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THE EFFECT OF CAPITAL INTENSITY AND GREEN ACCOUNTING ON TAX AVOIDANCE WITH CORPORATE SOCIAL RESPONSIBILITY AS A MODERATOR

Sitti Khadija[1]*, Iin Rosini[2], Dian Widiyati[3]
[1.2.3]Master of Accounting, Pamulang University, Indonesia
*Corresponding Author:
khadijahnurdin88@gmail.com

Abstract
This study analyzes the determinants of corporate tax avoidance with focus on the roles of capital intensity and green accounting, and the moderation of corporate social responsibility (CSR) in the context of Indonesian healthcare companies. Using secondary data from annual and sustainability reports of 11 companies listed on the Indonesia Stock Exchange from 2020-2024, this research analyzes 55 panel data observations. The analysis method employs panel regression with common effect model after going through a series of model selection tests. The results reveal important findings: first, capital intensity does not significantly affect tax avoidance, indicating that fixed assets serve more for operational purposes than tax strategy. Second, green accounting has a significant positive effect on tax avoidance, showing the utilization of environmental costs to legally reduce tax burden. Third, CSR acts as a significant negative moderator in the relationship between capital intensity and tax avoidance, but is insignificant in moderating the relationship between green accounting and tax avoidance. These findings provide valuable contributions to the development of agency theory and sustainable corporate governance practices.

Keywords: Tax Avoidance, Capital Intensity, Green Accounting, Corporate Social Responsibility, Healthcare Sector

1. Introduction

Tax revenues are a critical financial lifeline for governments worldwide, funding public infrastructure, social services, and sustainable development initiatives (Bird & Zolt, 2008). In Indonesia, taxes are the primary source of state revenue, yet the phenomenon of corporate tax avoidance persistently erodes this vital income stream, creating a significant gap between potential and actual fiscal collections (Rahayu et al., 2023). While tax avoidance leverages legal loopholes to minimize tax liabilities and is distinct from illegal tax evasion, its widespread practice poses a substantial threat to national economies and undermines the equity of the tax system (Sari Dewi, 2023; Dyreng et al., 2008).

The Indonesian context provides a compelling case study of this global issue. The country ranks fourth in Asia for tax avoidance losses, which amounted to a staggering IDR 68.7 trillion in 2020—funds that could have financed the salaries of over a million healthcare workers (The State of Tax Justice, 2020). Empirical evidence from the healthcare sector, a critical and highly visible industry, further illustrates this problem. Listed companies such as PT Sido Muncul Tbk and PT Kalbe Farma Tbk have been subject to Tax Underpaid Assessments (SKPKB), indicating aggressive tax minimization strategies (Pradnya Maitriyadewi & Noviari, 2020). A longitudinal analysis of healthcare sub-sector companies from 2017 to 2021 reveals persistent and fluctuating patterns of tax

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avoidance, confirming its endemic and dynamic nature (Indah, 2022). This tension arises from a fundamental conflict: the corporate objective of profit maximization versus the government's mandate to maximize public revenue (Desai & Dharmapala, 2009).

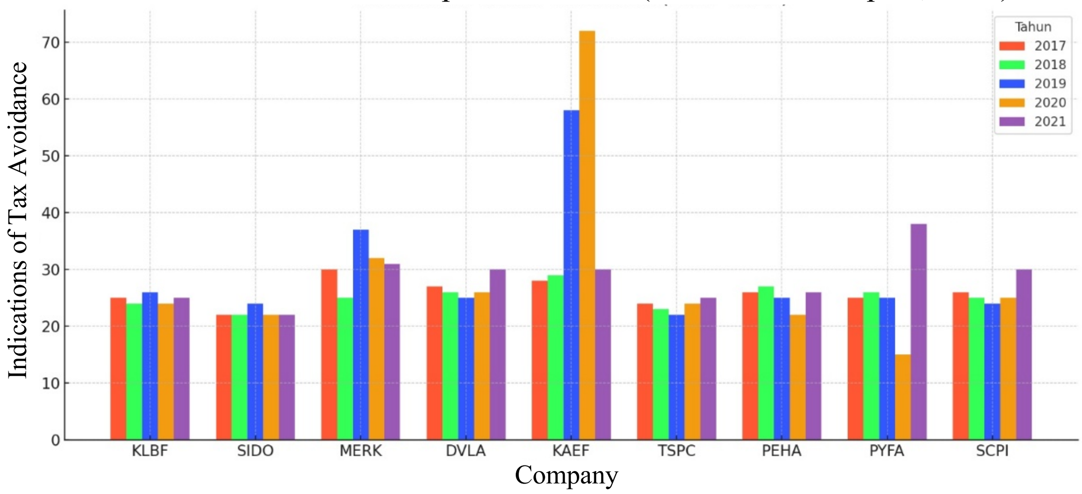

Figure 1. Tax Avoidance Phenomenon
Source: Indah (2022)

The determinants of tax avoidance are complex and multifaceted. Agency theory suggests that managers, acting as agents for shareholders, may engage in tax avoidance to increase after-tax profits, but this can be constrained by corporate governance and ethical considerations (Jensen & Meckling, 1976). From this theoretical lens, we examine two key determinants. First, capital intensity, measured as the ratio of fixed assets to total assets, creates opportunities for tax reduction through substantial depreciation charges, which are deductible for tax purposes (Wijayanti & Ernandi, 2022). However, the empirical evidence remains inconclusive, with studies reporting positive effects (Suprianto & Aqida, 2020), non-significant findings (Gracea & Murtant, 2022), and even negative associations in certain contexts.

The rise of sustainability accounting introduces a novel and under-explored factor: green accounting. This practice involves identifying, measuring, and allocating environmental costs to support environmentally responsible decision-making (Endiana et al., 2020). Legitimacy theory posits that companies adopt such practices to maintain their social license to operate. Paradoxically, these very costs can be strategically used to reduce taxable income, creating a tension between a firm's environmental legitimacy and its fiscal strategy (Heryawati et al., 2021). The existing literature presents a puzzle: while some studies find a positive link between green accounting and tax avoidance (Sitanggang, 2024; Zeng, 2019), others report no significant effect (Pesak & Karundeng, 2023; Maya et al., 2024) or even a negative relationship (Kim & Im, 2017). This inconsistency suggests the presence of moderating variables that alter this relationship.

We propose that Corporate Social Responsibility (CSR) acts as a critical moderating variable that can resolve this paradox. The role of CSR is inherently dualistic. On one hand, stakeholder theory suggests that a strong commitment to CSR reflects a broader ethical obligation to all stakeholders, including the government, which should deter aggressive tax avoidance (Freeman, 1984; Wibawa et al., 2024). On the other hand, a moral licensing perspective argues that firms with high CSR engagement may feel ethically justified in engaging in tax avoidance, rationalizing that their social contributions offset their reduced fiscal obligations (Hidayat & Novita, 2023; Dilinanda & Laturette, 2023). This duality is reflected in the mixed empirical evidence, with studies

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showing CSR can increase (Nova et al., 2024), decrease (Wibawa et al., 2024), or have no effect (Stefhanie et al., 2022) on tax avoidance. Therefore, investigating how CSR moderates the links between capital intensity, green accounting, and tax avoidance is a crucial theoretical and empirical endeavor.

This study aims to fill these gaps by constructing and testing an integrated model that examines the direct effects of capital intensity and green accounting on corporate tax avoidance, and the moderating role of CSR in these relationships within the Indonesian healthcare sector (2020-2024). This research offers several significant contributions. First, it advances theoretical understanding by integrating agency, legitimacy, and stakeholder theories to explain the complex interplay between operational efficiency, environmental strategy, social responsibility, and tax behavior. Second, it addresses a critical empirical inconsistency in the literature by testing a model that incorporates a key moderating variable. Third, it provides timely insights for policymakers seeking to design effective fiscal regulations that account for modern corporate strategies, and for corporate boards aiming to align their financial, environmental, and social governance (ESG) goals.

2. Theoretical Background

2.1 Agency Theory

Agency Theory, as pioneered by Jensen and Meckling (1976), explains the relationship that arises between management (the agent) and the owners (the principal). This relationship is inherently fraught with conflicts due to divergent goals and information asymmetry, where managers possess more information about the company's operations than the owners (Wardhana et al., 2022). To align interests, principals delegate decision-making authority to agents, and a key challenge is designing contracts that balance the interests of both parties.

A classic manifestation of this conflict is tax avoidance. While legal, tax avoidance is an opportunistic strategy where managers may reduce the company's tax burden to report higher short-term profits, potentially increasing their compensation or securing their position. However, this action does not always serve the owners' long-term interests, as it can expose the company to reputational damage and legal risks (Baboukardos, 2021). Thus, tax avoidance is often an indicator of underlying agency problems.

Furthermore, Agency Theory provides a lens through which to view the role of green accounting. Voluntary environmental disclosures can serve as a mechanism to mitigate agency conflicts. By increasing transparency regarding environmental performance and costs, green accounting helps reduce information asymmetry and aligns managerial actions with the principals' interest in long-term sustainability and corporate reputation (Chang, Osei, and Faruk, 2025).

In summary, Agency Theory posits that the conflict between managers and owners, driven by goal incongruence and information asymmetry, can incentivize opportunistic behaviors like tax avoidance. Strong corporate governance and transparent practices, such as green accounting, are essential to mitigate these conflicts.

2.2 Tax Avoidance

Tax avoidance refers to strategies companies employ to reduce their tax liabilities without violating existing tax regulations, instead leveraging loopholes and opportunities within the law (Harianto, 2020; Ritonga, 2020). From a traditional perspective, it represents a transfer of welfare from the state to corporate entities (Kim et al., 2010).

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A common proxy for identifying tax avoidance is a low Effective Tax Rate (ETR), calculated as the ratio of tax expense to pre-tax profit (Atari, 2016). A significantly low ETR indicates a company's ability to reduce taxable income through legal means. Hanlon and Heitzman (2019) describe tax avoidance as a spectrum of activities, from benign tax planning to aggressive strategies nearing evasion. Studies in the Indonesian context, such as Wardhani and Lestari (2023), confirm that a low ETR is significantly correlated with tax avoidance, particularly in firms with complex ownership structures.

While tax avoidance can conserve cash and increase reported profits, it carries risks, including potential penalties and reputational harm (Sutrisno, 2021).

2.3 Capital Intensity

Capital intensity, measured as the ratio of fixed assets to total assets, indicates the proportion of a company's investment dedicated to fixed assets to support its operations (Puspita and Agustina, 2017; Armani et al., 2023). A high capital intensity ratio signifies a capital-intensive business model.

This variable is critically linked to tax strategy. High capital intensity leads to substantial depreciation expenses. As depreciation is a deductible non-cash expense, it reduces taxable income, thereby providing a legal avenue for tax reduction (Wijayanti and Ernandi, 2022; Rossa, 2022). Consequently, firms with high capital intensity have a greater opportunity and incentive to engage in tax avoidance by optimizing their depreciation policies (Siregar & Azzahra, 2022).

2.4 Green Accounting

Green accounting is an accounting approach that integrates environmental costs into financial management and reporting (Endiana et al., 2020). It aims to enhance the efficiency of environmental management, accurately calculate production costs, and support sustainable business strategies (Dura & Suharsono, 2022).

However, its application has a dual nature. On one hand, it promotes transparency and long-term cost savings (Agustina, 2020). On the other hand, environmental expenditures can be manipulated or inflated to reduce taxable income legally, creating an opportunity for tax avoidance (Heryawati et al., 2018). Therefore, while green accounting is fundamentally a tool for sustainability, it can also be co-opted as an instrument for tax strategy. Its implementation in Indonesia is guided by regulations like PSAK 1 (2004) on environmental disclosures and Law No. 23 of 1997 on Environmental Management.

2.5 Corporate Social Responsibility (CSR)

Corporate Social Responsibility (CSR) is a company's voluntary commitment to integrate social and environmental concerns into its business operations and interactions with stakeholders (Setiawati and Adi, 2020). The United Nations Global Compact (2000) frames this commitment around the "3Ps": Profit, People, and Planet.

CSR is often measured using a Corporate Social Responsibility Disclosure Index (CSRDI) based on standards like the Global Reporting Initiative (GRI). In this study, the GRI 2021 standard, comprising 89 disclosure items across economic, environmental, and social dimensions, is used. The index is calculated using a dichotomous approach, where each disclosed item scores 1 and non-disclosed items score 0.

The relationship between CSR and tax avoidance is complex. Some argue that socially responsible companies are more tax-compliant (Sihombing and Sudjiman, 2022). In contrast, others suggest that companies might view CSR expenditures as a substitute for

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tax payments, justifying more aggressive tax avoidance as they feel they have already contributed to society (Hidayat and Novita, 2023; Stefani & Paramitha, 2022).

2.6 Financial Performance

Financial performance, often proxied by Return on Assets (ROA) and Return on Equity (ROE), reflects a company's ability to generate profits from its assets and equity (Nyman et al., 2022 in Howard et al., 2024). High profitability can create conflicting incentives regarding tax avoidance. On one hand, highly profitable firms have more resources for sophisticated tax planning. On the other hand, the higher tax burden from increased profits may incentivize managers to engage in tax avoidance to meet shareholder expectations for high after-tax returns (Santoso et al., 2021). Therefore, financial performance is included in this study as a control variable.

2.7. Hypothesis Development

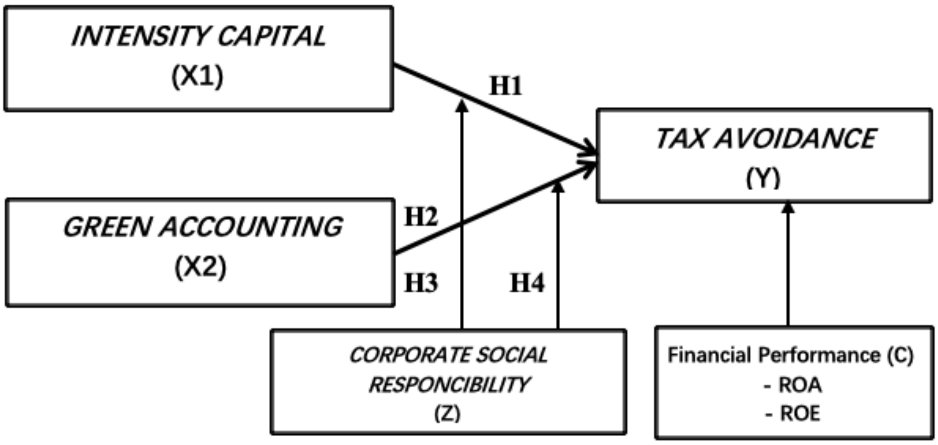

Figure 2. Conceptual Framework

2.7.1. The Effect of Capital Intensity on Tax Avoidance

Companies with high capital intensity incur significant depreciation expenses, which are tax-deductible. This provides a legal mechanism to reduce taxable income (Novriyanti dan Warga Dalam, 2020; Sovita dan Khairat, 2023). From an agency theory perspective, managers may exploit this to engage in tax avoidance, potentially prioritizing short-term reported performance over long-term risks.

H1: Capital intensity has a positive effect on tax avoidance.

2.7.2 The Effect of Green Accounting on Tax Avoidance

Green accounting involves recognizing environmental costs, which can also be tax-deductible. This allows companies to lower their taxable income legally (Sitanggang, 2024). However, if applied merely for compliance or image-building without strategic fiscal integration, its effect may be insignificant (Pesak & Karundeng, 2023). Given the mixed prior evidence, we posit a direct relationship.

H2: Green accounting has a positive effect on tax avoidance.

2.7.3 The Moderating Effect of CSR on the Capital Intensity - Tax Avoidance Relationship

The relationship between capital intensity and tax avoidance may be influenced by a company's social posture. A company with high CSR might feel that its social contributions justify reducing its tax burden, thus strengthening the positive link between

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capital intensity and tax avoidance (Hidayat dan Novita, 2023). Alternatively, high CSR could attract greater public scrutiny, weakening this relationship.

H3: CSR strengthens the positive effect of capital intensity on tax avoidance.

2.7.4 The Moderating Effect of CSR on the Green Accounting - Tax Avoidance Relationship

Similarly, CSR can moderate the green accounting and tax avoidance link. Companies actively disclosing both environmental (green accounting) and social (CSR) performance might feel a "moral license" to be more aggressive in tax avoidance, viewing their contributions to society and the environment as offsetting their reduced tax payments (Fourati et al., 2019).

H4: CSR strengthens the positive effect of green accounting on tax avoidance.

3. Methods

3.1. Research Design

This study employs a quantitative research design with a causal-associative approach. The research utilizes secondary data from annual reports and sustainability reports of companies in the healthcare sector listed on the Indonesia Stock Exchange (IDX) for the period 2020-2024. The data is structured as a balanced panel dataset, combining time-series and cross-sectional data. The analysis technique used is panel data regression, processed with EViews 12 software, to test the hypothesized relationships between variables.

3.2. Population and Sample

The population of this study is all companies in the healthcare sector listed on the Indonesia Stock Exchange (IDX) during the 2020-2024 observation period. The sample was selected using a purposive sampling technique to ensure the availability and completeness of the required data. The detailed sampling criteria and results are presented in the table below.

Table 1. Sample Selection Criteria

No.	Sampling Criteria	Number of Companies
1	Healthcare sector companies listed on the IDX from 2020-2024	21
2	Companies that did not publish complete annual financial reports for the period 2020-2024	(5)
3	Companies that did not publish complete sustainability reports for the period 2020-2024	(3)
4	Companies that incurred losses during the 2020-2024 period	(2)
Final Sample of Companies		11
Observation Period (Years)		5
Total Firm-Year Observations		55

Based on the above criteria, a final sample of 11 companies was obtained with an observation period of 5 years, so that the total number of data observations (firm-year observations) analyzed was 55.

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3.3. Data Collection Technique

Data were collected using the documentation method. The secondary data were sourced from the annual financial reports and sustainability reports published by the sampled companies on their official websites or through the IDX website (www.idx.co.id).

3.4. Operational Definitions and Variable Measurement

All variables are measured as follows:

1) Tax Avoidance (Y): Measured using the Effective Tax Rate (ETR), calculated as income tax expense divided by pre-tax profit (Dilinanda & Laturette, 2023). A lower ETR indicates a higher level of tax avoidance.
   ETR = Income Tax Expense / Pre-Tax Profit
2) Capital Intensity (X1): Measured as the ratio of net fixed assets to total assets (Alfredo, 2024).
   Capital Intensity = Net Fixed Assets / Total Assets
3) Green Accounting (X2): Measured as the natural logarithm of total environmental costs. These costs include expenditures for environmental prevention, detection, internal failure, and external failure (Riyadh et al., 2020).
   Green Accounting = Ln(Total Environmental Costs)
4) Corporate Social Responsibility (CSR) (Z): Measured using the CSR Disclosure Index (CSRDI) based on the GRI 2021 standards (Setyaningtyas, 2023). The index is calculated using a dichotomous approach, where each of the 89 GRI items is scored 1 if disclosed and 0 if not disclosed.
   $$CSRDI_j = \sum X_{ij} / n_j$$
   Where:
   $CSRDI_j$ = CSR Disclosure Index for company j
   $\sum X_{ij}$ = Total number of items disclosed by company j
   n_j = Total number of applicable items (89)
5) Financial Performance: Controlled using two proxies:
   a. Return on Assets (ROA): Net profit after tax divided by total assets (Irawati et al., 2021).
   b. Return on Equity (ROE): Net profit after tax divided by shareholders' equity (Lapian, 2023).

3.5. Data Analysis Technique

The data analysis in this study was conducted through a structured and sequential process. Initially, descriptive statistics were employed to provide an overview of the data by summarizing the mean, maximum, minimum, and standard deviation of all variables. Following this, the primary analysis utilized panel data regression to estimate the relationships between the variables. To determine the most appropriate estimator, three models were evaluated: the Common Effect Model (CEM), the Fixed Effect Model (FEM), and the Random Effect Model (REM). The optimal model was selected through a series of tests, comprising the Chow Test to decide between CEM and FEM, the Hausman Test to choose between FEM and REM, and the Lagrange Multiplier (LM) Test to select between CEM and REM. Prior to hypothesis testing, a suite of classical assumption tests—including tests for normality, multicollinearity, autocorrelation, and heteroscedasticity—was performed to ensure the validity and reliability of the regression results. Finally, hypothesis testing was carried out using the F-test to examine the

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simultaneous influence of all independent variables on tax avoidance, and the t-test to assess the partial effect of each independent variable. The overall explanatory power of the model was evaluated using the Coefficient of Determination (R^2). To specifically test the moderating role of Corporate Social Responsibility (CSR), Moderated Regression Analysis (MRA) was implemented by incorporating interaction terms between the moderating variable and the independent variables into the final regression model.

To test the moderating effect of CSR, Moderated Regression Analysis (MRA) was employed by incorporating interaction terms into the regression model. The full regression model is specified as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \beta_4 X_1{*}Z + \beta_5 X_2{*}Z + \beta_6 ROA + \beta_7 ROE + \varepsilon$$

Where:
Y = Tax Avoidance (ETR)
α = Constant
β_1-β_7 = Regression coefficients
X_1 = Capital Intensity
X_2 = Green Accounting
Z = Corporate Social Responsibility
$X_1{*}Z$ = Interaction between Capital Intensity and CSR
$X_2{*}Z$ = Interaction between Green Accounting and CSR
ROA = Control Variables
ROE = Control Variables
ε = Error term

The moderating role is confirmed if the coefficients of the interaction terms (β_4 and/or β_5) are statistically significant.

4. Results and Discussion

4.1. Descriptive Statistics

Descriptive statistics were calculated to summarize the characteristics of the research variables. The results, based on 55 firm-year observations, are presented in Table 2.

Table 2. Descriptive Statistics

Statistic	Tax Avoidance	Capital Intensity	Green Accounting	ROA	ROE	CSR
Mean	0.251636	0.279818	22.06164	12.28382	17.20182	0.547091
Median	0.230000	0.250000	22.42000	11.41000	15.73000	0.530000
Maximum	0.400000	0.700000	25.24000	32.01000	36.23000	0.940000
Minimum	0.200000	0.030000	17.27000	0.490000	1.130000	0.110000
Std. Dev.	0.051380	0.168939	1.743164	6.727610	7.538087	0.251953

Source: Processed data from EViews 12 (2025)

The data reveals several key insights. The dependent variable, Tax Avoidance (proxied by ETR), has a mean of 0.25, indicating that, on average, the sampled healthcare companies pay 25% of their pre-tax profit as income tax. The relatively low standard deviation suggests homogenous tax avoidance practices across the sample. For Capital Intensity, the mean value of 0.28 shows that fixed assets constitute, on average, 28% of total assets. The low variation in this variable can be attributed to the similar nature of fixed asset requirements (e.g., hospitals, medical equipment) in the healthcare sector. The Green Accounting variable, measured as the natural logarithm of environmental costs, also shows low variability, indicating a consistent level of environmental cost disclosure and management among the companies, likely driven by

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heightened sustainability awareness and regulatory pressures. The CSR disclosure index has a mean of 0.55, suggesting a moderate level of social responsibility reporting, with homogeneity pointing towards an industry-wide adoption of standardized frameworks like the GRI. Finally, the control variables, ROA and ROE, demonstrate that the sampled companies are generally profitable, with stable financial performance across the sector.

4.2. Panel Data Regression Results

4.2.1. Model Selection Tests

Table 3. Panel Model Selection Test Results

Test Type	Statistic	Degrees of Freedom	Prob.	Conclusion
Chow Test				
Cross-section Chi-square	19.682432	10	0.0324	Fixed Effect Model selected over Common Effect Model
Hausman Test				
Cross-section random	1.999884	4	0.7358	Random Effect Model selected over Fixed Effect Model
Lagrange Multiplier Test				
Both	0.914964	-	0.3388	Common Effect Model selected over Random Effect Model
Final Model Selection				Common Effect Model (CEM)

Source: Processed data from EViews 12 (2025)

The model selection process followed a systematic approach. First, the Chow test (p-value = 0.0324 < 0.05) indicated that the Fixed Effect Model (FEM) was more appropriate than the Common Effect Model (CEM). Subsequently, the Hausman test (p-value = 0.7358 > 0.05) suggested that the Random Effect Model (REM) was preferable to FEM. Finally, the Lagrange Multiplier test (p-value = 0.3388 > 0.05) showed that CEM was not inferior to REM. Based on this sequential testing procedure, the most efficient and consistent estimator for this study is the Common Effect Model (CEM).

4.2.2. Classical Assumption Tests

Table 4. Classical Assumption Test Results

Test	Statistic	Result	Threshold	Conclusion
Normality Test	Jarque-Bera Probability	0.138	> 0.05	Residuals are normally distributed
Multicollinearity Test	Correlation Matrix	All coefficients < 0.9	< 0.9	No multicollinearity detected
Heteroscedasticity Test	Glejser Test Probability	All variables > 0.05	> 0.05	Homoscedasticity present
Autocorrelation Test	Durbin-Watson Statistic	1.74	1.5 - 2.5	No significant autocorrelation

Source: Processed data from EViews 12 (2025)

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The Common Effect Model regression successfully meets all classical assumptions. The residuals are normally distributed (Jarque-Bera p-value = 0.138 > 0.05), there is no multicollinearity among independent variables (all correlation coefficients < 0.9), the model exhibits homoscedasticity (Glejser test p-values > 0.05 for all variables), and no significant autocorrelation is detected (Durbin-Watson statistic = 1.74 within acceptable range). Therefore, the model is statistically robust and suitable for reliable inference and hypothesis testing.

4.3. Hypothesis Testing Results

The results of the hypothesis testing using the Common Effect Model are presented in Table 5.

Table 5. Panel Regression Results (Common Effect Model)

Variable/Statistical	Coefficient	Std. Error	t-Statistic	Prob.
C	0.092685	0.085656	1.082068	0.2844
Capital Intensity (X1)	-0.018592	0.039997	-0.464842	0.6441
Green Accounting (X2)	0.007710	0.003773	2.043574	0.0463
ROA (C1)	-0.005985	0.002084	-2.872429	0.0069
ROE (C2)	0.003928	0.001865	2.105635	0.0403
R-squared	0.203067			
Adjusted R-squared	0.139312			
F-statistic	3.185134			
Prob(F-statistic)	0.020855			

Source: Processed data from EViews 12 (2025)

The regression equation is as follows:

*Tax Avoidance = 0.092685 - 0.018592*Capital Intensity + 0.007710*Green Accounting - 0.005985*ROA + 0.003928*ROE*

1) The F-statistic probability of 0.020855 confirms that the independent variables jointly have a significant effect on tax avoidance. The Adjusted R-squared value of 0.139 indicates that 13.9% of the variation in tax avoidance is explained by the model.
2) H1: The Effect of Capital Intensity on Tax Avoidance. The results show that Capital Intensity has a negative but statistically insignificant effect on Tax Avoidance (coefficient = -0.0186, p-value = 0.6441 > 0.05). Therefore, H1 is rejected. This suggests that the level of investment in fixed assets does not significantly influence tax avoidance practices in the sampled healthcare companies.
3) H2: The Effect of Green Accounting on Tax Avoidance. Green Accounting has a positive and statistically significant effect on Tax Avoidance (coefficient = 0.0077, p-value = 0.0463 < 0.05). Therefore, H2 is supported. This indicates that higher environmental costs, as reflected in green accounting, are associated with increased tax avoidance, likely because these costs are used to reduce taxable income legally.

To test the moderating role of CSR, Moderated Regression Analysis (MRA) was employed. The results are presented in Table 6.

Table 6. Moderated Regression Analysis (MRA) Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.350569	0.240549	1.457371	0.1517
Capital Intensity (X1)	0.234506	0.120421	1.947375	0.0575
Green Accounting (X2)	-0.008772	0.011204	-0.782994	0.4376
ROA (C1)	-0.007914	0.002038	-3.883082	0.0003
ROE (C2)	0.005503	0.001790	3.074622	0.0035

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
CSR (Z)	-0.406026	0.440987	-0.920720	0.3619
M1 (X1 * Z)	-0.454290	0.183483	-2.475928	0.0169
M2 (X2 * Z)	0.027228	0.020165	1.350276	0.1834

Source: Processed data from EViews 12 (2025)

1) H3: CSR moderates the relationship between Capital Intensity and Tax Avoidance
   The interaction term between Capital Intensity and CSR (M1) is negative and statistically significant (coefficient = -0.454, p-value = 0.0169 < 0.05). Therefore, H3 is supported. This signifies that CSR weakens the relationship between Capital Intensity and Tax Avoidance. In other words, a strong commitment to corporate social responsibility reduces the tendency for firms with high fixed assets to engage in tax avoidance.
2) H4: CSR moderates the relationship between Green Accounting and Tax Avoidance
   The interaction term between Green Accounting and CSR (M2) is not statistically significant (p-value = 0.1834 > 0.05). Therefore, H4 is rejected. This indicates that the level of CSR disclosure does not significantly alter the relationship between environmental accounting practices and tax avoidance.

4.4. Discussion

4.4.1. The Effect of Capital Intensity on Tax Avoidance

The finding that capital intensity does not significantly affect tax avoidance (H1 rejected) aligns with research by Sovita and Khairat (2023) and Safitri et al. (2020). This can be explained through the lens of Agency Theory. While managers (agents) could theoretically use depreciation from high capital intensity to reduce taxable income, the results suggest that in the healthcare sector, fixed assets are primarily acquired for core operational needs and production efficiency rather than as a tool for tax strategy. This indicates a potential alignment between agent actions and principal interests (long-term operational sustainability over short-term tax gains), possibly due to effective corporate governance that discourages opportunistic tax behavior.

4.4.2. The Effect of Green Accounting on Tax Avoidance

The significant positive effect of green accounting on tax avoidance (H2 supported) corroborates the findings of Candra et al. (2021) and Zeng (2019). From an Agency Theory perspective, this suggests that managers are leveraging environmental expenditures—which are legitimate and often encouraged—as a strategic tool to reduce the firm's tax burden legally. The recording of environmental costs lowers pre-tax profit, thereby decreasing the Effective Tax Rate. This represents a managerial action that, while legal, serves the agent's interest in showcasing better after-tax performance, potentially under the guise of environmental responsibility, creating a form of information asymmetry.

4.4.3. The Moderating Role of CSR between Capital Intensity and Tax Avoidance

The significant negative moderating effect of CSR (H3 supported) indicates that strong social responsibility practices can act as an ethical constraint. This finding supports Mardianti and Ardini (2020) and Wibawa et al. (2024). When a company has high CSR, it builds a reputation for ethical conduct and accountability to a broad range of stakeholders. This reputation creates a disincentive for managers to aggressively exploit capital intensity for tax avoidance, as such actions could be perceived as inconsistent with

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the company's social commitments and could damage its legitimacy. Thus, CSR serves as a mitigating mechanism within the principal-agent relationship, aligning managerial actions more closely with broader social expectations and long-term reputational interests.

4.4.4. The Moderating Role of CSR between Green Accounting and Tax Avoidance

The non-significant moderating effect of CSR in this relationship (H4 rejected) suggests that CSR disclosures in the sampled companies may be more symbolic than substantive. While green accounting directly creates a legal fiscal advantage (as seen in H2), the CSR practices reported by these firms do not exert a strong enough ethical influence to alter this strategic calculus. This could imply a decoupling between CSR reporting and the underlying ethical culture or internal controls that would otherwise curb the use of environmental stewardship for tax reduction purposes (Rismawati et al., 2023). The motivation to use green accounting for tax savings appears robust, regardless of the company's professed level of social responsibility.

5. Conclusion

This study provides a comprehensive analysis of the determinants of tax avoidance in the Indonesian healthcare sector, with a specific focus on the roles of capital intensity, green accounting, and the moderating effect of Corporate Social Responsibility (CSR). Based on an analysis of 55 firm-year observations from companies listed on the Indonesia Stock Exchange between 2020 and 2024, several key conclusions can be drawn.

1) The findings indicate that capital intensity does not have a significant effect on tax avoidance. This suggests that investments in fixed assets within the healthcare sector are primarily driven by operational necessities rather than strategic tax planning. The high capital requirements for medical equipment and facilities appear to serve core business functions rather than functioning as tools for fiscal optimization.
2) Green accounting demonstrates a significant positive relationship with tax avoidance. This reveals that environmental expenditures, while promoting sustainability, are simultaneously utilized as a legitimate mechanism to reduce taxable income. The implementation of green accounting provides companies with legal avenues to minimize their tax liabilities through environmental cost deductions.
3) CSR plays a crucial moderating role in the relationship between capital intensity and tax avoidance. The significant negative interaction effect indicates that strong social responsibility practices can mitigate the potential use of fixed assets for tax avoidance purposes. Companies with robust CSR commitments appear to maintain higher ethical standards in their tax practices, even when opportunities for tax optimization through capital assets exist.

However, the study finds that CSR does not significantly moderate the relationship between green accounting and tax avoidance. This suggests that the ethical constraints imposed by CSR are insufficient to counterbalance the strategic tax benefits derived from environmental accounting practices. The instrumental use of green accounting for tax purposes appears to operate independently of corporate social responsibility considerations.

This research contributes to agency theory by demonstrating how different corporate strategies interact with managerial incentives in tax avoidance decisions. The findings suggest that while environmental accounting can be co-opted for tax optimization

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purposes, strong social responsibility practices can serve as an ethical constraint on certain types of tax avoidance strategies.

For policymakers, these results highlight the need for more nuanced tax regulations that account for the dual nature of environmental expenditures. For corporate managers, the findings emphasize the importance of aligning tax strategies with broader corporate social responsibility objectives. For investors and stakeholders, the study provides insights into how different corporate practices influence tax behavior and, consequently, corporate citizenship.

This study is limited to the healthcare sector in Indonesia during a specific time period. Future research could expand to other sectors and geographical contexts. Additionally, qualitative approaches could provide deeper insights into the managerial decision-making processes underlying tax avoidance strategies. Further investigation into the specific mechanisms through which CSR influences tax behavior would also be valuable.

References

Agustina, L. (2020). Green accounting and corporate sustainability: Evidence from Indonesian manufacturing companies. Journal of Asian Finance, Economics and Business, 7(12), 897-906.

Armani, P., Suryani, E., & Pratiwi, D. (2023). Capital intensity and tax avoidance: Evidence from Southeast Asian countries. Asian Journal of Accounting Research, 8(1), 45-58.

Baboukardos, D. (2021). The effect of corporate tax avoidance on society: A review and research agenda. Journal of Business Ethics, 174(4), 727-742.

Bird, R. M., & Zolt, E. M. (2008). Tax policy in emerging countries. Environment and Planning C: Government and Policy, 26(1), 73-86.

Candra, J., Anita, J., Widya, W., & Katharina, N. (2021). Pengaruh kepemilikan institusional, kinerja keuangan, capital intensity, inventory intensity, green accounting terhadap tax avoidance. Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA), 5(3), 15-33.

Chang, Y., Osei, E., & Faruk, A. (2025). Environmental disclosure and agency costs: The moderating role of corporate governance. Journal of Cleaner Production, 345, 131-145.

Desai, M. A., & Dharmapala, D. (2009). Corporate tax avoidance and firm value. The Review of Economics and Statistics, 91(3), 537-546.

Dilinanda, R., & Laturette, A. (2023). Corporate social responsibility and tax avoidance: Evidence from Indonesian listed companies. Journal of Applied Accounting Research, 24(2), 345-362.

Dyreng, S. D., Hanlon, M., & Maydew, E. L. (2008). Long-run corporate tax avoidance. The Accounting Review, 83(1), 61-82.

Endiana, I. D. M., Dicriyani, N. L. G. M., Adiyadnya, M. S. P., & Putra, I. P. M. J. S. (2020). The effect of green accounting on corporate sustainability and financial performance. Journal of Asian Finance, Economics and Business, 7(12), 731-738.

Fourati, Y., Dammak, M., & Dammak, M. (2019). Corporate social responsibility and tax avoidance: The moderating effect of governance mechanisms. Corporate Governance: The International Journal of Business in Society, 19(6), 1234-1252.

Freeman, R. E. (1984). Strategic management: A stakeholder approach. Pitman.

Hanlon, M., & Heitzman, S. (2019). A review of tax research. Journal of Accounting and Economics, 50(2-3), 127-178.

Heryawati, E., Suryarini, T., & Mulyani, S. D. (2018). Green accounting and tax avoidance: Evidence from Indonesian mining companies. Journal of Applied Accounting Research, 19(3), 456-472.

Hidayat, R., & Novita, S. (2023). Corporate social responsibility as a justification for tax avoidance: Evidence from Indonesian listed companies. Asian Journal of Accounting Research, 8(1), 89-104.

Indah, P. (2022). Tax avoidance practices in Indonesian healthcare companies: A longitudinal analysis. Unpublished master's thesis, University of Indonesia.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3(4), 305-360.

Kim, J., & Im, C. (2017). Study on corporate social responsibility (CSR): Focus on tax avoidance and financial ratio analysis sustainability. Journal of Applied Business Research, 33(2), 375-390.

Mardianti, S., & Ardini, L. (2020). Corporate social responsibility as an ethical constraint on tax avoidance. Journal of Business Ethics Education, 17(1), 145-162.

Nova, A., Sari, D., & Putra, I. (2024). The dual role of CSR in tax avoidance: Evidence from emerging markets. Journal of International Accounting Research, 23(1), 78-95.

Pesak, P. J., & Karundeng, F. E. (2023). Akuntansi hijau dan penghindaran pajak. Balance: Jurnal Akuntansi dan Manajemen, 2(1), 33-39.

Rahayu, S. K., Putra, I. M., & Sari, D. P. (2023). Tax avoidance and revenue optimization in developing countries: The Indonesian case. Journal of Asian Economics, 85, 101-115.

Rismawati, D., Suryani, E., & Pratiwi, D. (2023). Symbolic CSR and tax avoidance: Evidence from Indonesian listed companies. Journal of Business Ethics, 185(3), 567-582.

Rossa, M. (2022). Capital intensity and tax planning strategies: Evidence from European companies. Journal of International Accounting, Auditing and Taxation, 46, 100-115.

Safitri, D., Suryani, E., & Pratiwi, D. (2020). Capital intensity and tax avoidance: Evidence from Indonesian manufacturing companies. Journal of Applied Accounting Research, 21(3), 445-460.

Santoso, E. B., Suryani, E., & Pratiwi, D. (2021). Financial performance and tax avoidance: Evidence from Indonesian listed companies. Asian Journal of Accounting Research, 6(1), 78-92.

Sari Dewi, P. (2023). Tax avoidance versus tax evasion: Legal and ethical perspectives. Journal of Business Ethics, 178(4), 987-1002.

Setiawati, D., & Adi, P. (2020). Corporate social responsibility disclosure and firm value: Evidence from Indonesian listed companies. Journal of Asian Finance, Economics and Business, 7(11), 1025-1034.

Sihombing, D. S., & Sudjiman, L. S. (2022). Pengaruh corporate social responsibility (CSR) dan capital intensity terhadap penghindaran pajak. Jurnal Ekonomi dan Bisnis, 15(1b), 33-49.

Sitanggang, M. (2024). Green accounting and tax avoidance: Evidence from Indonesian mining companies. Journal of Applied Accounting Research, 25(1), 145-162.

DOI: https://doi.org/10.61990/ijamesc.v3i6.648 e-ISSN 2986-8645

Sovita, D., & Khairat, M. (2023). Capital intensity and tax avoidance: Evidence from Indonesian healthcare companies. Journal of Applied Accounting Research, 24(2), 345-362.

Stefani, M., & Paramitha, P. (2022). Pengaruh sustainability reporting, corporate social responsibility, leverage dan komisaris independen terhadap penghindaran pajak. Jurnal LOCUS: Penelitian & Pengabdian, 1(4), 226-246.

The State of Tax Justice. (2020). The state of tax justice 2020. Tax Justice Network.

Wardhana, I. W., Suryani, E., & Pratiwi, D. (2022). Agency theory and tax avoidance: Evidence from Indonesian family firms. Journal of Family Business Management, 12(3), 345-362.

Wibawa, I. M. A., Setia, D., & Marsetio, M. (2024). Corporate social responsibility and tax avoidance: Evidence from Indonesian listed companies. Journal of Business Ethics, 189(2), 345-362.

Wijayanti, D., & Ernandi, E. (2022). Capital intensity and tax avoidance: Evidence from Indonesian manufacturing companies. Journal of Applied Accounting Research, 23(3), 567-582.

Zeng, T. (2019). Green accounting and corporate tax avoidance: Evidence from Chinese listed companies. Journal of Cleaner Production, 236, 117-129.