The Role of Firm Size in the Relationship between ESG Performance and Firm Value: Evidence from Listed Companies on the Stock Exchange of Thailand

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Abstract

This study re-examines whether ESG performance is value-relevant in the Thai capital market and evaluates whether firm size conditions this relationship using firm-level panel data. Using an unbalanced panel dataset of 176 firms over the period 2020–2024 (708 firm-year observations), the study employs pooled ordinary least squares (OLS) and fixed-effects estimations with industry and year controls. The analysis further examines whether firm size moderates the ESG–firm value relationship through an interaction term.

The regression evidence shows no statistically discernible valuation premium associated with ESG scores during the sample period. Firm value is measured by Tobin's Q under a linear specification. In contrast, financial performance, proxied by return on assets (ROA), exhibits a consistently positive and statistically significant relationship with firm value across all model specifications. Moreover, the interaction between ESG performance and firm size is not statistically significant, suggesting that firm size does not condition the valuation relevance of ESG in the Thai capital market during the sample period.

These findings imply that the Thai capital market remains primarily performance-driven and does not appear to systematically incorporate ESG information into valuation decisions. The study contributes to the ESG literature by providing context-specific evidence from an emerging market and suggests that the value relevance of ESG may depend on structural, institutional, or disclosure-quality conditions rather than operating as a universal driver of firm value. The findings offer implications for regulators and firms aiming to enhance the credibility and economic usefulness of sustainability disclosures.

Keywords: *ESG Performance, Firm Value, Firm Size, Tobin's, Emerging Markets*

1. Introduction

Despite the rapid global expansion of ESG investing, empirical evidence regarding the pricing of ESG information remains inconsistent, particularly in emerging markets. In Thailand, where sustainability reporting is largely voluntary and investor structure is dominated by retail participation, it remains unclear whether ESG performance is systematically reflected in firm valuation. ESG performance is widely regarded as an important mechanism for promoting long-term sustainability, mitigating corporate risk, and enhancing governance quality (Friede et al., 2015; Fatemi et al., 2018). Empirical evidence from developed markets suggests that firms with superior ESG performance tend to enjoy higher market valuations, as investors perceive ESG as an indicator of managerial quality, risk mitigation, and long-term cash flow stability (Eccles et al., 2014).

From the perspective of Stakeholder Theory (Freeman, 1984), firms that actively manage stakeholder relationships through ESG initiatives can reduce conflicts, enhance legitimacy, and create long-term value. Similarly, Signaling Theory (Spence, 1973) posits that ESG disclosure serves as a credible signal that reduces information asymmetry between managers and investors (Dhaliwal et al., 2011).

However, whether ESG information is reflected in firm value depends on the informational efficiency of capital markets. According to the Efficient Market Hypothesis (EMH), relevant and credible information should be rapidly incorporated into stock prices in an informationally efficient market (Fama, 1970). If ESG disclosures are value-relevant and credible, they should be capitalized into firm value. In emerging markets, however, limited disclosure comparability, weaker enforcement mechanisms, and

heterogeneous reporting practices may constrain the efficient processing of ESG information (Wong et al., 2021). As a result, ESG information may not be fully incorporated into market valuation.

Thailand provides an important setting to examine this issue. Although the Stock Exchange of Thailand increasingly promotes sustainability reporting, ESG disclosure remains largely voluntary, and international standards such as IFRS S1 and IFRS S2 have not yet been fully implemented (IFRS Foundation, 2023). Consequently, the valuation relevance of ESG may be conditional upon firm-level characteristics.

Prior studies frequently assume that the effect of ESG on firm value is homogeneous across firms. In practice, however, the market's ability to interpret and price ESG information may vary according to firm characteristics, particularly firm size. Larger firms generally have greater visibility, higher analyst coverage, more structured disclosure practices, and stronger stakeholder scrutiny. Therefore, ESG information from large firms may be perceived as more credible and more likely to influence valuation (Dhaliwal et al., 2011; Uyar et al., 2020).

Within the framework of informational efficiency, firm size may reflect differences in information dissemination and processing. ESG disclosures by large firms are more widely monitored and analyzed, increasing the likelihood that such information is incorporated into stock prices. In contrast, ESG information from smaller firms may receive limited market attention. This perspective suggests that firm size may condition the valuation relevance of ESG.

Although extensive evidence from developed markets supports a positive ESG– firm value relationship (Eccles et al., 2014; Friede et al., 2015), findings in emerging markets remain mixed and inconclusive. In particular, limited research has examined whether firm size conditions the ESG–firm value relationship in the Thai context using panel data and fixed-effects models. Therefore, this study investigates whether ESG performance is associated with firm value and whether firm size moderates this relationship among listed companies on the Stock Exchange of Thailand.

This study contributes to the literature in three important ways. First, it provides empirical evidence from Thailand, an emerging market with distinct institutional and informational characteristics. Second, it integrates Stakeholder Theory, Signaling Theory, and Efficiency Theory to explain the conditional valuation of ESG. Third, it examines whether firm size acts as a moderating mechanism that influences how ESG information is incorporated into firm value.

2. Literature Review

2.1 Concepts and Theories Related to ESG and Corporate Value

The study of the relationship between ESG and corporate value is based on several important theoretical foundations, especially Stakeholder Theory, which proposes that firms that consider the interests of a broad range of stakeholders not only shareholders, but also employees, customers, communities, and society—can reduce conflict, enhance legitimacy, and create long-term value. (Freeman, 1984). Under this framework, good ESG practices should reflect the quality of management and have a positive impact on corporate value.

Furthermore, Signaling Theory explains that ESG disclosures can act as a positive signal of firm quality, helping to reduce information asymmetry between management and investors and increasing confidence in the capital market (Spence, 1973; Dhaliwal et al., 2011). At the same time, ESG is linked to risk management concepts, which view companies with good ESG performance as having lower legal, environmental, and reputational risks, resulting in lower capital costs and increased business value in the long term.

2.2 Empirical Evidence on the Relationship between ESG and Business Value in Other Countries

Numerous studies in developed countries report a positive correlation between ESG (Environmental, Social, and Governance) practices and business sustainability, with a positive effect on business value and financial performance. For example, Eccles, Ioannou, and Serafeim (2014), found that companies with a high level of sustainability practices performed better in the long term than companies with a low level of sustainability focus. Similarly, Friede, Busch, and Bassen (2015), reviewing over 2,000 studies, found that the majority supported a positive correlation between ESG and financial performance.

However, some research indicates that the impact of ESG on business value depends on specific context and special conditions. For example, Fatemi, Glaum, and Kaiser (2018) found that ESG has a nonlinear relationship with business value, and that the role of disclosure is important in how the market values ESG. Meanwhile, Wong et al. (2021) reported that ESG certifications or scores do not always create added value for businesses, especially in markets with lower performance.

2.3 Empirical Evidence in Emerging Markets and Thailand

In the context of emerging markets, the findings on ESG and enterprise value are more diverse than in developed countries. Atan et al. (2018) studied companies in Malaysia and found that ESG dimensions affected enterprise performance differently across various components, while some dimensions showed no significant relationship.

In Thailand, relevant research has begun to increase over the past decade, but the results are not unanimous. Suttipun and Stanton (2012) found that environmental disclosures by Thai companies are influenced more by business characteristics than by market factors, while Kittipongvises (2017) reported that sustainability reporting has a positive correlation with business performance in some cases. However, Wisuttisak and Likhitruangsilp (2020) found that corporate social responsibility did not significantly impact business value across all sample groups.

Empirical evidence in Thailand therefore reflects that, although listed companies are disclosing more ESG information, the Thai capital market may still not be able to systematically assess the value of ESG. This may be due to limitations in data quality, the voluntary nature of disclosure and investor structures that differ from developed countries.

2.4 The Role of Enterprise Size and Research Gaps

Most ESG research assumes that the impact of ESG on enterprise value is homogeneous across all companies. However, some research is beginning to point out that the effects of ESG may vary depending on the specific characteristics of an enterprise, particularly its size. Dhaliwal et al. (2011) suggest that larger companies have greater incentives and pressures to disclose non- financial information, and that such information is more likely to be used in investment decisions. Uyar et al. (2020) found that enterprise size plays a significant role in the relationship between corporate social responsibility and financial performance.

However, in the context of Thailand, there is a lack of systematic research studying the role of business size as a moderator, particularly research using panel data and fixed effects models, which can control for biases arising from unobservable company-specific characteristics. This research aims to fill this gap by examining the role of business size in the Thai capital market's use of ESG data in business valuation.

3. Objectives

This study examines whether ESG performance is value-relevant in the Thai capital market and investigates whether firm size moderates the relationship between ESG performance and firm value among companies listed on the Stock Exchange of Thailand. Accordingly, the study has the following objectives:

1) To examine whether ESG performance is associated with firm value among companies listed on the Stock Exchange of Thailand.

2) To test whether firm size moderates the relationship between ESG performance and firm value.

3) To provide empirical evidence on the valuation relevance of ESG in an emerging market context where sustainability disclosure remains largely voluntary.

4. Research Framework

This research framework is developed based on empirical data from companies listed on the Stock Exchange of Thailand, using a panel dataset from 2020–2024. The data is structured at both the company (ID) and year levels. The framework aims to explain the relationship between ESG (Environmental, Social, and Governance) scores and firm value, measured by Tobin's Q, within the context of the Thai capital market, which is considered an emerging market with limitations in market efficiency and sustainability reporting. According to Stakeholder Theory, which proposes that businesses that prioritize a broad range of stakeholders

can reduce conflict, increase business legitimacy, and create long-term value (Freeman, 1984), along with Signaling Theory, which explains that ESG disclosures can serve as positive signals to investors about the quality of management and the risks of a business, helping to reduce information asymmetry between management and investors (Spence, 1973; Dhaliwal et al., 2011), within this theoretical framework, it is expected that higher ESG scores should be correlated with higher business value. However, empirical evidence in emerging markets, including Thailand, suggests that the relationship between ESG and enterprise value may not be systematically apparent due to limitations in the quality of ESG data, the voluntary nature of disclosure, and a capital market structure with a high proportion of retail investors (Atan et al., 2018; Wisuttisak & Likhitruangsilp, 2020). Based on the data used in this research, the ESG scores of Thai companies showed relatively limited change over the study period, while enterprise value exhibited high volatility, reflecting that the market may not yet be fully able to translate ESG data into market value.

This leads to the conceptual framework that the impact of ESG on business valuation may not be uniform across all companies, but depends on firm size, which acts as a moderator. Larger companies tend to disclose ESG information more systematically, and from the perspective of analysts, institutional investors, and the media, ESG data from larger companies is more likely to be used in valuations than smaller companies (Dhaliwal et al., 2011; Uyar et al., 2020). Conversely, even if smaller companies have implemented ESG practices, this information may not be clearly reflected in their share prices.

Therefore, this research framework defines ESG score as the primary independent variable and enterprise value (Tobin's Q) as the dependent variable, with firm size acting as a moderating variable in the relationship between ESG and enterprise value. Furthermore, to control for fundamental economic and financial factors, the framework includes key control variables such as profitability (ROA), capital structure (debt-to-equity ratio: DE), and enterprise size in the form of the logarithm of total assets (LnSize), as well as industry and annual variables to control structural impacts.

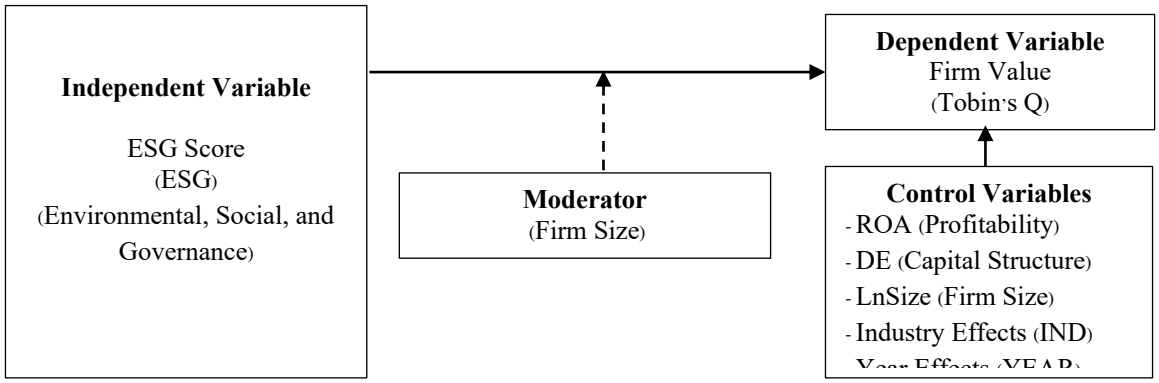

Figure 1 Research Framework

4.1 Research Methodology

The empirical analysis is based on firm-level panel data obtained from publicly available financial and ESG databases covering 2020–2024. The study relies on ESG scores obtained from a recognized commercial database that provides firm-level ESG assessments for listed companies. While this approach facilitates comparability across firms, prior studies have noted that ESG scores may vary across providers due to differences in rating methodology, scope, and weighting schemes (Berg et al., 2022).

4.2 Population and Sample

The initial population consists of 694 companies listed on the Stock Exchange of Thailand during the period 2020–2024, representing a potential total of 3,470 firm-year observations. Secondary data were collected from multiple sources, including the SETSMART database, LSEG Workspace, and companies'

annual financial reports. ESG scores were obtained from recognized ESG rating databases, while financial variables were extracted from audited financial statements.

The study focuses on firms with accounting periods ending on December 31 to ensure consistency across observations.

Companies in the financial sector were excluded due to differences in accounting structures, regulatory environments, and financial statement characteristics compared to non-financial firms. After applying the exclusion criteria and filtering for data availability, the final sample comprises 176 non-financial firms, yielding 708 firm-year observations.

The dataset is structured as an unbalanced panel, as not all firms have complete observations for every year within the study period.

4.3 Empirical Model and Variables

Firm value is measured using Tobin's Q. ESG performance is proxied by ESG scores. Control variables include profitability (ROA), capital structure (DE), and firm size (LnSize). Year and industry effects are incorporated to control for macroeconomic and sectoral influences.

Firm size is measured as the natural logarithm of total assets (LnSize) and is included both as a control variable and as part of the interaction term (ESG × LnSize) to test the moderating effect.

4.4 Research Hypotheses

Hypothesis 1: ESG Performance and Firm Value

Under Stakeholder Theory and Signaling Theory, strong ESG performance is expected to enhance firm value by improving transparency, reducing information asymmetry, and strengthening stakeholder relationships (Freeman, 1984; Spence, 1973; Dhaliwal et al., 2011).

Although prior evidence from developed markets generally supports a positive ESG–firm value relationship (Eccles et al., 2014; Friede et al., 2015), findings in emerging markets remain mixed (Atan et al., 2018; Wisuttisak & Likhitruangsilp, 2020). Accordingly, this study proposes:

H1: ESG performance is positively associated with firm value.

Hypothesis 2: The Moderating Role of Firm Size in ESG Valuation

Prior research suggests that the valuation relevance of ESG information may vary depending on firm characteristics, particularly firm size. Larger firms typically exhibit greater visibility, higher disclosure quality, and stronger stakeholder monitoring, which may enhance the credibility of ESG disclosures (Dhaliwal et al., 2011; Uyar et al., 2020).

From an informational efficiency perspective, firm size may influence the extent to which ESG information is processed and incorporated into stock prices.

Therefore, this study proposes:

H2: Firm size moderates the relationship between ESG performance and firm value.

4.5 Study Model

This study employs a panel data regression framework to examine the relationship between ESG performance and firm value among companies listed on the Stock Exchange of Thailand during the period 2020–2024. The use of panel data is appropriate because it allows the analysis to capture both cross-sectional variation across firms and time-series variation within firms (Baltagi, 2021).

To address potential bias arising from unobserved firm-specific heterogeneity—such as managerial characteristics or corporate culture—that may be correlated with ESG performance, this study adopts the Fixed Effects (FE) model as the primary estimation approach. The fixed-effects specification controls for

time-invariant firm characteristics and is widely applied in accounting and finance research (Hsiao, 2014; Wooldridge, 2010).

Model 1: Baseline Model

Model 1 tests Hypothesis 1 by examining whether ESG performance is associated with firm value. The model controls for firm-level financial characteristics and includes year and industry fixed effects to account for macroeconomic shocks and sector-specific factors.

$$TOBIN\_Q_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 ROA_{it} + \beta_3 DE_{it} + \beta_4 LnSize_{it} + \gamma_t + \delta_\kappa + \varepsilon_{it}$$

Where:

$TOBIN\_Q_{it}$= Firm value of firm i at time t, measured by Tobin's Q
ESG_{it}= ESG score of firm i at time t
ROA_{it}= Return on assets (profitability)
DE_{it}= Debt-to-equity ratio
$LnSize_{it}$= Natural logarithm of total assets (firm size)
γ_t= Year fixed effects
δ_κ= Industry fixed effects
ε_{it}= Error term

The coefficient β_1 captures the direct effect of ESG performance on firm value.

Model 2: Moderation Model (Testing H2)

To examine whether firm size moderates the ESG–firm value relationship (H2), Model 2 introduces an interaction term between ESG performance and firm size:

$$TOBIN\_Q_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 LnSize_{it} + \beta_3 (ESG_{it} \times LnSize_{it}) + \beta_4 ROA_{it} + \beta_5 DE_{it} + \gamma_t + \delta_k + \varepsilon_{it}$$

In this specification, β_3 captures the moderating effect of firm size. The marginal effect of ESG on firm value is:

$$\frac{\partial TOBIN\_Q_{it}}{\partial ESG_{it}} = \beta_1 + \beta_3 LnSize_{it}$$

In this specification:

β_3 represents the moderating effect of firm size.

A statistically significant β_3 would indicate that firm size alters the strength of the relationship between ESG performance and firm value.

4.6 Data Analysis

Data analysis was conducted using Gretl software based on panel data from companies listed on the Stock Exchange of Thailand over the period 2020–2024. The analytical procedure was designed to align with the conceptual framework, research hypotheses, and empirical models.

The dataset was structured in panel format, with firms defined as cross-sectional units (ID) and years as the time dimension (Year). Data cleaning procedures were conducted to ensure completeness and internal consistency. Outliers were examined, and observations with incomplete information were excluded. The final dataset constitutes an unbalanced panel, reflecting the fact that not all firms have complete observations across the five-year period.

Descriptive statistics were computed to summarize the distributional characteristics of the variables, including mean, standard deviation, minimum, and maximum values.

Pearson correlation coefficients were then calculated to examine preliminary relationships among variables and to detect potential multicollinearity issues. Variance Inflation Factors (VIFs) were also computed to further assess multicollinearity risk prior to regression estimation.

Panel Data Estimation Strategy

The empirical analysis proceeds in two stages. First, pooled Ordinary Least Squares (OLS) regression with industry and year fixed effects were estimated to provide baseline results. Second, a Fixed Effects (FE) panel model was employed to control for unobserved, time-invariant firm-specific characteristics that may be correlated with ESG performance and firm value. The FE specification mitigates omitted variable bias arising from unobservable heterogeneity across firms.

To justify the use of the FE model over alternative specifications, model selection considerations were based on standard panel data econometric principles (Baltagi, 2021; Wooldridge, 2010). The FE model is particularly suitable when firm-specific effects are correlated with explanatory variables.

Control of Time Effects and Robustness of Standard Errors

All model specifications include year fixed effects to control for macroeconomic fluctuations, regulatory developments, and other time-specific shocks affecting firm valuation.

Robust standard errors clustered at the firm level were applied to account for heteroskedasticity and within-firm serial correlation. This adjustment enhances the statistical reliability of coefficient estimates and ensures more accurate inference.

Interpretation and Hypothesis Testing

Regression results were evaluated based on both the magnitude and statistical significance of coefficients.

- The coefficient of ESG performance tests Hypothesis 1.
- The interaction term between ESG and firm size tests Hypothesis 2.

Interpretation of results was grounded in Stakeholder Theory, Signaling Theory, and Efficiency Theory and assessed in relation to prior empirical evidence.

5. Results

5.1 Descriptive Statistical Analysis

Table 1 presents the descriptive statistics of the main variables used in this study, including firm value (Tobin's Q), ESG score, profitability (ROA), leverage (DE), and firm size (log of total assets).

The mean value of Tobin's Q is 1.730, with a median of 1.217 and a standard deviation of 1.513. The relatively large standard deviation and the wide range (minimum = 0.486; maximum = 15.80) indicate substantial variation in firm value across companies and years. This suggests that market valuation differs significantly among firms listed on the Stock Exchange of Thailand.

The average ESG score is 54.50, with a median of 56.05 and a standard deviation of 16.36. The ESG scores range from 0.367 to 92.16, indicating considerable dispersion in ESG performance among firms. The fact that the median slightly exceeds the mean suggests a moderately left-skewed distribution, possibly influenced by firms with relatively low ESG scores.

For ROA, the mean is 5.465%, while the median is 4.379%, with a standard deviation of 7.526. The minimum value of −60.84 and the maximum of 63.39 reflect significant variability in profitability across firms. The presence of extreme values suggests that some firms experienced substantial losses or unusually high profitability during the sample period.

The debt-to-equity ratio (DE) has a mean of 94.39 and a median of 65.94, with a high standard deviation of 140.4. The wide dispersion (minimum = 0.000; maximum = 1616) indicates that leverage levels vary considerably among firms, and the distribution appears to be right-skewed due to highly leveraged firms.

Firm size, measured as the natural logarithm of total assets (LnSize), has a mean of 20.66 and a median of 20.46, with a standard deviation of 1.588. The relatively small dispersion suggests that firm size is more stable compared to other financial variables. The range (16.45 to 25.34) indicates substantial variation in firm scale within the Thai capital market.

Overall, the descriptive statistics demonstrate sufficient variation across all key variables, supporting the appropriateness of panel regression analysis. The dispersion in ESG scores and firm value is particularly relevant for examining both the direct and moderating effects proposed in this study.

Table 1 Descriptive Statistical Analysis Results (n = 708)

Variables	Mean	Median	S.D.	Min	Max
TOBIN_Q	1.730	1.217	1.513	0.486	15.80
ESG SCORE	54.50	56.05	16.36	0.367	92.16
ROA	5.465	4.379	7.526	-60.84	63.39
DE	94.39	65.94	140.4	0.000	1616
LnSize	20.66	20.46	1.588	16.45	25.34

5.2 Correlation Analysis

Pearson correlation analysis was conducted to examine the pairwise relationships among the variables and to assess potential multicollinearity concerns. None of the correlation coefficients among the independent variables exceeded the conventional threshold of 0.80. The highest correlation was observed between ESG score and firm size (r = 0.411), followed by the debt-to-equity ratio and firm size (r = 0.310). Variance Inflation Factors (VIFs) were also computed and ranged from 1.10 to 1.35, well below the commonly accepted cut-off value of 5. These results indicate that multicollinearity is unlikely to bias the regression estimates. The detailed results are reported in Table 2.

Table 2 Correlation Analysis

Variables	TOBIN_Q	ESG	ROA	DE	LnSize
TOBIN_Q	1.000	0.027	0.369	-0.109	-0.140
ESG		1.000	-0.105	-0.016	0.411
ROA			1.000	-0.307	-0.212
DE				1.000	0.310
LnSize					1.000

Notes: Pearson correlation coefficients are reported. None of the pairwise correlations exceed 0.80, indicating no severe multicollinearity. Variance Inflation Factors (VIFs) were also computed and ranged between 1.10 and 1.35, well below the conventional threshold of 5, confirming that multicollinearity is not a concern.

5.3 Multiple Regression Analysis

Table 3 Multiple Regression Analysis

Variables	Model 1 (Pooled OLS)	Model 2 (Fixed Effects)
ESG Score	-0.048 (0.049)	-0.027 (0.038)
ROA	0.067*** (0.020)	0.016*** (0.005)
DE	-0.000 (0.000)	-0.000 (0.000)
LnSize	-0.292* (0.165)	0.068 (0.151)
ESG × LnSize	0.003 (0.002)	0.001 (0.002)
Year Effects	Yes	Yes
Firm Fixed Effects	No	Yes
Industry Effects	Yes	Absorbed by firm fixed effects
Constant	5.660* (3.303)	-0.013 (3.097)
Observations	708	708
R^2	0.268	0.158 (Within R^2)

Note: Standard Errors (clustered by firm). *** p < 0.01, ** p < 0.05, * p < 0.10.

Table 3 shows the results from the Pooled OLS and Fixed Effects (FE) estimations examining the relationship between ESG performance and firm value

Model 1 employs the Pooled Ordinary Least Squares (OLS) method with year and industry effects, based on 708 firm-year observations. Across specifications, the ESG coefficient remains economically small and statistically indistinguishable from zero, suggesting the absence of a measurable linear pricing effect. ($\beta = -0.048$, SE = 0.049), indicating that ESG performance does not have a significant linear association with Tobin's Q under the pooled specification. Profitability (ROA) shows a positive and statistically significant relationship with firm value ($\beta = 0.067$, $p < 0.01$). Leverage (DE) is not statistically significant. Firm size (LnSize) is negative and weakly significant at the 10% level ($\beta = -0.292$, $p < 0.10$).

The model explains approximately 26.8% of the variation in firm value ($R^2 = 0.268$), and the F-statistic is statistically significant, confirming the overall validity of the model.

Furthermore, ESG is reported as the variable with the highest p-value in the model, reinforcing the conclusion that ESG performance does not significantly explain firm value under the Pooled OLS framework.

Model 2 applies a firm fixed-effects specification to control for unobserved, time-invariant firm characteristics that may be correlated with ESG performance and firm value. The results show that the coefficient on ESG score remains statistically insignificant ($\beta = -0.027$, SE = 0.038), indicating that ESG performance does not exhibit a significant direct association with firm value after controlling for firm-specific heterogeneity. The interaction term between ESG and firm size (ESG × LnSize) is positive but statistically insignificant ($\beta = 0.001$, SE = 0.002), suggesting that firm size does not significantly moderate the relationship between ESG performance and firm value under the linear specification. Profitability (ROA) continues to show a positive and statistically significant association with firm value ($\beta = 0.016$, $p < 0.01$), whereas the debt-to-equity ratio (DE) and firm size (LnSize) are not statistically significant. The within R^2 of 0.158 indicates that approximately 15.8% of the within-firm variation in Tobin's Q is explained by the model. Overall, these results do not support Hypothesis 2.

5.4 Discussion of Research Findings

The findings indicate that ESG performance does not have a statistically significant direct effect on firm value in the Thai capital market under either pooled OLS or fixed-effects estimations. This result contrasts with a substantial body of evidence from developed markets, where ESG is often associated with superior market valuation and long-term performance (Eccles et al., 2014; Friede et al., 2015). However, the result is consistent with prior studies in emerging markets showing that the ESG–firm value relationship is not always strong, linear, or statistically significant (Atan et al., 2018; Wong et al., 2021).

From the perspective of Stakeholder Theory, firms with stronger ESG performance should be better able to manage stakeholder relationships, reduce conflicts, and enhance long-term value creation (Freeman, 1984). Similarly, Signaling Theory suggests that ESG disclosure should function as a credible signal of managerial quality, transparency, and long-term orientation (Spence, 1973; Dhaliwal et al., 2011). Nevertheless, the present findings suggest that these theoretical benefits may not yet be translated into firm valuation in the Thai context. One possible explanation is that ESG disclosure quality, comparability, and consistency remain uneven, reducing investors' confidence in ESG information as a useful pricing signal.

This interpretation is also consistent with the informational efficiency perspective. If capital markets are not fully efficient in processing sustainability-related information, ESG disclosures may not be fully reflected in stock prices even when they contain potentially value-relevant content (Fama, 1970). In emerging markets, weaker enforcement mechanisms, heterogeneous reporting practices, and limited investor sophistication may constrain the incorporation of ESG information into firm value (Wong et al., 2021). In the Thai market, where sustainability disclosure remains largely voluntary and reporting practices are still developing, investors may continue to place greater emphasis on traditional accounting-based indicators.

The insignificant moderating effect of firm size further suggests that, under the linear specification employed in this study, larger firms do not necessarily receive a stronger ESG valuation premium than smaller

firms. This result does not support the expectation derived from prior studies suggesting that ESG information from larger firms is more visible, more credible, and more likely to be incorporated into investment decisions (Dhaliwal et al., 2011; Uyar et al., 2020). A possible explanation is that although large firms may disclose ESG information more extensively, the market may still not differentiate sufficiently between firms on the basis of ESG quality alone.

By contrast, profitability remains a stable and statistically significant determinant of firm value across model specifications. This finding is consistent with traditional valuation theory and with prior empirical studies showing that financial performance continues to play a dominant role in market valuation, particularly in contexts where non-financial information has not yet become fully integrated into investor decision-making (Fatemi et al., 2018; Wisuttisak & Likhitruangsilp, 2020). Overall, the evidence suggests that the Thai capital market during the sample period remained primarily performance-driven, with ESG information not yet systematically incorporated into firm valuation.

6. Limitations and Future Research

This study has several limitations that should be acknowledged. First, ESG performance is measured using an aggregated ESG score obtained from a recognized database. Although such scores facilitate comparability across firms, they may also be affected by differences in rating methodologies, indicator weights, and data availability. Prior studies have noted that ESG ratings from different providers may vary substantially, raising concerns regarding measurement consistency and comparability (Berg et al., 2022). Therefore, the ESG proxy used in this study may not fully capture all dimensions of firm-level sustainability performance.

Second, the relationship between ESG performance and firm value may be subject to endogeneity concerns, including possible reverse causality. Firms with higher market value may possess greater resources and incentives to invest in ESG initiatives, while strong ESG performance may also influence investor perceptions and valuation. Although the fixed-effects model helps mitigate bias arising from time-invariant firm characteristics (Wooldridge, 2010; Baltagi, 2021), it does not completely eliminate all endogeneity concerns. Future research may therefore consider lagged ESG variables, instrumental-variable approaches, or dynamic panel techniques to address this issue more explicitly.

Third, the study covers the period 2020–2024, which may be relatively short for capturing the long-term valuation implications of ESG activities. This period also coincides with changing sustainability-reporting practices and post-pandemic market adjustments, which may affect both disclosure patterns and valuation outcomes. Since the economic benefits of ESG investments may materialize over a longer horizon, future studies could extend the time period to better assess dynamic effects.

Finally, future research may strengthen the analysis by employing alternative proxies for firm value, such as the market-to-book ratio or stock returns, and by examining environmental, social, and governance dimensions separately. Prior studies suggest that different ESG dimensions may have different implications for performance and valuation (Atan et al., 2018; Fatemi et al., 2018). Comparative studies across ASEAN or other emerging markets may also provide deeper insight into how institutional quality and market structure affect the valuation relevance of ESG.

7. References

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