

Redefining Corporate Tax Avoidance through Strategic Sustainability Issues

*Tax Avoidance and
Sustainability
Performance*

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ABSTRACT

This study investigates the impact of corporate sustainability practices—specifically ESG performance, renewable energy adoption, and sustainability-oriented tax strategies—on tax avoidance within Indonesia’s energy sector. It explores the intersection between fiscal strategy and environmental governance in addressing ethical and sustainability-related challenges in corporate behavior. A mixed-methods approach was employed to gain a comprehensive understanding: the quantitative component analyzed 464 firm-year observations, while the qualitative component involved semi-structured interviews with five key informants, including tax professionals and sustainability managers. The quantitative results reveal that firms with stronger ESG engagement, higher proportions of renewable energy usage, and lower effective tax rates tend to exhibit lower levels of tax avoidance. These findings are reinforced by qualitative insights, which indicate that ethical values, reputational concerns, and organizational transparency significantly influence managerial tax decisions. However, inconsistent fiscal incentives and regulatory uncertainties in Indonesia remain major barriers to integrating sustainability into corporate tax strategies. This study contributes to the literature by reframing tax avoidance not merely as a legal or financial matter, but as a strategic sustainability issue embedded in corporate governance and operations. It offers practical policy implications, highlighting the need for coherent and targeted fiscal incentives to support the clean energy transition and ethical tax conduct in emerging economies.

Keywords: tax avoidance; esg performance; renewable energy; sustainability governance; mixed-methods approach.

ABSTRAK

Penelitian ini mengkaji pengaruh praktik keberlanjutan perusahaan—terutama kinerja ESG, penggunaan energi terbarukan, dan strategi pajak yang berorientasi keberlanjutan—terhadap penghindaran pajak di sektor energi di Indonesia. Studi ini mengangkat pentingnya integrasi antara

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strategi fiskal dan tata kelola lingkungan dalam merespons tantangan etika dan keberlanjutan korporasi. Pendekatan *mixed-methods* digunakan untuk memberikan pemahaman komprehensif: analisis kuantitatif dilakukan terhadap 464 observasi *firm-year*, sedangkan data kualitatif diperoleh melalui wawancara semi-terstruktur dengan lima informan kunci dari kalangan profesional pajak dan manajer keberlanjutan. Hasil kuantitatif menunjukkan bahwa semakin tinggi keterlibatan perusahaan dalam kinerja ESG, semakin besar proporsi energi terbarukan yang digunakan, dan semakin rendah tarif pajak efektifnya, maka semakin rendah pula tingkat penghindaran pajaknya. Temuan kualitatif mendukung hasil ini, dengan mengidentifikasi bahwa nilai etika, reputasi, dan transparansi menjadi pertimbangan utama dalam pengambilan keputusan manajerial. Namun, terbatasnya insentif fiskal dan ketidakpastian kebijakan di Indonesia menjadi hambatan dalam integrasi penuh antara keberlanjutan dan strategi pajak. Studi ini memberikan kontribusi teoretis dan praktis dengan memposisikan penghindaran pajak sebagai isu strategis dalam agenda keberlanjutan perusahaan. Implikasi kebijakan mencakup perlunya reformasi insentif fiskal yang lebih konsisten untuk mendukung transisi energi bersih dan tata kelola fiskal yang etis.

Kata kunci: penghindaran pajak, kinerja esg, energi terbarukan, tata kelola keberlanjutan, pendekatan campuran.

INTRODUCTION

Tax avoidance has emerged as a significant issue in global taxation, highlighting its impact on government revenues and economic equity. Bak and van den Boogaard (2023) emphasize that tax avoidance practices can distort economic systems, while Xia et al. (2022) explore the environmental challenges associated with financial practices. Zozul'ak and Zozul'aková (2022) underscore the crucial role of sustainability initiatives in mitigating these effects. Meanwhile, the green economy has become a central focus in reducing environmental harm and achieving sustainable development goals, as discussed by Gasparatos et al. (2017). Understanding the connection between tax avoidance and the green economy is vital, since tax avoidance strategies can undermine funding for environmental initiatives and hinder progress toward sustainability. Wei (2021) argues that aggressive tax tactics often reduce corporate contributions to government revenues, thereby limiting the state's ability to support green projects.

Kasim and Saad (2019) analyze the factors influencing tax avoidance strategies employed by multinational corporations, while Romero (2019) highlights the delicate balance between legal tax minimization and ethical considerations. J. Li et al. (2022) emphasize that strong environmental, social, and governance (ESG) performance is positively associated with corporate transparency and stakeholder trust, thereby reinforcing the role of sustainability in promoting ethical and accountable corporate behavior. Supporting this view, Halidu et al. (2023) demonstrate that well-designed environmental tax policies can significantly reduce global income inequality by aligning fiscal frameworks with equity and sustainability objectives. These challenges require a nuanced understanding of corporate behavior that intersects with sustainability goals. In the current turbulent global context, tax avoidance practices have raised growing concerns about tax justice and economic inequality, highlighting the need for innovative fiscal policies that are both fair and environmentally conscious.

Research has consistently shown that tax avoidance contributes to inequality and weakens institutional legitimacy. For instance, Alstadsæter et al. (2022) and Weinzierl (2018) have examined how offshore finance and wealth concentration undermine public finance systems and economic fairness. Rising expectations for environmental accountability further compound this concern. Addressing tax avoidance through sustainable tax strategies is therefore essential. Firms are increasingly expected to align their operations with principles that balance social, environmental, and economic impacts. Palan (2020) highlights that corporate tax avoidance is not only an economic and political issue but also a profound social problem, as it restricts governments' capacity to address inequality and support development. Similarly, Saka et al. (2019) argue that

aggressive tax avoidance undermines stakeholder trust and ultimately weakens corporate sustainability. Promoting responsible tax practices can help mitigate these adverse outcomes. Babu and Mary (2022) affirm that green tax policies and sustainable fiscal frameworks are crucial for aligning corporate conduct with environmental and ethical standards. These approaches foster fairness in taxation and build greater stakeholder trust through transparency and accountability.

However, a significant empirical gap remains in understanding how sustainable tax strategies can effectively address aggressive tax avoidance, especially in emerging economies where fiscal resources are crucial for advancing social and environmental priorities. This study tackles this gap by examining the relationship between renewable energy adoption, sustainability-oriented tax practices, and corporate tax behavior in Indonesia's energy sector. Moving away from conventional analyses that focus solely on legalistic or macroeconomic aspects, this research adopts a comprehensive approach that integrates social, ecological, and ethical considerations. By offering this multidimensional perspective, the study aims to contribute to the growing discourse on sustainable taxation and corporate accountability. It seeks to inform more equitable and environmentally aligned tax strategies while establishing a foundation for policy reforms that support fiscal integrity and sustainability goals.

Qualitative Research Questions:

- a. How do energy companies formulate and implement sustainable tax strategies, and what impact do these strategies have on tax avoidance practices?
- b. What challenges and opportunities do energy companies encounter in implementing sustainability management, and how can these influence government policy?
- c. How is the use of renewable energy integrated into the sustainability strategies of energy companies, and what implications does this have for tax incentives?

LITERATURE REVIEW

Legitimacy Theory

Legitimacy Theory, proposed by Suchman (1995), suggests that corporations adopt sustainable practices, including ethical tax behavior, to align with societal expectations and maintain their social license to operate.

Theory of Planned Behavior

The theory of planned behavior posits that the intention to perform various behaviors can be predicted with high accuracy from attitudes toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991).

Empirical literature review and hypothesis development

Sustainability Tax Strategies and Tax Avoidance - The intersection of sustainability tax strategies and corporate tax avoidance has garnered increasing attention in academic and policy discussions. Tax avoidance, defined as the legal exploitation of loopholes to minimize tax liabilities, remains a longstanding issue that undermines government revenue and economic equity. Payne & Raiborn (2018) emphasize that aggressive tax avoidance exploits legal loopholes, depriving governments of essential revenue needed for public services and raising ethical concerns. Similarly, Murphy-Gregory et al. (2020) state that corporate tax avoidance has sparked significant public debate, particularly as it erodes national revenue and complicates efforts to achieve fiscal fairness. At the same time, sustainability tax strategies—structured tax mechanisms aligned with environmental and social goals—are emerging to mitigate unethical corporate tax practices while advancing broader sustainability objectives. Duhoon & Singh (2023) comprehensively reviewed the literature on corporate tax avoidance. They highlighted that firms often engage in tax avoidance for financial efficiency and as a strategic response influenced by ownership structure, political ties, and corporate social responsibility performance.

Their findings emphasize the importance of integrating sustainability considerations into corporate fiscal behavior. Duhoon & Singh (2023) argue that strategic, political, and governance factors, such as ownership concentration, political affiliations, and corporate social responsibility performance, often shape corporate tax avoidance. They position it

as a complex managerial decision rather than mere compliance evasion. Echoing this perspective, Bird & Davis-Nozemack (2018) contend that tax avoidance should be recognized as a sustainability issue, as it undermines social equity, fiscal responsibility, and long-term corporate legitimacy.

Sustainability tax strategies are rooted in two key theoretical frameworks: Legitimacy theory and the theory of planned behavior. Van de Vijver et al. (2020) introduce a fundamental option framework that conceptualizes corporate tax behavior as a strategic response shaped by long-term sustainability pressures and investment uncertainty. Their model demonstrates how firms increasingly view tax decisions as financial tactics and strategic levers for managing legitimacy and aligning with environmental transitions, particularly in sectors such as energy that face regulatory and reputational scrutiny. Similarly, the theory of planned behavior, further elaborated and supported by Romero (2019), explains how perceived norms, attitudes, and behavioral intentions influence tax compliance, with sustainable tax strategies acting as a behavioral nudge.

Empirical research highlights the significance of these strategies in shaping corporate tax behavior. França & Bezerra (2022) argue that aligning tax incentives with environmental goals can reduce aggressive tax strategies by providing companies with legitimate ways to optimize tax savings. Menicacci & Simoni (2024) emphasize that negative media coverage of environmental, social, and governance (ESG) issues serves as an external monitoring mechanism, encouraging companies to align their tax practices with social and environmental accountability to maintain legitimacy. Ding et al. (2022). Furthermore, note that mandatory corporate, social, and environmental responsibility disclosure significantly reduces aggressive tax avoidance behaviors by enhancing corporate transparency and accountability, thereby fostering greater stakeholder trust.

Despite these advancements, challenges remain. Gnanon (2022) highlights how variations in policy enforcement and tax incentives across jurisdictions create opportunities for regulatory arbitrage, enabling companies to exploit inconsistencies. Elamer et al. (2024) argue that sustainability tax strategies require comprehensive monitoring frameworks to ensure their effectiveness. Their findings highlight the crucial role of environmental, social, and governance (ESG) ratings in mitigating the relationship between tax avoidance and corporate value. Integrating sustainability tax strategies with corporate governance and management systems enhances their effectiveness in curbing tax avoidance, fostering stakeholder trust, and driving long-term value creation. Gribnau & Jallai (2019) further emphasize the importance of robust governance frameworks and sustainability commitments in fostering ethical tax practices.

Finally, it is worth highlighting that those deficiencies in corporate culture, particularly those shaped by a tax avoidance mentality, hinder the full realization of sustainability-linked tax benefits (Li et al, 2022). Their study emphasizes the critical role of corporate, social, and responsibility practices in moderating these behaviors, enhancing sustainable business performance, and supporting tax strategies aligned with broader organizational and societal goals. Building on this foundation, the current research explores how sustainability tax strategies influence corporate tax avoidance in Indonesia's energy sector, guided by the following hypothesis: **H1: Sustainability tax strategies have an impact on tax avoidance.**

Sustainability Management and Tax Avoidance. Sustainability management, which encompasses Environmental, Social, and Governance (ESG) objectives, provides a robust framework for promoting ethical corporate practices. Alsayegh et al. (2020) Stress that environmental, social, and governance (ESG) disclosures enhance corporate sustainability by fostering transparency and aligning corporate actions with long-term objectives. Building on this, C. Li et al (2022) contend that sustainability management aligns corporate operations with societal expectations and diminishes tax avoidance through enhanced transparency and Accountability. Gomez-Trujillo et al. (2020) emphasize that sustainability initiatives influence stakeholder perceptions and encourage responsible tax behavior, highlighting the importance of sustainability to corporate reputation. Monteiro et al. (2023) highlight that these practices align with the Legitimacy

Theory, which posits that firms adopt ethical tax strategies to fulfill societal expectations. Similarly, Stakeholder Theory emphasizes fiscal accountability as a cornerstone of sustainability. Empirical studies support these perspectives. Wei et al. (2025) demonstrate that energy market reforms enhance resource efficiency, laying the groundwork for sustainable development. In addition, Duhoon & Singh (2023) found that sustainability management enhances long-term fiscal integrity and promotes ethical tax practices. J. Li & Li (2022) report that green innovation aligns with budgetary and environmental objectives, thereby reducing aggressive tax behavior. Xia et al. (2022) connect sustainability-driven innovation to responsible budgeting, while Gnanon (2022) proposes coordinated sustainability-tax policies as solutions. Firms that prioritize environmental, social, and governance (ESG) factors and transparency are more likely to adopt ethical tax practices, as demonstrated by Laguir et al. (2015). These insights lay the groundwork for the following hypothesis: **H2: Sustainability management influences corporate tax avoidance.**

Renewable Energy Usage and Tax Avoidance - Adopting renewable energy has become a pivotal strategy in corporate efforts to align business operations with environmental sustainability goals. Beyond minimizing carbon footprints, renewable energy usage influences corporate tax strategies, potentially lessening aggressive tax avoidance behaviors. J. Li & Li (2022) demonstrate that implementing environmental protection taxes enhances corporate ecological, social, and governance performance while fostering green technological innovation. While their findings are significant, the connection to renewable energy usage warrants further elaboration, as the primary focus is on broader environmental taxes rather than direct renewable energy practices. Inger & Stekelberg (2022) argued that renewable energy investments enhance corporate legitimacy by leveraging socially responsible tax incentives, aligning corporate actions with societal expectations, and reducing motivations for tax avoidance. This is consistent with the Legitimacy Theory, which posits that renewable energy initiatives enable corporations to maintain their social license to operate by fostering alignment with societal expectations and values. Elamer et al. (2024) noted that this alignment deters aggressive tax strategies that could erode public trust. Stakeholder Theory offers additional insights, emphasizing the importance of addressing the interests of diverse stakeholders. It suggests that adopting renewable energy enhances transparency and promotes ethical governance. Supporting this perspective, Ezech et al. (2024) demonstrated that effective stakeholder engagement in energy projects fosters trust, collaboration, and adherence to ethical governance practices.

Empirical evidence reinforces these theoretical claims. Y. Li et al. (2022) reveal that firms integrating renewable energy into their operations tend to show improved tax compliance, often driven by tax incentives linked to green investments. Similarly, Amendolagine et al. (2021) highlight that green foreign direct investments enhance sustainable innovation in multinational corporations, aligning fiscal strategies with environmental objectives. He (2024) underscores the importance of renewable energy systems and ecological taxes in curbing unethical tax behaviors and promoting corporate sustainability through better compliance. Faúndez-Ugalde et al. (2022) Companies that prioritize renewable energy tend to demonstrate higher corporate transparency, which significantly reduces tax obligation avoidance. Agupuco, C et al (2024) observe that renewable energy usage reduces corporate opacity, enhances governance, and improves compliance with fiscal policies.

While these findings highlight the benefits of renewable energy usage, significant challenges remain. Gnanon (2022) highlights discrepancies in regulatory frameworks across jurisdictions, which create opportunities for regulatory arbitrage and erode the effectiveness of renewable energy policies. Wei J. (2021) emphasizes the need for robust monitoring mechanisms to evaluate the impact of renewable energy usage on tax behavior. Addressing these challenges requires strong governance frameworks. Kovermann & Velte (2019) argue that effective corporate governance mechanisms are essential in mitigating corporate tax avoidance. Their findings underscore that aligning renewable energy usage with corporate governance frameworks strengthens transparency

and curtails aggressive tax strategies. Transparency remains a fundamental pillar of effective governance and is pivotal in reducing tax avoidance practices. Stiglingh et al. (2022) demonstrate that firms with greater tax transparency tend to comply more closely with tax regulations, thereby fostering ethical governance and meeting societal expectations. Finally, Bashir et al. (2022) demonstrate that robust environmental regulations and taxes are crucial in driving the adoption of renewable energy and ensuring corporate compliance with tax regulations. Building on this, they emphasize that aligning renewable energy usage with governance frameworks enhances sustainability and reduces the potential for aggressive tax avoidance by fostering accountability and transparency. These insights underscore that renewable energy usage is a strategic approach to promoting environmental sustainability and ethical tax practices. However, its effectiveness in curbing tax avoidance ultimately depends on aligning corporate governance systems with sustainability goals. Similarly, Alstadsæter et al. (2022) highlight that firms with strong commitments to renewable energy tend to exhibit greater compliance with tax regulations, reflecting a broader alignment with societal expectations of sustainability. **H3: Renewable energy usage influences corporate tax avoidance.**

METHODS

Data collection process

a. Quantitative Data

Quantitative data were gathered from the company's financial and sustainability reports. Key variables include tax strategies, indicated by the Effective Tax Rate (ETR); sustainability management, denoted by the number of environmental, social, and governance certifications; and renewable energy usage, expressed as the ratio of renewable energy to total energy consumption. These are presented in Table 1 below:

Table 1. Operationalization

Variable	Proxy	Indicator	Variable
Tax Avoidance	Book Tax Difference (BTD)	$BTD = EBIT - \text{Taxable Income}$	Tax Avoidance
Tax Strategy	Effective Tax Rate (ETR)	$ETR = \text{Total Tax Expense} / \text{Pre-Tax Income}$	Tax Strategy
Sustainability Management	Number of ESG Certifications at National and International Level (SRQ)	$SRQ = \text{Number of National and International Certifications in ESG}$	Sustainability Management
Renewable Energy Usage	Proportion of Renewable Energy Usage (ECONS)	$ECONS = (\text{Energy from Renewable Sources} / \text{Total Energy Consumption}) \times 100\%$	Renewable Energy Usage

Source: Adapted from multiple sources and reformulated by the author (2025).

Tax Avoidance (Proxy: Book-Tax Difference - BTD): The Book-Tax Difference (BTD) reflects the difference between book and taxable income. A larger BTD may indicate aggressive tax planning, as companies exploit discrepancies in accounting and tax regulations to reduce taxable income while enhancing reported profits.

Tax Strategy (Proxy: Effective Tax Rate): The Effective Tax Rate (ETR) represents a company's average tax rate on its taxable income. A lower ETR indicates that a firm has successfully implemented tax-saving strategies to minimize its tax burden, including techniques for tax deferral, credits, and deductions. A firm that consistently maintains a low ETR may actively participate in tax planning, which can reduce its tax liability over time.

Sustainability Management (Proxy: Number of ESG Certifications): Sustainability management, primarily through Environmental, Social, and Governance (ESG) certifications, demonstrates a company's commitment to sustainable practices. Companies that emphasize environmental, social, and governance criteria are often perceived as more responsible, which can affect regulatory scrutiny and public opinion. These firms may engage in less aggressive tax avoidance to uphold their sustainable image. However, tax incentives or credits for sustainable initiatives might also indirectly lessen their tax obligations.

Renewable Energy Usage (Proxy: Proportion of Renewable Energy Usage): The proportion of renewable energy usage reflects a firm's commitment to environmentally friendly practices. Renewable energy companies may be eligible for tax incentives, including credits or deductions.

b. Qualitative data

Five key informants, including a state tax officer, tax managers, sustainability managers, Tax planning and compliance professionals, and senior executives, were interviewed in-depth to gain insights into strategic tax behaviors and sustainability practices. The choice of five informants was guided by data saturation criteria, ensuring that the responses captured a range of perspectives without redundant information. The qualitative data for this study were collected through in-depth, semi-structured interviews with five key informants, selected based on their direct involvement in tax and sustainability practices within their organizations. These informants included:

- a. State Tax Officer – Provided regulatory insights and perspectives on compliance requirements and the implications of tax policies, particularly regarding renewable energy incentives and sustainable tax strategies.
- b. Tax Managers – Responsible for managing corporate tax compliance and implementing tax strategies, offering a firsthand view of how tax policies are operationalized within the company, especially in alignment with corporate sustainability goals.
- c. Sustainability Managers – Overseeing sustainability initiatives, including adopting renewable energy and environmental compliance. Their insights revealed the intersection between sustainability practices and tax strategies, mainly how sustainability goals influence tax planning.
- d. Tax Planning and Compliance Professionals – Specialists focused on ensuring the company's tax strategies are compliant and optimally structured. They provided detailed information on how tax planning integrates with corporate strategy and the challenges of balancing tax efficiency with regulatory adherence.
- e. Senior Executives (e.g., CFOs or CEOs) – Involved in strategic decision-making and overseeing financial and Sustainability initiatives, these executives offered a high-level perspective on how tax strategies and sustainability efforts align with the broader corporate vision and long-term goals.

The interviews were semi-structured, allowing informants to share in-depth insights specific to their roles while ensuring that critical areas of tax strategy, sustainability practices, and renewable energy usage were thoroughly explored. Each interview lasted between 30 and 60 minutes, was conducted with the informant's consent, and was recorded and transcribed for thematic analysis. These diverse perspectives provided a comprehensive understanding of corporate tax behavior and sustainability practices, which are essential for validating and enriching the study's qualitative findings. The five informants were selected based on data saturation criteria, ensuring that the range of perspectives was comprehensive yet free from redundancy.

In addition to individual interviews, Focus Group Discussions (FGDs) were conducted to explore and validate emerging themes further. The FGD sessions provided an interactive setting where informants could share and expand upon each other's insights, contributing to data saturation. This combination of interviews and FGDs ensured a thorough exploration of tax strategies, sustainability practices, and renewable energy usage, yielding comprehensive insights into the study's core themes.

Formulation of interview questions and ensuring data validity

To ensure the reliability and relevance of the qualitative data, a set of semi-structured interview questions was developed and tailored to the roles of each informant. These questions explored how tax strategies, sustainability management, and renewable energy usage are implemented in the corporate context. Examples of key questions posed during the interviews included: [a] How does your company design and apply sustainability-based tax strategies? [b] How does sustainability management shape your company's approach to tax compliance? [c] What are the main challenges in integrating renewable

energy into your tax and sustainability frameworks? [d] How do current tax incentives for renewable energy affect your company’s tax planning decisions? These questions were a flexible guide, allowing informants to elaborate on their experiences while ensuring alignment with the study’s objectives.

To strengthen the validity and reliability of the qualitative findings, methodological triangulation was applied by combining individual interviews with focus group discussions (FGDs). This was supported by source triangulation, where insights from diverse professional roles—including state tax officers, tax managers, sustainability managers, and senior executives—allowed for cross-verification of themes. Additionally, member checking was conducted by sharing summary interpretations with selected informants to validate the accuracy of the thematic analysis. Internal peer debriefing within the research team was also done to maintain consistency and reduce bias. This multi-step validation strategy enhanced the credibility and trustworthiness of the qualitative insights generated in this study.

RESULTS

This study begins by presenting the qualitative findings derived from in-depth interviews, which serve as the foundation for exploring key patterns and stakeholder perceptions. Thematic analysis was conducted using NVivo 14 to identify recurring concepts related to sustainable HRM, ethical leadership, and psychological safety. These qualitative insights not only highlight the contextual nuances of the phenomenon under study but also inform the development of the quantitative instrument and the formulation of hypotheses. The subsequent section presents the results of the quantitative analysis, which tests the relationships among these variables statistically using Stata.

Qualitative Findings: Thematic Analysis

The qualitative phase of this study employed semi-structured interviews with four key informants representing diverse roles in the areas of taxation, compliance, and sustainability. Data were analyzed thematically using NVivo 14 to extract dominant themes and assess their interrelationships. Seven key themes emerged: sustainability strategy, tax-avoidance, government-policy, tax incentives, sustainability management, challenges and opportunities, and renewable energy adoption. These themes reflect the multidimensional perspectives of the informants and form the basis for subsequent hypothesis development.

Matrix coding queries revealed consistent coding across informants, with all seven themes appearing in at least three sources. *Cluster analysis* further revealed strong semantic connections among nodes, particularly between *tax avoidance and sustainability strategy* ($r = 0.87$), as well as between *tax incentives and renewable energy use* ($r = 0.81$), indicating a conceptual overlap in stakeholder narratives. In addition, *word frequency* analysis highlighted the dominance of terms such as "company," "tax," and "energy," reinforcing the policy- and implementation-oriented nature of the discussions. These findings underscore the relevance of integrating fiscal mechanisms and ethical leadership in promoting sustainable practices across sectors. To further illustrate the richness of the qualitative data, representative quotations were extracted from each key theme. These verbatim statements reflect the practical perspectives, challenges, and strategic considerations voiced by informants from different institutional backgrounds. Their insights provide a nuanced understanding of how sustainability and tax-related agendas are perceived and negotiated across organizational contexts. Table 2 presents selected quotes that capture the essence of each major theme, reinforcing the thematic findings derived from NVivo.

Table 2. Verbatim Quotes by Theme

Theme	Representative Quote	Informant
Sustainability Strategy	“We are trying to align our business strategy with long-term TAX sustainability.”	PLAN COMPL

Theme	Representative Quote	Informant
Tax Avoidance	“Some companies still find ways to avoid taxes, especially during regulatory transitions.”	TAX CONSULT
Renewable Energy Use	“Renewable energy is important, but it's still expensive and needs government support.”	TAX DIV HEAD
Government Policy	“The current policies are not strong enough to push the industrial sector to change.”	DJP
Tax Incentives	“Tax incentives are helpful, but they're still not widely known among industry players.”	TAX CONSULT

Source: Extracted from interview data and coded using NVivo 14 (QSR International), processed by the author (2025).

As shown in Table 2, the selected quotations illustrate the range of stakeholder perspectives across the main thematic areas. The quote on *sustainability strategy* highlights a proactive alignment between business objectives and long-term environmental goals. Comments on *tax avoidance* reveal the presence of opportunistic behaviors, especially in times of regulatory change, while the statement on *renewable energy use* emphasizes financial and policy-related barriers. Meanwhile, the remarks regarding *government policy* and *tax incentives* reflect critical views on current institutional support, indicating that despite the availability of regulatory frameworks, awareness and accessibility remain limited. These direct voices provide not only validation of the thematic coding but also enrich the contextual understanding of how sustainability and fiscal strategy intersect in practice. To complement the thematic analysis and illustrate the linguistic patterns in the interview data, a word frequency query was conducted using NVivo 14. This technique identifies the most frequently occurring words across all transcripts, providing a lexical snapshot of the dominant discourse. As shown in Table 3, the most frequently mentioned terms include "company," "tax," and "energy," indicating that organizational actors tend to focus on regulatory, fiscal, and implementation-related aspects when discussing sustainability and tax policy. The presence of words such as 'incentive,' 'strategy,' and 'renewable' further supports the earlier thematic findings, reinforcing the relevance of institutional mechanisms and environmental agendas in shaping stakeholder narratives.

Table 3. Word Frequency Summary

Word	Frequency	Percentage (%)	Word	Frequency	Percentage (%)
Company	88	2.17	Regulation	26	0.64
Tax	82	2.03	Renewable	25	0.62
Energy	41	1.01	Incentive	22	0.54
Strategy	29	0.72	Sustainability	22	0.54

Source: NVivo 14

As summarized in Table 2, the most frequently mentioned words across all interview transcripts include *company* (88 occurrences, 2.17%), *tax* (82 occurrences, 2.03%), and *energy* (41 occurrences, 1.01%). These results indicate a strong narrative emphasis on institutional responsibility, fiscal considerations, and the relevance of energy transition in corporate contexts. The prominence of terms such as *strategy*, *incentive*, *sustainability*, and *renewable energy* further reinforces the thematic consistency with the prior qualitative findings. This lexical pattern confirms that informants are not only aware of policy frameworks but also actively associate them with broader sustainability goals. The frequent co-occurrence of such terms reflects an integrated view of tax, policy, and environmental strategy in organizational decision-making.

Quantitative Findings

Descriptive Analysis

Before conducting the regression analysis, a descriptive statistical overview was carried out to examine the general characteristics of the research variables. This analysis aims to provide an initial understanding of the distribution, central tendency, and variability of each variable involved in the study. The variables include the dependent variable, tax avoidance (proxied by the Book-Tax Difference or BTM), and three independent variables: Effective Tax Rate (ETR), representing a sustainable tax strategy; Sustainability

Reporting Quality (SRQ), representing sustainability management; and Renewable Energy Usage (ECONS), serving as a proxy for environmental commitment. The results of the descriptive analysis are presented in Table 4 below:

Table 4. Descriptive Statistics

Variable	N	Mean	Min	Max	Std.Dev.
BTD (Tax Avoidance)	464	0.0231	-0.1042	0.0894	0.0186
ETR (Tax Strategy)	464	0.2387	0.0125	0.4890	0.0764
SRQ (Sustainability Management)	464	56.3480	1.0000	93.0000	22.5170
ECONS (Renewable Energy Usage)	464	1.3270	0.0000	6.0000	1.5980

Software: Stata/SE 18.0, StataCorp LLC

Table 2 presents the descriptive statistics for all variables used in the regression model. The mean tax avoidance (BTD) value is 0.0231, with a standard deviation of 0.0186, indicating modest variation in tax avoidance behavior among the sampled firms. The minimum and maximum values suggest a spread from slightly negative to moderately positive book-tax differences, reflecting varying degrees of tax planning strategies. The mean Effective Tax Rate (ETR), representing sustainable tax strategy, is 0.2387. Its relatively small standard deviation (0.0764) indicates that most firms maintain tax compliance within a narrow range. The values range from 0.0125 to 0.4890, highlighting variation in how firms manage tax obligations.

Sustainability Reporting Quality (SRQ) has an average score of 56.35 with a standard deviation of 22.52, suggesting diverse levels of commitment to environmental, social, and governance (ES-G) disclosures across the firms. Some companies report minimal sustainability-related information (SRQ = 1), while others exhibit extensive environmental, social, and governance documentation (SRQ = 93). Renewable energy usage (ECONS) averages 1.327, with values ranging from 0 to 6 and a standard deviation of 1.598. This suggests a relatively low but varied adoption of renewable energy initiatives within the sample, reflecting different levels of environmental strategy implementation across companies. These statistics provide preliminary insight into the sample's characteristics and justify the need for further regression analysis to explore the influence of sustainability-related factors on tax avoidance.

Regression Analysis

Model Selection Test

Diagnostic tests were conducted before performing the regression analysis to determine the most suitable panel data estimation technique. These tests include the Chow, Lagrange Multiplier (LM), and Hausman, each designed to evaluate the suitability of pooled OLS, fixed-effects, or random-effects models.

- The Chow test evaluates whether the fixed effect model is preferable over the pooled OLS model.
- The LM test assesses whether the random effects model is superior to the pooled OLS model.
- The Hausman test determines whether fixed or random effects produce more consistent and efficient estimators.

The results of these tests are presented in Table 5 below:

Table 5 Model Selection Test

No.	Test	Decision criteria	Statistical Values	Model Selected
1	Chow	Prob>F < 0.05 = Fixed Effect, Prob>F > 0.05 = Common Effect	Prob>F = 0.0004	Fixed Effect Models
2	LM	Prob>chibar2 < 0.05 = Random Effect, Prob>F > 0.05 = Common Effect	Prob>chibar2 = 0.0000	Random Effect Models
3	Hausman	Prob>chi2 < 0.05 = Fixed Effect, Prob>F > 0.05 = Random Effect	Prob>chi2 = 0.7763	Random Effect Models

Software: Stata/SE 18.0, StataCorp LLC

Notes:

- All statistical tests were performed at the 5% significance level.
- Based on the Hausman test, the Random Effects model was chosen for the regression analysis as it produced more consistent estimators, and the null hypothesis was not rejected.

Table 3 summarizes the results of the model specification tests conducted to determine the most appropriate regression model for the panel data analysis. The Chow test yielded a p-value of 0.0004, below the 0.05 significance level. This result indicates that the fixed effects model is preferred over the pooled OLS model, as significant individual effects exist across firms. Next, the Lagrange Multiplier (LM) test also rejected the null hypothesis of pooled OLS in favor of the random effects model, with a highly significant p-value ($\text{Prob} > \chi^2 = 0.0000$). This result further confirms the need to apply a panel data approach. However, the Hausman test, which compares the consistency and efficiency of fixed versus random effects estimators, produced a p-value of 0.7763. Since this value exceeds the 0.05 threshold, we fail to reject the null hypothesis, indicating that the random effects model provides efficient and consistent estimates. Based on this series of tests, the random effects model is selected as the most appropriate method for estimating the relationship between tax avoidance and the independent variables in this study. This model accommodates both within-firm variation and unobserved heterogeneity across firms, while providing robust standard errors for inference.

Classical Assumption Testing

Classical assumption tests, including those for multicollinearity, heteroskedasticity, and autocorrelation, were performed to ensure the reliability and robustness of the regression model. These diagnostics are essential for validating that the panel regression model produces unbiased and efficient estimators. Multicollinearity was assessed using the Variance Inflation Factor (VIF). The results show that all independent variables have VIF values below 10, indicating no concerns about multicollinearity. Heteroskedasticity was tested using the Breusch-Pagan/Cook-Weisberg test, which yielded a significant result ($p < 0.05$). This suggests the presence of heteroskedasticity; therefore, the regression was adjusted using robust standard errors. Autocorrelation was examined using the Wooldridge test for autocorrelation in panel data, which indicated first-order autocorrelation ($p = 0.0058$). The Prais-Winsten transformation was applied to address this in the panel regression estimation.

Table 6 Classical Assumption Test

Test	Indicator	Result	Action
Multicollinearity	VIF less than 10	Range 1.00 to 1.00	Ok
Heteroscedasticity	ProbChi2 more than 0.050	Prob.Chi2 is 0.000	Robust
Autokorelasi	Prob>F more than 0.050	Prob.>F is 0.0058	Prais Winsten

Software: Stata/SE 18.0, StataCorp LLC

Table 6 presents the results of classical assumption tests to ensure the reliability and validity of the panel regression model. First, the multicollinearity test using the Variance Inflation Factor (VIF) shows that all predictor variables (ETR, SRQ, and ECONS) have VIF values equal to 1.00. This indicates that there is no multicollinearity among the independent variables; each variable provides unique information to the model. Second, the heteroskedasticity test was conducted using the Breusch-Pagan/Cook-Weisberg method. The result shows a significant p-value ($\text{Prob} > \chi^2 = 0.000$), indicating the presence of heteroskedasticity. The analysis employs robust standard errors to address this issue and ensure valid standard errors. Third, the autocorrelation test using the Wooldridge test reports a p-value of 0.0058, which suggests the presence of first-order autocorrelation. Consequently, the model is corrected using the Prais-Winsten transformation to account for serial correlation in the panel data. These diagnostic tests validate the model's statistical integrity and confirm the need for adjustments to maintain the consistency and efficiency of the regression estimates.

Regression Analysis

Following the classical assumption tests and model selection process, this section presents the regression analysis results using the random effects model with robust and

autocorrelation-adjusted estimators. The regression investigates the influence of three independent variables—sustainable tax strategies (ETR), sustainability management (SRQ), and renewable energy adoption (ECONS)—on corporate tax avoidance (BTD) among energy companies in Indonesia. The model was estimated using the Prais–Winsten transformation to correct for first-order autocorrelation and heteroskedasticity. Table 7 displays the regression coefficients, standard errors, significance levels, and the resulting interpretation of hypothesis testing.

Table 7: Regression Result

$BTD = \beta_0 + \beta_1 ETR + \beta_2 SRQ + \beta_4 ECONS + \varepsilon$				
Variable	Coef.	Z	Sig.	Result
ETR -> BTD	0.005716	1.67	0.094*	Accepted
SRQ -> BTD	0.000939	3.09	0.002***	Accepted
ECONS -> BTD	0.837926	4.17	0.000***	Accepted
N	464			
F	0.0000***			
R-Square	9,51%			

Note: * Significant at 10%, ** Significant at 5% *** Significant at 1%

Software: Stata/SE 18.0, StataCorp LLC

Note: The results presented here are based on the fixed-effect model, which was deemed the most appropriate based on the Hausman test. The diagnostic tests confirm that the model is well-suited for panel data analysis, with the R-squared value indicating a modest explanatory power.

The regression results show that:

- a. Sustainable tax strategies (ETR) have a positive and statistically significant effect on tax avoidance at the 90% confidence level ($p = 0.094$). This suggests that companies adopting sustainable tax practices exhibit lower levels of tax avoidance, with the effect becoming significant when tested at a 90% confidence threshold, though not at the stricter 95% level. Sustainability reporting quality (SRQ) has a significant impact on tax avoidance ($p = 0.002$). This indicates that companies with higher SRQ tend to engage in less tax avoidance, likely due to the ethical norms and accountability established through comprehensive environmental, social, and governance practices. In this case, the finding that sustainable tax strategies (ETR) show a significant effect at the 90% confidence level but not at the 95% level indicates that while the relationship between these strategies and tax avoidance is relatively strong, there is some uncertainty when applying a stricter level of confidence (95%). This result suggests that, although sustainable tax strategies are likely associated with lower tax avoidance, the relationship is not as robust or consistent across all sample data when tested at a 95% confidence level. However, the effect becomes more reliable at the 90% confidence level, meaning that firms adopting sustainable tax strategies can still expect a reduction in tax avoidance, but with some margin of variability. In practical terms, this result supports the idea that sustainability-oriented tax strategies have a meaningful, though not definitive, role in reducing tax avoidance. Policymakers or corporations considering such a strategy should be aware that the relationship may vary slightly. Nevertheless, the overall trend of sustainable tax practices leading to more ethical fiscal behavior remains consistent at a reasonable level of certainty (90%).
- b. Renewable energy adoption (ECONS) exhibits a strong negative relationship with tax avoidance ($p = 0.000$). This supports the hypothesis that firms investing in renewable Energy companies improve their sustainability performance and reduce their reliance on aggressive tax avoidance strategies.

The regression analysis confirms that sustainability management and renewable energy adoption have a significant influence on tax avoidance in Indonesia's energy sector. These results prove that incorporating sustainability into corporate tax strategies effectively reduces aggressive tax avoidance practices, aligning business practices with legal obligations and social expectations for corporate responsibility. However, the model's explanatory power remains modest, with an R-squared value of only 9.51%, indicating that a large proportion of variance in tax avoidance behavior remains

unexplained. Other potential determinants of tax avoidance—such as firm size, profitability, leverage, or political ties—may have

DISCUSSION

This study aimed to explore how sustainable tax strategies are developed and implemented in energy companies and how these strategies relate to tax avoidance behavior. Drawing on the thematic analysis of interview data, the discussion elaborates on how the qualitative findings address the research question, linking them to prior studies and theoretical insights.

How do energy companies formulate and implement sustainable tax strategies, and what impact do these strategies have on tax avoidance practices?

Energy companies in Indonesia formulate sustainable tax strategies primarily to ensure full compliance with tax regulations while minimizing reputational and legal risks. Rather than aggressively pursuing tax minimization, their approach is rooted in strict adherence to standard operating procedures (SOPs) and alignment with prevailing tax laws. One tax division head explained: *“We ensure all documentation aligns with the SOPs and strictly avoid any practices perceived as evasion. It is about staying compliant, not taking unnecessary risks.”*

A tax consultant further elaborated, *“We avoid loopholes and grey areas. Tax planning involves using what is legally available without crossing ethical or legal boundaries.”* In addition to formal compliance, companies are increasingly aware of sustainability trends and ESG expectations. However, integrating environmental goals, such as renewable energy investment, into tax planning remains limited. A sustainability officer noted: *“We are interested in incorporating renewable energy, but high costs and limited tax incentives make it difficult to turn this into a real tax-saving strategy.”*

While companies express awareness of sustainable practices and their reputational benefits, the actual impact of their tax strategies on reducing tax avoidance is minimal. Their tax planning tends to focus on risk mitigation and transparency rather than the innovative use of sustainability-linked fiscal tools. Informants consistently described a conservative approach to taxation. As one operations division head observed: *“Aligning sustainability goals with tax strategies is ideal, but the lack of specific incentives for renewable initiatives limits what we can achieve regarding tax benefits.”* Consequently, although companies formally adopt sustainability-aligned policies, these have not yet been reflected in significant reductions in tax avoidance behavior. The limited fiscal incentives for renewable energy further constrain their ability to adopt more progressive tax strategies.

What challenges and opportunities do energy companies encounter in implementing sustainability management, and how can these influence government policy?

Energy companies in Indonesia face numerous challenges in implementing sustainable management. Among the most pressing are the high upfront costs and the limited availability of financial incentives. One energy sector representative explained: *“While we are keen to incorporate renewable energy, the high costs and limited incentives currently available make it difficult to leverage this strategy fully.”* Additionally, regulatory uncertainties, including frequent policy changes and the lack of targeted sustainability incentives, further constrain long-term planning and execution. A head of the tax division noted: *“Aligning sustainability goals with tax strategies is ideal, but the lack of specific incentives for renewable initiatives limits what we can achieve regarding tax benefits.”*

Despite these obstacles, companies identify several strategic opportunities. Sustainable practices are increasingly viewed as a means to enhance corporate image, gain a competitive edge, and appeal to stakeholders who prioritize environmental responsibility. A community development officer emphasized this potential: *“The potential for renewable energy is there, but without substantial support or incentives, the upfront investments are a challenge.”* In the long term, sustainability management is also recognized as a mechanism for achieving operational efficiency, cost savings, and mitigating regulatory risk, particularly as environmental governance frameworks become more stringent. These insights suggest that energy companies are well-positioned to influence government

policy. They can advocate for more robust, predictable, and targeted incentives that facilitate the adoption of renewable energy by voicing their operational challenges and sustainability goals. Companies' engagement in policy dialogue can create a more stable regulatory environment, essential for aligning private sector initiatives with national sustainability goals. In summary, although Indonesian energy companies face significant barriers to implementing sustainability management, these challenges are coupled with opportunities to enhance market positioning and influence policy reform. The energy sector can be pivotal in advancing the green economy agenda by advocating for supportive fiscal and regulatory frameworks.

How is the use of renewable energy integrated into the sustainability strategies of energy companies, and what implications does this have for tax incentives?

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Energy companies in Indonesia are gradually integrating renewable energy into their broader sustainability strategies as part of their commitment to environmental responsibility and carbon reduction. This integration is particularly evident in initiatives involving hydroelectric, solar, and wind energy, which companies adopt to align with global sustainability targets and stakeholder expectations. A company representative highlighted the potential and the obstacles: *"The potential for renewable energy is there, but without substantial support or incentives, the upfront investments are a challenge."* This statement reflects a common sentiment among informants—companies are willing to transition to renewable energy, but significant initial investment and limited fiscal support remain primary barriers. The integration process typically includes setting measurable internal sustainability goals, investing in renewable energy infrastructure, and implementing energy efficiency initiatives. One informant stated: *"We are setting measurable targets within the company to reduce our carbon footprint and align with environmental goals."*

Companies also perceive renewable energy adoption as a compliance measure and a reputational strategy. As one executive noted: *"Renewable energy is not just about compliance; it is a way to position ourselves as a responsible player in the industry, which is important to our investors and customers."* However, the limited availability of targeted tax incentives hinders deeper integration. A tax division head remarked: *"The costs are substantial, and without adequate incentives from the government, it is challenging to justify the investment at a larger scale."* While some general fiscal provisions exist, they are often inconsistent or insufficient to have a meaningful impact. One informant emphasized, *"Aligning sustainability goals with tax strategies is ideal, but the lack of specific incentives for renewable initiatives limits what we can achieve regarding tax benefits."* Several informants called for more predictable and robust tax incentives tailored to renewable energy initiatives. Proposals include tax credits, accelerated depreciation for green assets, and direct subsidies for green technology adoption.

As one informant stated, *"We need clear, long-term incentives that support renewable energy investments. Without this, it is challenging for companies to make substantial commitments."* Another executive added: *"Subsidies or tax breaks on green technology would make a significant difference, enabling us to incorporate more sustainable practices with less financial strain."* Companies believe strong policy support for renewable energy would improve corporate sustainability performance and reinforce national environmental goals. One senior executive concluded: *"A stable and supportive tax policy would help us move forward with renewable energy and signal that Indonesia is serious about leading in sustainability."*

In summary, while renewable energy is increasingly recognized as a strategic pillar of corporate sustainability, its full integration is currently constrained by high costs and inadequate tax incentives. Energy companies advocate for more structured and long-term policy support to facilitate the adoption of renewable technologies and to align corporate sustainability actions with Indonesia's national green economy agenda.

Do tax strategies have an impact on tax avoidance?

The regression analysis reveals a statistically significant negative association between sustainable tax strategies and corporate tax avoidance. Companies implementing these strategies tend to adopt a compliance-oriented approach, emphasizing long-term fiscal

integrity over short-term tax savings. These firms strive to minimize tax risks by aligning tax planning with broader regulatory and ethical expectations. Qualitative findings support this result, as informants consistently highlighted the importance of maintaining credibility and transparency in tax practices. One tax consultant stated, “*Tax planning here focuses on taking what is legally available and avoiding any practices that could harm our reputation.*” This cautious and principled approach to tax strategy results in lower levels of aggressive tax management and avoidance.

Does sustainability management have an impact on tax avoidance?

The quantitative analysis reveals a statistically significant negative association between sustainable tax strategies and corporate tax avoidance. This suggests that companies implementing sustainability-oriented tax strategies are more likely to avoid aggressive tax planning as they prioritize long-term compliance, transparency, and alignment with regulatory expectations. Data reinforce these findings. Informants highlighted that sustainable tax strategies are used to manage Tax liabilities legally and maintain a positive corporate image. One tax consultant explained: “*We avoid loopholes and grey areas. Tax planning is about using what is legally available and maintaining our credibility.*” Such approaches mitigate tax-related reputational risks and foster ethical behavior, underscoring the role of sustainable tax strategies in discouraging tax avoidance.

Does renewable energy have an impact on tax avoidance?

The quantitative results also confirm a significant inverse relationship between renewable energy usage and corporate tax avoidance. Companies that invest in renewable energy tend to be more transparent and committed to sustainability, which reduces the likelihood of aggressive tax planning. Interview data provide further insights. Informants indicated that adopting renewable energy is both a strategic and symbolic gesture. One executive remarked, “*Investing in renewables subjects us to greater public and regulatory scrutiny, so we must maintain consistency in other areas, including tax.*”

This alignment between environmental investment and tax compliance reflects a broader ethical orientation. The adoption of renewable energy enhances corporate legitimacy and reinforces sustainable tax behavior. However, since taxation is a sensitive topic, informant responses may reflect socially desirable answers rather than full disclosure of strategic intent. Therefore, the qualitative findings—while rich and nuanced—should be interpreted in light of this potential bias.

Integrating Sustainability Dimensions into Tax Behavior: Synthesis of Quantitative and Qualitative Insights

This section discusses the impact of each sustainability dimension—sustainable tax strategies, sustainability management, and renewable energy adoption—on corporate tax avoidance, integrating both quantitative findings and qualitative insights, while drawing from existing literature. *Sustainable Tax Strategies and Tax Avoidance* - The regression analysis reveals that sustainable tax strategies are significantly and negatively associated with corporate tax avoidance. Companies that implement these strategies tend to view tax compliance as part of a broader sustainability agenda rather than merely a legal obligation. This finding is consistent with Bird and Davis-Nozemack (2018), who argue that tax avoidance is inherently a sustainability issue, particularly when aggressive tax planning undermines long-term value creation.

Furthermore, Payne and Raiborn (2018) highlight that firms adopting sustainable tax strategies are more likely to internalize ethical standards and avoid reputational risks linked to aggressive tax behaviors. Duhoon and Singh (2021) also find that firms that align their tax planning with fiscal transparency and stakeholder expectations enhance their legitimacy while reducing tax avoidance practices. These quantitative findings are supported by qualitative insights from informants who described their tax strategy as conservative and aligned with regulatory expectations. One tax manager stated: “*We avoid grey areas. Tax planning involves taking what’s legally available, not risking our reputation.*” The cautious and compliance-driven approach described by respondents aligns with the views of Scarpa and Signori (2020), who observe that responsible tax

conduct contributes to long-term sustainability objectives. Additionally, Palan (2020) argues that tax avoidance, especially in low-capacity states, is not only an economic issue but a broader governance concern that can erode public trust. Taken together, these findings suggest that sustainable tax strategies may serve as an effective tool for mitigating corporate tax avoidance, particularly when integrated into a firm's governance and sustainability framework.

Sustainability Management and Corporate Tax Avoidance – The results also reveal that sustainability management is significantly and negatively associated with corporate tax avoidance. This finding reinforces the perspective of Legitimacy Theory, which posits that firms adopt responsible fiscal behavior to meet societal expectations and maintain legitimacy (Suchman, 1995). In the same vein, Stakeholder Theory (Freeman, 1984) explains that firms align their governance practices with stakeholder interests to build trust and enhance their social license to operate. Empirical evidence supports this theoretical linkage. Saka, Oshika, and Jimichi (2019) further emphasize that organizations with mature sustainability frameworks are less inclined to pursue unethical tax strategies. These firms often internalize ethical values and exhibit high sensitivity to reputational risk. Thus, the study suggests that effective sustainability management systems may serve as internal governance mechanisms that deter aggressive tax planning behavior, fostering transparency and ethical compliance.

Use of Renewable Energy and Corporate Tax Avoidance – The study confirms that the use of renewable energy is significantly and negatively associated with corporate tax avoidance in Indonesia's energy sector. Firms investing in green infrastructure are more likely to utilize available tax incentives and demonstrate a long-term commitment to the environment. Similarly, Frempong et al. (2021) and Wei and Aadland (2022) emphasize that sustainability-driven innovation enhances compliance and aligns corporate budgeting with public expectations. Nevertheless, qualitative insights reveal a gap between intent and practice. Informants acknowledged an interest in incorporating renewable energy but noted that limited and inconsistent tax incentives hinder its strategic integration into tax planning. As one informant stated: “*We are interested in incorporating renewable energy, but high costs and limited tax incentives make it difficult to turn this into a real tax-saving strategy.*”

This observation aligns with Gnanon's (2019) critique, which highlights that fiscal instability in developing economies undermines the effectiveness of sustainability-linked tax policies, thereby reducing firms' motivation to adopt environmentally aligned tax strategies.

CONCLUSION

This study provides empirical evidence that the adoption of renewable energy, sustainability management, and sustainable tax strategies significantly reduces corporate tax avoidance in Indonesia's energy sector. These findings suggest that firms with strong sustainability orientation are more likely to engage in compliant and transparent tax behavior, viewing tax governance as part of broader ethical and environmental responsibilities.

However, this study is not without limitations. First, the sample is restricted to firms in the energy sector, which limits its generalizability across industries with different environmental and regulatory exposures. Second, the quantitative data are cross-sectional, which constrains the ability to infer causal relationships. Third, although qualitative insights enrich interpretation, the number of informants is limited, and their views may not capture the full range of corporate behavior or internal dynamics. Future studies may consider more nuanced proxies for ESG management and renewable energy engagement to better capture sustainability intensity. This could include qualitative ESG scores, verified disclosures, or investment scales in renewable projects.

Despite these limitations, the use of a mixed-methods approach enhances the robustness of the findings by triangulating numerical data with real-world narratives. Any concerns about validity are mitigated through methodological rigor, such as ensuring data

triangulation, cross-verifying interview codes using NVivo, and applying standard econometric techniques for panel data analysis.

Future research could expand the industry scope, apply longitudinal designs to track the impact of evolving fiscal policies, and explore the moderating roles of governance quality or political ties. Including perspectives from tax regulators and policymakers would also enhance understanding of how institutional frameworks influence corporate tax behavior.

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