRI) Standards, which provide a structured framework for assessing sustainability practices across economic, environmental, and social dimensions. The GRI indicators enable a systematic evaluation of each company's CSR initiatives, including areas such as environmental management, community involvement, labor practices, and corporate governance. By relying on these globally recognized standards, the study ensures consistency and comparability in measuring CSR performance while strengthening the validity of the findings related to the interaction between CSR, profitability, and tax avoidance behavior.

Operational Definition of Data

1. **Dependent Variable:**

   The degree of tax avoidance in this study is measured using the Cash Effective Tax Rate (CETR), which is calculated as the ratio of cash taxes paid to pre-tax earnings. The CETR reflects the proportion of a company's earnings that is actually paid in taxes, thereby serving as a reliable indicator of its tax planning behavior. A lower CETR value implies a higher degree of tax avoidance, as the company is paying a smaller portion of its profits as cash taxes, likely due to the use of various tax-saving mechanisms. Conversely, a higher CETR indicates that the firm is paying a greater share of its income in taxes, suggesting a lower level of tax avoidance. CETR is widely regarded in tax research as a more accurate measure of a firm's actual tax burden, as it focuses on cash-based tax payments rather than accounting-based figures that may include deferred taxes or accrual adjustments. This metric captures how effectively a company utilizes legitimate tax planning strategies such as deductions, credits, or timing differences to minimize tax obligations while remaining compliant with existing tax laws. By employing CETR as a proxy, this study seeks to provide a clearer representation of how energy companies manage their tax responsibilities, offering insight into the extent to which they engage in aggressive yet lawful tax avoidance practices within the Indonesian corporate context.

2. **Independent Variables:**
   a. **Corporate Social Responsibility (CSR):**
   The level of Corporate Social Responsibility (CSR) disclosure is assessed using the 2021 Global Reporting Initiative (GRI) Standards, which provide a comprehensive and internationally recognized framework for evaluating sustainability practices. The GRI Standards consist of detailed indicators encompassing economic, environmental, and social dimensions, allowing researchers to assess the extent of transparency and accountability in corporate reporting. In this study, CSR disclosure is measured by comparing the company's sustainability reports and disclosures against the specific indicators outlined in the GRI framework. Each disclosure item is assigned a score based on whether it is reported, partially reported, or not reported at all. The total CSR score is then calculated as the ratio of disclosed items to the total applicable indicators. This approach provides an objective and standardized measure of CSR performance, reflecting a company's commitment to sustainable operations, ethical practices, and stakeholder engagement. By applying the GRI-based assessment, the study aims to capture variations in CSR practices among energy companies and their potential influence on tax avoidance behavior.
   b. **Company Size:**
   Company size is measured using total assets, as total assets provide a reliable representation of a firm's scale of operations, financial capacity, and resource base. Firms with larger asset holdings generally possess greater stability, market influence, and access to capital, which may enable them to engage in more sophisticated financial and tax planning strategies. The choice of total assets as a size indicator is also supported by its widespread use in empirical studies on taxation and corporate behavior, as it reflects the overall scope of the firm's activities and its ability to manage complex fiscal structures. Furthermore, using the logarithmic transformation of total assets ensures that data distribution remains normalized, minimizing the effect of extreme values among companies of different sizes. This measure thus provides an accurate and consistent basis for examining the relationship between firm size and tax avoidance within the energy sector.
   c. **Profitability:**
   Profitability is evaluated using the Return on Assets (ROA) ratio, which measures a company's efficiency in generating earnings from its total asset base. ROA is calculated as net income divided by total assets, representing how effectively a company utilizes its resources to produce profit. This metric is widely regarded as a key indicator of financial performance, reflecting both operational efficiency and managerial effectiveness. Firms with higher ROA are typically more profitable and may have a stronger incentive to engage in tax planning or tax avoidance strategies to optimize after-tax income.

Conversely, firms with lower profitability may have limited capacity or motivation to pursue such strategies. ROA is selected for this study because it directly links profitability to the firm's asset utilization efficiency, making it a suitable measure for analyzing how financial performance influences corporate tax behavior.

Data Analysis Techniques

The regression model satisfied the required diagnostic tests. The normality test results are reported in table 2, indicating normally distributed residuals. Multicollinearity diagnostics, based on Variance Inflation Factor (VIF) and tolerance values, are presented in table 3 and show no multicollinearity issues. The heteroscedasticity test results, obtained using the Glejser test, are reported in table 4, confirming homoscedastic residuals. Hypothesis testing using t-statistics and the F-statistic is presented in table 5 and 6. The goodness of fit of the model was evaluated using the R-squared (R^2) measure.

The regression model is specified as follows:

$$CETR_{i.t} = \alpha + \beta_1 CSR_{i.t} + \beta_2 SIZE_{i.t} + \beta_3 PROF_{i.t} + e$$

FINDINGS AND DISCUSSION

Normality Test

Table 2. Normality Test

		Unstandardized Residual
N		69
Normal Parameters	Mean	0.0000000
	Std. Deviation	0.31919223
Most Extreme Differences	Absolute	0.075
	Positive	0.071
	Negative	-0.075
Test Statistic		0.075
Asymp. Sig. (2-tailed)		0.200

The Kolmogorov-Smirnov normality test yielded an asymptotic two-tailed significance value of 0.200, which exceeds the conventional 0.05 threshold, indicating that the residuals are normally distributed. This observation confirms that the residuals of the regression model are normally distributed, suggesting that the data distribution is consistent with normality. As a result, there are no issues with data normality, and the normality assumption for regression analysis is met. Therefore, further regression analysis can proceed, as the data satisfy one of the key assumptions required to produce valid and reliable estimates.

Multicollinearity Test

Table 3. Multicollinearity Test

Model	**Collinearity Statistics**	
	Tolerance	**VIF**
(Constant)		
X2	0.776	1.289
X3	0.960	1.041
X1	0.781	1.280

Results from the multicollinearity test indicate that tolerance levels for CSR, firm size, and profitability are all greater than 0.1, while their corresponding VIF values remain under 10, confirming the absence of harmful collinearity among the predictors. The diagnostics provide clear evidence that multicollinearity is not a concern in this study. Specific tolerance and Variance Inflation Factor (VIF) values for the individual variables are reported as follows:

1. X1 (Corporate Social Responsibility): Tolerance = 0.781, VIF = 1.280
2. X2 (Company Size): Tolerance = 0.776, VIF = 1.289
3. X3 (Profitability): Tolerance = 0.960, VIF = 1.041

These threshold criteria (tolerance > 0.1 and VIF < 10) demonstrate that the independent variables are sufficiently independent of one another. This indicates that these independent variables lack significant mutual influence, meaning the regression model successfully avoids multicollinearity. Therefore, CSR, Company Size, and Profitability can all be used simultaneously in the regression model, validating the analysis results by removing concerns related to redundancy or excessive dependency.

Heteroscedasticity Test

Table 4. Heteroscedasticity Test

Model	Sig.
(Constant)	0.252
X2	0.202
X3	0.023
X1	0.123

For all independent variables (CSR, Company Size, and Profitability), the heteroscedasticity test reported significance (Sig.) values greater than 0.05, structured as follows:

1. X1 (Corporate Social Responsibility): Sig. = 0.123
2. X2 (Company Size): Sig. = 0.252
3. X3 (Profitability): Sig. = 0.202

The requirement for homoscedasticity is met, as the Sig. values for every included variable all exceed 0.05. Therefore, the regression model does not exhibit heteroscedasticity issues. In other words, the residual variance in the model is constant and not affected by irregularities or unexplained variations. Therefore, the regression model can be considered valid and suitable for further analysis.

F Test

Table 5. F Test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	7.502	3	2.501	4.834	0.004
Residual	33.624	65	0.517		
Total	41.126	68			

The results of the F-test indicate that the overall regression model is statistically significant, with an F-statistic value of 4.834 and a p-value of 0.004 ($p < 0.05$). This finding confirms that Corporate Social Responsibility (CSR) (X1), company size (X2), and profitability (X3) jointly have a significant effect on tax avoidance (Y). In other words, when analyzed simultaneously, these three independent variables meaningfully explain variations in the level of corporate tax avoidance. The significance of the F-test demonstrates that the regression model is appropriate and capable of capturing the combined influence of the selected explanatory variables on firms' tax behavior.

This result further suggests that tax avoidance is influenced by a combination of financial and non-financial factors, rather than by a single determinant. The joint significance of CSR, firm size, and profitability reflects the complex nature of corporate decision-making, in which companies strive to balance financial performance, compliance, and social accountability. Larger and more profitable firms may have greater capacity and incentive to engage in structured tax planning, while CSR engagement may also influence a company's ethical stance toward taxation. Therefore, the F-test findings reinforce the idea that these three variables together play a crucial role in shaping the extent of tax avoidance practices among energy companies listed on the Indonesia Stock Exchange (IDX).

T Test

Table 6. T Test

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	-1.341	1.411		-0.950	0.345
X2	0.044	0.050	0.110	0.866	0.390
X3	-1.758	0.665	-0.303	-2.646	0.010
X1	1.272	0.541	0.298	2.351	0.022

Results of the t-tests for the respective hypotheses are shown in the following section:

a. X1 (Corporate Social Responsibility - CSR):
The t-test confirms that CSR positively and significantly influences tax avoidance ($t = 2.351$, $p = 0.022$), implying that companies disclosing more CSR information are more likely to pursue tax avoidance strategies.

b. X2 (Company Size):
The effect of firm size on tax avoidance is not statistically significant ($t = 0.866$, $p = 0.390$), failing to reach the conventional 0.05 significance level.

c. X3 (Profitability):
Profitability exhibits a statistically significant negative impact on tax avoidance ($t = -2.646$, $p = 0.010 < 0.05$), indicating that more profitable firms tend to engage in less tax avoidance. In interpretation, this indicates an inverse relationship: greater profitability leads to a reduced inclination toward practicing tax avoidance.

Coefficient of Determination Test (R^2)

The R^2 test is used to calculate the degree of closeness of the relationship between the independent and dependent variables. The results of the SPSS calculation for this analysis are shown in the table below:

Table 7. Coefficient of Determination Test (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.427	0.182	0.145	0.71922696

Based on Table 7, it can be seen that the model has an Adj R Square value of 0.145 or 14.5%, meaning that the independent variable is able to explain the variation in the dependent variable value by 14.5%, while the remainder is explained by other variables outside this study.

In summary, CSR (X1) and profitability (X3) significantly influence tax avoidance, while company size (X2) shows no statistically significant effect in this model. The significant relationship between CSR and tax avoidance in the energy sector may reflect the strategic use of CSR as a legitimacy tool, where firms with extensive CSR disclosures seek to offset reputational risks arising from aggressive tax planning. Given the high public visibility and environmental impact of energy companies, CSR initiatives may function to maintain stakeholder acceptance while allowing firms to pursue tax-efficient strategies. This finding is consistent with Hidayat and Novita (2023), who document a positive association between CSR and tax avoidance in Indonesia.

The negative relationship between profitability and tax avoidance suggests that more profitable energy companies tend to exhibit higher tax compliance. In this sector, firms with strong profitability are often subject to closer regulatory oversight and greater scrutiny from tax authorities, reducing incentives to engage in aggressive tax avoidance. Moreover, financially strong firms may prioritize long-term legitimacy and stability over short-term tax savings. This result supports the findings of Jaeni (2022). Meanwhile, the insignificance of company size indicates that both large and relatively smaller energy firms face similar regulatory and reputational constraints, limiting the explanatory power of size alone in determining tax avoidance behavior. This result aligns with Aini and Ikram (2025) and highlights the sector-specific nature of tax compliance in the energy industry.

CONCLUSIONS

Based on the analysis, Corporate Social Responsibility has a statistically significant positive influence on tax avoidance among energy companies listed on the IDX, indicating that stronger CSR disclosure is associated with higher levels of tax avoidance. Theoretically, this finding contributes to legitimacy theory by demonstrating that CSR in the energy sector may function strategically as a legitimacy mechanism rather than purely as a constraint on opportunistic behavior, particularly in industries characterized by high environmental impact and public scrutiny. This evidence extends prior legitimacy-based arguments by showing that CSR disclosure can coexist with, and potentially facilitate, aggressive tax planning.

Company size does not exhibit a significant effect on tax avoidance, suggesting that scale alone does not adequately capture agency-related incentives or monitoring intensity within the energy sector. In contrast, profitability shows a significant negative relationship with tax avoidance, supporting agency theory by indicating that highly profitable firms prioritize long-term legitimacy and compliance over short-term tax savings due to heightened regulatory and reputational exposure. Collectively, these findings contribute to the theoretical literature by clarifying how legitimacy and agency mechanisms jointly shape corporate tax avoidance behavior in a sector-specific context.

LIMITATION & FURTHER RESEARCH

Although this study provides valuable insights into the relationship between Corporate Social Responsibility (CSR), company size, profitability, and tax avoidance among energy companies in Indonesia, it is not without limitations. First, the study focuses exclusively on energy sector firms listed on the Indonesia Stock Exchange (IDX) from 2021 to 2023, which may limit the generalizability of the findings to other industries or time periods. Future research could expand the scope by including companies from different sectors or extending the observation period to provide a more comprehensive understanding of corporate tax behavior across industries.

Second, the research relies on secondary data drawn from publicly available annual reports and sustainability disclosures, which may not fully capture the internal tax planning strategies or managerial motivations behind corporate tax decisions. Further studies could incorporate qualitative or mixed-method approaches, such as interviews with corporate tax managers or case studies, to gain deeper insight into the strategic reasoning that drives tax avoidance behavior.

Third, this study employs the Cash Effective Tax Rate (CETR) as the sole measure of tax avoidance. While CETR is widely used and reliable, it may not fully account for temporary timing differences or deferred tax strategies. Future research might consider alternative or complementary tax avoidance indicators, such as the GAAP Effective Tax Rate (ETR) or Book-Tax

Differences (BTD), to capture a broader spectrum of tax avoidance practices.

Lastly, external factors such as regulatory changes, international tax policies, or macroeconomic conditions were not explicitly included in this study's model but may significantly influence tax behavior. Therefore, future research is encouraged to integrate these contextual variables to enrich the analysis. Addressing these limitations will help produce a more robust and nuanced understanding of how CSR, company characteristics, and profitability interact in shaping corporate tax avoidance strategies.

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