

The Effect of Intangible Assets Value and Transfer Pricing on Tax Avoidance with ESG Performance as a Moderator: Evidence from Thailand

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Abstract

This study examines the relationship between intangible assets, transfer pricing, and corporate tax avoidance, with ESG performance as a moderating variable. Using panel data from 133 firms listed on the Stock Exchange of Thailand during 2020–2024 (665 firm-year observations), multiple regression analysis was employed. Tax avoidance was measured by the effective tax rate (ETR), the ratio of tax expense to operating cash flows (TAX/CFO), and the ratio of tax expense to total assets (TAX/ASSETS). The results reveal that intangible assets are positively associated with TAX/CFO and TAX/ASSETS, indicating lower levels of tax avoidance. ESG performance weakens the relationship between intangible assets and TAX/ASSETS, suggesting reduced tax avoidance in high-ESG firms. Transfer pricing is positively related to TAX/ASSETS, and ESG performance strengthens the relationship between transfer pricing and ETR, thereby enhancing tax compliance. These findings support Stakeholder Theory by highlighting the role of ESG in promoting ethical tax practices. These findings suggest that ESG serves as an effective governance mechanism for mitigating tax avoidance and enhancing tax transparency. Therefore, regulators and tax authorities should incorporate ESG as a central criterion in assessing and managing tax risks.

Keywords: Intangible asset, Transfer pricing, Tax avoidance, ESG performance

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Introduction

In the context of rapidly evolving globalization, international free trade has increased the prominence of multinational corporations (MNCs). These entities play a crucial role in facilitating the transfer of strategic resources such as advanced technologies, production capabilities, and global communication systems from developed to developing countries (Kyove et al., 2021). These corporations are often accused of exploiting cross-border differences in tax regimes to lower their effective corporate tax rates. Common strategies include the use of transfer pricing and the shifting of costs associated with intangible assets, which enable the relocation of profits to jurisdictions with lower tax rates (Sari et al., 2021).

Transfer pricing (TP) refers to the method used to determine the pricing of transactions between affiliated entities or subsidiaries within the same corporate group. In principle, such pricing should align with the arm's length standard, which requires that intercompany transactions be priced as if they were conducted between independent, unrelated parties in a competitive market (Pandey et al., 2024). However, the practical implementation of the arm's length principle faces several challenges, particularly in jurisdictions with underdeveloped legal frameworks or weak regulatory enforcement. These limitations create opportunities for the manipulation of transfer prices, commonly referred to as transfer mispricing, which can result in significant distortions in taxable income and facilitate aggressive tax avoidance (Solikhah et al., 2025). The manipulation of transfer pricing is a commonly employed accounting strategy by MNCs to facilitate tax avoidance and profit shifting to low-tax jurisdictions, with the primary objective of minimizing the overall tax liability of the corporate group. This is typically achieved by inflating reported profits in countries with low tax rates and simultaneously deflating profits in high-tax jurisdictions. The issue has garnered substantial scholarly attention due to its profound implications for international tax policy and global economic equity.

The strategic use of intangible assets has become a key mechanism for multinational corporations (MNCs) to engage in tax avoidance, attracting considerable academic and policy attention following scandals involving major digital firms such as Google and Facebook (Fuchs, 2018). In response, many countries, including Thailand, have introduced measures to strengthen tax collection in the digital economy. Thailand's E-Service tax regime, effective 1 September 2021, requires non-resident digital service providers to remit Value Added Tax (VAT), aiming to close legal loopholes and ensure equitable treatment between domestic and

foreign operators. Similar regulations have been implemented in more than 60 countries. Additionally, some jurisdictions voluntarily enhance governance by incorporating environmental, social, and governance (ESG) practices, consistent with stakeholder theory, to address long-term challenges and mitigate the adverse effects of lost investment benefits, particularly in managing transfer pricing risks in developing economies.

According to the *World Investment Report*, Asian countries have attracted the highest levels of foreign direct investment (FDI) over the past five years, with Southeast Asia receiving 225 billion US dollars in 2025 (UNCTAD, 2025). Despite these inflows, the OECD (2024) *Revenue Statistics* show that in 2022, tax revenues from multinational enterprises in many Asian countries, including Thailand, remained below the OECD average of 34.0 percent of GDP. Thailand's tax-to-GDP ratio was only 16.7 percent, lower than the Asia-Pacific average of 19.3 percent, indicating persistent challenges in tax collection efficiency. Contributing factors include weak enforcement of tax laws, limited adoption of digital technologies, and the absence of integrated inter-agency data systems. These structural deficiencies create opportunities for tax avoidance (World Bank, 2023; OECD, 2024), thereby forming the basis for this study.

This study pursues three primary objectives: (1) to examine transfer pricing practices and profit shifting through intangible assets within the context of Thailand as a developing country; (2) to analyze the influence of these practices on corporate tax avoidance; and (3) to investigate the regulatory role of environmental, social, and governance (ESG) performance in constraining tax avoidance behavior as an alternative to strict legal enforcement. The findings are expected to provide valuable insights for policymakers, practitioners, and stakeholders, while also addressing theoretical gaps in the literature on corporate tax behavior.

Literature Review and Hypothesis Development

Relevant Theories

This study draws on two theoretical perspectives: Agency Theory and Stakeholder Theory. Agency theory (Jensen & Meckling, 1976) highlights the principal–agent relationship, where information asymmetry between managers (agents) and shareholders (principals) can lead to opportunistic behaviors, including tax avoidance through accounting manipulation or transfer pricing that violates the arm's length principle. Stakeholder theory (Freeman, 1984) expands the focus to all parties affected by corporate decisions, such as investors,

employees, customers, governments, and communities, emphasizing that strong stakeholder relationships enhance long-term value, especially through Environmental, Social, and Governance (ESG) initiatives (Rudyanto & Pirzada, 2021). While some tax avoidance practices may be legal, they are often ethically questionable; robust ESG practices can discourage aggressive tax avoidance by fostering ethical conduct, transparency, and accountability in financial reporting.

The relationship between the value of intangible assets and tax avoidance.

Recent studies on intangible assets and tax avoidance show mixed results. Argilés-Bosch et al. (2020) found that e-commerce firms in Europe are more likely to avoid taxes, while Chen and Meng (2023) linked higher digital transformation in Chinese listed companies to greater tax avoidance. In ASEAN, Saputra et al. (2024) reported a significant relationship mediated by earnings management, and Sudaryono and Murwaningsari (2023) found a positive effect moderated by foreign ownership in Indonesia—both supporting agency theory. Conversely, Kim et al. (2020) in South Korea and Sodikin (2024) in Indonesia found a negative association, aligning with stakeholder theory. Triyanto and Tarmidi (2024) reported no significant link for R&D expenditures in Indonesia. Given these mixed findings, this study adopts the agency theory perspective, viewing intangible assets as strategic tools to reduce tax liabilities and proposes the following hypothesis:

Hypothesis 1: The value of intangible assets is hypothesized to be negatively associated with the effective tax rate, ETR/CFO, and ETR/ASSET, indicating a higher degree of tax avoidance.

The relationship between transfer pricing and tax avoidance

Empirical studies on the relationship between transfer pricing and tax avoidance have produced mixed results. Amidu et al. (2019), using data from firms listed on the Ghana Stock Exchange (2008–2015), found a positive association between transfer pricing and tax avoidance. Similarly, Illahia et al. (2022), examining manufacturing firms on the Indonesia Stock Exchange with audit quality as a moderating variable, reported a significant positive relationship. These findings align with agency theory, which views transfer pricing as a tax planning mechanism that serves investor and shareholder interests. In contrast, studies grounded in stakeholder theory highlight ethical considerations and corporate governance. Suwaldiman (2025) found that transfer pricing had a significant negative effect on tax avoidance in various Indonesian industries, suggesting that firms with stronger stakeholder engagement and ethical governance

are less likely to employ aggressive transfer pricing practices. Despite these divergent findings, this study adopts the agency theory perspective, positing that transfer pricing can be strategically employed to reduce tax liabilities and enhance shareholder value. Based on this reasoning, the following hypothesis is proposed:

Hypothesis 2: The intensity of transfer pricing is hypothesized to be negatively associated with the effective tax rate, as measured by ETR/CFO and ETR/ASSET, indicating a higher level of tax avoidance.

The role of ESG performance in moderating the relationship between intangible asset value and tax avoidance

Empirical evidence directly examining the moderating role of ESG performance in the relationship between intangible assets and corporate tax avoidance remains limited. However, related studies offer relevant insights. Chouaibi and Chouaibi (2020) found that CSR practices strengthened the positive relationship between intellectual capital and voluntary accounting disclosure, underscoring the role of socially responsible behavior in enhancing corporate transparency. Similarly, Jorgji et al. (2024) reported that ESG performance positively moderated the relationship between sustainable human resource management and firm performance, indicating that stronger ESG practices amplify the benefits of sustainable initiatives. Li et al. (2022) showed that CSR engagement mitigated the negative impact of tax avoidance on firm performance among SMEs in Pakistan, while Elamer et al. (2024) found that although ESG performance was positively associated with firm value, this effect weakened when tax avoidance was present—suggesting that tax avoidance can undermine the credibility of ESG activities. Grounded in stakeholder theory, which emphasizes ethical responsibility, transparency, and accountability to all stakeholder groups, this study proposes the following hypothesis:

Hypothesis 1A: ESG performance is expected to have a significant negative moderating effect on the relationship between intangible asset value and tax avoidance.

The role of ESG performance in moderating the relationship between transfer pricing value and tax avoidance.

Empirical research generally reports a positive relationship between transfer pricing and tax avoidance, indicating that greater profit shifting is associated with higher levels of tax avoidance (Amidu et al., 2019; Illahia et al., 2022). In contrast, studies examining ESG performance and tax avoidance typically find a negative association, suggesting that firms

with stronger ESG practices are more likely to consider stakeholder interests and engage in ethical, transparent tax behavior (Rashid et al., 2024). However, evidence on ESG's moderating role in the transfer pricing–tax avoidance relationship remains inconclusive. Elmer et al. (2024), studying French firms, found ESG performance had only a marginal effect on tax avoidance, potentially indicating that some companies use ESG initiatives as tax planning tools, consistent with agency theory. Conversely, Amri and Chaibi (2025) reported that ESG practices reduced stock price volatility in the presence of tax avoidance. Grounded in stakeholder theory and the ESG framework, this study proposes the following hypothesis:

Hypothesis 2A: ESG performance is expected to have a significant negative moderating effect on the relationship between transfer pricing value and tax avoidance.

Conceptual Framework

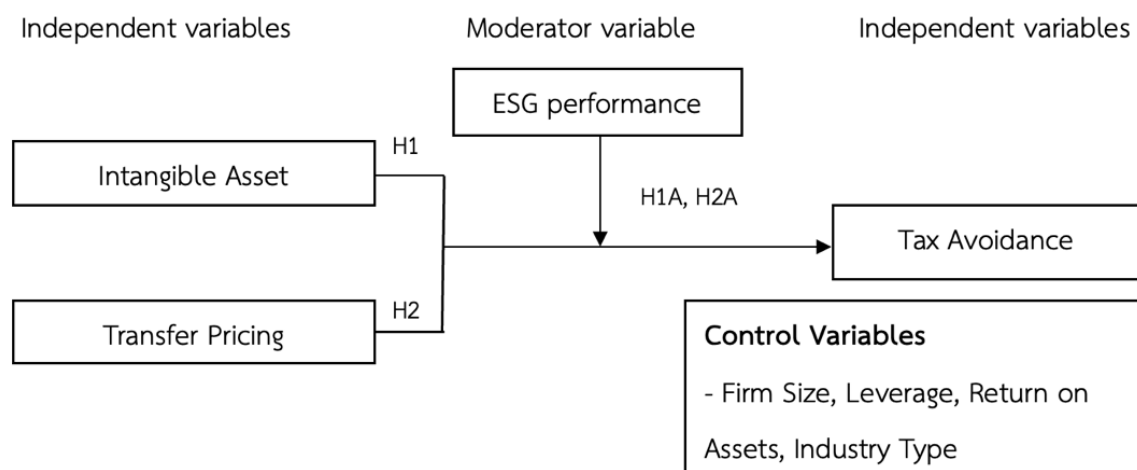


Figure 1 Conceptual Framework

Research Methodology

Sample Selection and Data Collection

In this study, the population comprised companies listed on the Stock Exchange of Thailand (SET) that maintained continuous operations over the five years from 2020 to 2024. To be included in the sample, companies were required to meet specific criteria established by the researcher based on historical data. Applying these selection criteria resulted in a final sample of 133 companies, yielding a total of 665 firm-year observations. The detailed sample selection process is summarized in Table 1

Table 1 Presents the number of firm-year observations Unit: firm-year observations

Sample used in the study	Total
List of companies in the SET100 index as of December 31, 2024	670
Less Company-level annual data from the banking, finance and securities, life insurance, and real estate mutual fund industries.	(109)
Less Companies with incomplete data, outliers *	(140)
Companies reporting pre-tax losses	(207)
Total sample used in the study	133
Number of companies in the study sample over the five years (2020–2024)	665

Note: *Including companies with untraceable data and those that were listed on the Stock Exchange (IPO) after January 1, 2019.

The regression analysis identified outliers that impaired the accuracy of the estimated relationships between variables. To mitigate this, the Trimmed Means method (Walfish, 2006) was applied, excluding the lowest and highest 1% of values for each variable. This procedure introduced missing data, which were subsequently addressed using mean imputation based on the guidelines of Little and Rubin (2002).

Variables and Measurement

The following section outlines the variables employed in this study, including their definitions and measurement approaches. These comprise the dependent variable, independent variables, and control variables.

Independent variables: Tax avoidance is proxied by three measures: the Effective Tax Rate (ETR), the ratio of corporate income tax to Cash Flow from Operating Activities (TAX/CFO), and the ratio of corporate income tax to Total Assets (TAX/ASSETS). The definitions and measurement methods for these proxies are described as follows:

Measures of Tax Avoidance: The key challenge in tax research is the measurement of tax avoidance behavior, as data on taxable income and actual tax payments typically come from confidential tax returns that are not publicly available. As a result, researchers rely primarily on financial statement data. Commonly used proxies include the ETR Ratio, the TAX/CFO Ratio, and the TAX/ASSETS Ratio. Each proxy reflects different aspects of tax behavior and entails specific strengths and limitations. Using only one measure may lead to misinterpretation; hence, multiple indicators are often recommended to enhance accuracy and reduce measurement bias (Dyreng et al., 2008). These are described as follows:

1. ETR Ratio: ETR is one of the most widely used proxies in empirical research on tax avoidance and is computed as follows: $\text{ETR Ratio} = \text{Total Tax Expense} / \text{Pre-tax income}$ (Dyrenge et al., 2008). The ETR reflects the level of tax planning or avoidance, where a negative value suggests aggressive tax avoidance. However, this measure has limitations. It includes deferred tax expenses, which may not represent actual tax payments, potentially leading to misinterpretation (Hanlon & Heitzman, 2010). Additionally, when pre-tax income is low or negative, the ETR may be distorted, failing to accurately reflect tax avoidance behavior (Henry & Sansing, 2014)

2. Cash flow ETR Ratio: To overcome the limitations of ETR, several scholars have recommended the use of the TAX/CFO ratio, which is computed as follows: $\text{TAX/CFO Ratio} = \text{Total tax expense} / \text{Cash flow of operation}$ (Henry & Sansing, 2014). This ratio captures the actual tax burden paid by a firm relative to its operational cash-generating capacity. As such, it is considered a more accurate and reliable indicator than the ETR for assessing the effects of tax planning on a firm's true cash flows (Koester et al, 2016). A negative TAX/CFO ratio may suggest that a firm is engaging in tax avoidance strategies such as income shifting, tax deferral, or operating in low-tax jurisdictions. However, this measure has certain limitations, particularly when operating cash flows are negative. In such cases, researchers often assume the denominator to be zero or exclude these firms from the analysis, which may lead to biased or inaccurate results due to the exclusion of firms with negative cash flows.

3. TAX/ASSETS Ratio: The TAX/ASSETS Ratio is an alternative proxy that offers greater stability in capturing a firm's tax burden. It is calculated as follows: $\text{TAX/ASSETS Ratio} = \text{Total tax expense} / \text{Total assets}$. This ratio reflects the tax burden relative to the size of the firm (Armstrong et al, 2012) and is particularly useful for comparing firms across different industries or size categories. A negative TAX/ASSETS value may indicate the presence of tax avoidance strategies. However, this measure does not effectively capture a firm's profitability or operational efficiency, especially in cases where firms possess substantial assets but fail to generate adequate income.

Independent variables: Intangible Asset and Transfer Pricing. The value of intangible assets is proxied by the Intangible Asset Ratio $= \text{Intangible assets} / \text{Total assets}$ (Sudaryono & Murwaningsari, 2023). Transfer pricing activity is proxied by Transfer Pricing Intensity $= \text{Related party receivables} / \text{Total receivables}$ (Merle et al, 2019).

Moderator variable: The moderating variable in this study is ESG performance, which is measured using the ESG Rating based on the Stock Exchange of Thailand (SET)'s criteria for selecting firms for inclusion in the Thailand Sustainability Investment (SET, 2025). The assessment consists of three stages, as follows:

Stage 1: ESG performance is assessed based on information disclosed in the company's ESG report submitted to the Stock Exchange of Thailand (SET). The evaluation comprises three dimensions: (1) Environmental (E) – including greenhouse gas management, (2) Social (S) – including gender equality (measured by employee distribution by gender) and employee remuneration, and (3) Governance (G) – including director and executive remuneration. Stage 2: Calculation of the Composite ESG Score. The composite ESG Rating is computed using the following formula: $ESG\ Rating = (E \times w_E) + (S \times w_S) + (G \times w_G)$ Where: E, S, G = represent the scores obtained in each dimension (on a scale of 0 to 100) w_E, w_S, w_G = represent the weighting assigned to each dimension: Environmental (25%), Social (25%), and Governance (50%) Stage 3: Conversion of ESG Rating Levels into Numerical Scores. The final ESG rating is categorized into five levels, with each range assigned a corresponding median score for quantitative analysis, as shown below:

Table 2 Criteria for the Interpretation of Assessment Score Levels

Rating Level	Score Range	Assigned Median Score	Interpretation
4	90-100	95	Excellent
3	80-89	85	Very Good
2	70-79	75	Moderate
1	60-69	65	Below Moderate
0	< 60	50	Poor

Control Variable: This study incorporates firm-level control variables that have been shown to influence tax avoidance. These include firm size, leverage, return on assets, and industry type (Thunputtadom et al., 2022)

Data Analysis Results

This study employed multiple regression analysis (MRA) using the Ordinary Least-Squares (OLS) estimation method to test the research hypotheses, as detailed below:

$$\text{ETR} = \alpha_1 + \beta_1 \ln \text{Asset} + \beta_2 \text{TP} + \beta_3 \text{ESG Rating} + \beta_4 \ln \text{Asset} * \text{ESG Rating} + \beta_5 \text{TP} * \text{ESG Rating} + \beta_6 \text{FS} + \beta_7 \text{LEV} + \beta_8 \text{ROA} + \sum_{n=1}^6 \beta_9 \text{Industry} + \varepsilon_{it} \dots\dots\dots (\text{Model 1})$$

$$\text{TAX/CFO} = \alpha_1 + \beta_1 \ln \text{Asset} + \beta_2 \text{TP} + \beta_3 \text{ESG Rating} + \beta_4 \ln \text{Asset} * \text{ESG Rating} + \beta_5 \text{TP} * \text{ESG Rating} + \beta_6 \text{FS} + \beta_7 \text{LEV} + \beta_8 \text{ROA} + \sum_{n=1}^6 \beta_9 \text{Industry} + \varepsilon_{it} \dots\dots\dots (\text{Model 2})$$

$$\text{TAX/ASSETS} = \alpha_1 + \beta_1 \ln \text{Asset} + \beta_2 \text{TP} + \beta_3 \text{ESG Rating} + \beta_4 \ln \text{Asset} * \text{ESG Rating} + \beta_5 \text{TP} * \text{ESG Rating} + \beta_6 \text{FS} + \beta_7 \text{LEV} + \beta_8 \text{ROA} + \sum_{n=1}^6 \beta_9 \text{Industry} + \varepsilon_{it} \dots\dots\dots (\text{Model 3})$$

Results

Descriptive statistics

Table 3 presents the descriptive statistics of the independent, moderating, and dependent variables. The dependent variable, tax avoidance, is measured using three proxies: ETR, TAX/CFO, and TAX/ASSETS. The mean ETR is 16.56%, with a minimum of 0.02% and a maximum of 85.46%. TAX/CFO has a mean of 9.20%, ranging from 0% to 84.81%. TAX/ASSETS ranges from 0% to 0.43%. These results suggest that most firms in the sample tend to engage in tax planning strategies that reduce taxable income while preserving accounting income, as captured by the ETR measure. In contrast, TAX/CFO reflects differences in firms' cash flow management and budgeting policies, which may be used for tax deferral and vary across firms depending on their operational context. The TAX/ASSETS measure shows that the amount of tax paid relative to total assets is relatively low, indicating a different aspect of tax avoidance behavior. Overall, the differences observed across the three tax avoidance proxies highlight their varying sensitivities to time periods and firm characteristics. These findings are consistent with the arguments presented by Hanlon and Heitzman (2010), who noted that each proxy captures distinct dimensions of tax avoidance behavior.

The moderating variable, ESG performance, is measured by the ESG Rating, which ranges from a minimum of 0.00 to a maximum of 4.00, with a mean value of only 0.77. This relatively low average suggests that most firms in the sample exhibit limited disclosure or implementation of environmental, social, and governance (ESG) practices. This may indicate that these firms are still in the early stages of integrating ESG principles into their operations or are in the initial phases of developing sustainability-oriented strategies.

For the independent variables, which include the value of intangible assets and the intensity of transfer pricing, the results show that the mean value of intangible assets was 2.87, with a maximum of 33.20. The mean value of transfer pricing intensity was 14.17, ranging

from 0 to 87.87. These findings indicate considerable variation in the strategic utilization of intangible assets and the extent of transfer pricing activities, as measured by the intensity of related-party transactions, across firms in different industries.

The control variables in this study include firm size (FS), leverage (LEV), and return on assets (ROA). FS has a minimum value of 13.25, a maximum value of 20.69, and a mean of 16.07, reflecting variation in firm size among the sample companies. LEV ranges from 0.60% to 89.13%, with an average of 38.29%, indicating substantial differences in capital structure and financial risk across firms. ROA ranges from –2.50% to 20.69%, with a mean of 5.47%, reflecting differences in profitability among the companies in the sample.

Table 3 Descriptive Statistic Analysis Results

Variables	Minimum	Maximum	Mean	STD
Panel A: Continuous Variables				
ETR	0.02	85.46	16.56	9.72
TAX/CFO	0.00	84.81	9.20	11.78
TAX/ASSETS	0.00	3.64	0.43	0.43
ESG Rating	0.00	4.00	0.77	1.44
Ing Asset	0.02	33.20	2.87	4.08
TP	0.00	87.87	14.17	18.92
FS	13.25	20.69	16.07	1.44
LEV	0.60	89.13	38.29	19.84
ROA	13.25	20.69	16.07	1.44

Correlation Results

Table 4 presents the Pearson correlation coefficients for the model variables to assess potential multicollinearity. The pairwise correlations among independent variables range from 0.169 to 0.718, all below the 0.90 threshold, indicating no multicollinearity concerns (Hair et al., 2010). This is confirmed by the variance inflation factor (VIF) values from the regression models in Tables 5 and 6, with the highest VIF at 2.937, well below the 8.0 threshold (Black, 2010).

Table 4 Pearson's Correlation Matrix

Variables	In Asset	TP	ESG Rating	ETR	TAX /CFO	TAX/ ASSET	FS	LEV	ROA
In Asset	1								
TP	-.022	1							
ESG Rating	.141**	.098*	1						
ETR	-.029	.051	-.105**	1					
TAX/CFO	.007	-.018	-.022	.163**	1				
TAX/ASSETS	.001	.011	-.005	.249**	.224**	1			
FS	.101**	.203**	.494**	-.018	.009	-.117**	1		
LEV	.167**	.050	.202**	-.053	-.020	-.169**	.325**	1	
ROA	-.039	-.118**	.097*	.021	.271**	.515**	-.097*	-.162**	1

Note: * p-value < 0.10, ** p-value < 0.05, *** p-value < 0.0

Table 5 presents regression results on the relationships between intangible assets, transfer pricing, and corporate tax avoidance, including the moderating effect of ESG performance.

Tax avoidance is measured using ETR, TAX/CFO, and TAX/ASSETS ratios. Intangible assets show a negative but insignificant association with ETR, while positive and significant relationships are found with TAX/CFO ($\beta_1 = 0.084$, $p = 0.054$) and TAX/ASSETS ($\beta_1 = 0.003$, $p = 0.036$). These results indicate that higher intangible asset values are associated with greater tax payments, suggesting lower tax avoidance. In Thailand, this may reflect close regulatory monitoring of intangible assets such as brand reputation, software, and intellectual property, limiting their use in aggressive tax planning. The findings are consistent with Kim et al. (2020) and Sodikin (2024) and align with stakeholder theory, emphasizing accountability and transparency. They also support the role of ESG practices in reducing tax avoidance, consistent with the observed moderating effect. Regarding ESG performance as a moderating variable, the results show negative associations with ETR and positive associations with TAX/CFO, though neither is statistically significant. However, ESG performance has a significant negative moderating effect on the relationship between intangible assets and TAX/ASSETS ($\beta_4 = -0.02$, $p = 0.014$), indicating that higher ESG performance weakens this positive relationship. This suggests that firms with stronger ESG performance are less likely to use intangible assets for

tax avoidance. These findings are consistent with Rashid et al. (2024), and align with stakeholder theory. Based on the results, Hypothesis 1, which posits that the value of intangible assets is negatively associated with the ETR, TAX/CFO, and TAX/ASSETS, indicating a higher level of tax avoidance, is rejected. In contrast, Hypothesis 1A, which proposes that ESG performance has a significant negative moderating effect on the relationship between the value of intangible assets and tax avoidance, is supported.

The results show that transfer pricing is negatively associated with tax avoidance when measured by ETR and TAX/CFO, though these relationships are not statistically significant. However, a positive and significant association is found with TAX/ASSETS ($\beta_2 = 0.002$, $p = 0.034$), indicating that firms with higher transfer pricing activity tend to pay more taxes and thus engage less in tax avoidance. In Thailand, this may suggest that transfer pricing is not primarily used for tax avoidance, possibly due to regulatory requirements for disclosing related-party transactions by the Revenue Department. These findings align with studies by Suwaldiman (2025), as well as stakeholder theory, and may also reflect the role of ESG performance in discouraging tax avoidance, consistent with the moderating effect observed in this study.

The results show that ESG performance is positively associated with TAX/CFO and TAX/ASSETS, though these relationships are not statistically significant. However, ESG performance has a positive and significant moderating effect on the relationship between transfer pricing and ETR ($\beta_5 = 0.033$, $p = 0.002$), indicating that higher ESG performance strengthens this positive association. Firms with stronger ESG performance tend to pay more taxes when engaging in transfer pricing, reflecting lower tax avoidance. This suggests that effective ESG practices reduce the use of transfer pricing as a tax avoidance mechanism. These findings are consistent with Rashid et al. (2024) and align with stakeholder theory. Therefore, with regard to Hypothesis 2, which posits that transfer pricing intensity is negatively associated with ETR, TAX/CFO, and TAX/ASSETS, indicating a higher level of tax avoidance, the hypothesis is supported. Similarly, Hypothesis 2A, which proposes that ESG performance has a significant negative moderating effect on the relationship between transfer pricing intensity and tax avoidance, is also supported.

Table 6 presents the robustness test of the main findings. To verify the consistency of ESG performance as a mediating variable, the ESG Rating was replaced with an alternative proxy, the ESG Dummy, assigned a value of 1 if firm i disclosed ESG information on the SET

and 0 otherwise (Thunputtadom et al., 2024). Regression models were re-estimated for Model 4 (ETR), Model 5 (TAX/CFO), and Model 6 (TAX/ASSETS). The results, shown in Table 5, align with those in Table 6, confirming the robustness and reliability of the findings. This study is consistent with Chelawat and Trivedi (2016), who demonstrated that ESG disclosure can serve as a reliable proxy for examining firms' tax behavior. It also aligns with Thunputtadom et al. (2024), who found that ESG disclosure is significantly associated with firms' tax practices, thereby suggesting that disclosure-based measures can adequately capture key governance mechanisms. Accordingly, the consistent regulatory role of ESG, irrespective of the indicator employed, not only corroborates prior research on its capacity to constrain aggressive tax avoidance strategies but also extends these insights to the Thai context.

Table 5 Results of Multiple Linear Regression Analysis: Moderating Effect of ESG Performance

Variable	Model 1 (ETR)			Model 2 (TAX/CFO)			Model 3 (TAX/ASSETS)		
	b	beta	t_ Value	b	beta	t_ Value	b	beta	t_ Value
(Constant)	6.848		1.196	-.143		-.022	.236		1.073
In Asset	-.030	-.040	-.791	.084	.092	1.926**	.003	.091	2.098***
TP	-.006	-.013	-.275	-.008	-.014	-.301	.002	.089	2.121***
ESG Rating	-1.317	-.196	-3.630***	-.512	-.063	-1.216	.001	.005	.106
In Asset*ESG Rating	.006	.020	.349	-.026	-.069	-1.248	-.002	-.123	-2.463***
TP*ESG Rating	.033	.162	3.101***	.007	.030	.598	.000	.018	.405
FS	.747	.111	2.033***	-.034	-.004	-.079	-.001	-.005	-.098
LEV	-.020	-.040	-.947	.015	.025	.618	-.002	-.071	-1.931**
ROA	.039	.027	.650	.560	.325	8.079***	.031	.488	13.523***
Industry	yes			yes			yes		
F-stat	2.330			6.442			18.247		
Adj. R ²	0.290			0.109			0.280		
Max-VIF	2.303			2.303			2.303		
Durbin-Watson	2.056			1.869			1.996		
n	655			655			655		

Note: * p-value < 0.10, ** p-value < 0.05, *** p-value < 0.0

Table 6 Robustness test: Moderating Effect of ESG Performance

Variable	Model 4 (ETR)			Model 5 (TAX/CFO)			Model 6 (TAX/ASSETS)		
	b	beta	t_ Value	b	beta	t_ Value	b	beta	t_ Value
(Constant)	6.291		1.087	-.064		-.010***	.181		.817
In Asset	-.026	-.035	-.694	.088	.096	1.994	.003	.095	2.180***
TP	-.003	-.008	-.154	-.010	-.018	-.388	.002	.092	2.182***
ESG Dummy	-4.333	-.193	-3.549***	-1.600	-.059	-1.129	-.010	-.010	-.207
In Asset*ESG Dummy	.016	.015	.265	-.099	-.077	-1.394	-.006	-.125	-2.525***
TP*ESG Dummy	.106	.148	2.793***	.032	.037	.722	.000	.010	.225
FS	.777	.115	2.092***	-.040	-.005	-.092	.002	.007	.148
LEV	-.021	-.043	-.995	.014	.024	.589	-.002	-.070	-1.913**
ROA	.040	.028	.675	.559	.324	8.066***	.031	.491	13.607***
Industry	yes			yes			yes		
F-stat	2.190			6.444			18.348		
Adj. R ²	0.296			0.110			0.298		
Max-VIF	2.270			2.270			2.270		
Durbin-Watson	2.057			1.871			1.993		
n	655			655			655		

Note: * p-value < 0.10, ** p-value < 0.05, *** p-value < 0.0

Discussion and implementation

This study investigates the relationship between intangible assets, transfer pricing, and corporate tax avoidance, focusing on the moderating role of ESG performance. Grounded in agency and stakeholder theories, the analysis uses panel data from 665 firm-year observations of companies listed on the Stock Exchange of Thailand (2020–2024). Tax avoidance is measured by three indicators—ETR, TAX/CFO, and TAX/ASSETS ratios—each reflecting a distinct dimension of the firm's tax burden.

This research enhances the understanding of tax avoidance in developing countries, particularly Thailand. The findings show that intangible assets are positively associated with TAX/CFO and TAX/ASSETS, indicating that firms with higher intangible assets tend to pay more taxes, implying lower tax avoidance. This contrasts with evidence from other countries where intangible assets often facilitate aggressive tax planning, and in Thailand, may reflect strong corporate governance and ESG-driven reputation management. ESG performance as a moderating variable negatively affects the relationship between intangible assets and TAX/ASSETS, suggesting that effective ESG practices limit the use of intangible assets for excessive tax benefits. This supports stakeholder theory by emphasizing transparency, sustainability, and long-term credibility over short-term tax gains.

The analysis shows that transfer pricing is positively and significantly associated with TAX/ASSETS, indicating that firms with higher transfer pricing activity tend to pay more taxes and engage less in tax avoidance. This contrasts with evidence from other countries where transfer pricing is a common tool for profit shifting and tax minimization. In Thailand, the result may reflect listed companies' adherence to the arm's length principle, driven by tax authority scrutiny and stakeholder pressure, helping to reduce reputational risk and promote transparency in tax reporting. ESG performance has a significant positive moderating effect on the transfer pricing–ETR relationship, suggesting that higher ESG engagement strengthens this positive link, leading to higher tax payments and reduced tax avoidance. This finding supports stakeholder theory and highlights ESG as a potential mechanism for enhancing corporate tax governance.

Based on the findings, this study offers three main contributions. First, it provides empirical evidence that in Thailand, ESG performance plays a critical role in moderating the relationship between firms' resource utilization and tax behavior, particularly for intangible assets and transfer

pricing. ESG serves as a mechanism to curb aggressive tax avoidance and reinforces its role in corporate tax governance. Second, the results contrast with much prior literature that views intangible assets and transfer pricing primarily as tools for tax avoidance. In Thailand, firms with strong ESG engagement may use intangible assets for strategic investments such as R&D, brand development, and market expansion, while transfer pricing may be influenced by regulatory and stakeholder pressures rather than being solely for tax minimization, and third, This study extends agency theory by showing that ESG practices align managerial incentives with stakeholder expectations and curb opportunistic tax behavior. It also reinforces stakeholder theory by demonstrating that ESG functions as a governance mechanism that constrains aggressive tax avoidance. Collectively, these findings provide a more comprehensive framework for linking ESG practices to corporate tax behavior.

Implications for the Thai capital market include: (1) Policymakers, especially the Stock Exchange of Thailand, should promote ESG disclosure and develop an ESG index incorporating tax governance criteria to assess tax risk. (2) Boards and audit committees should integrate ESG into tax risk management to strengthen accountability and stakeholder trust. (3) Tax authorities should monitor firms with low ESG performance, particularly those engaged in intangible asset and cross-border transactions, to reduce tax avoidance and improve enforcement. This study provides novel insights into corporate tax avoidance in Thailand, highlighting ESG's moderating role in shaping tax-related strategies. The findings have implications for ESG policy development and tax governance, and future research should explore these relationships in other countries with different institutional contexts to broaden the understanding of ESG's influence on tax behavior.

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