

Aligning ESG with Firm Value: The Conditional Impact of ESG on Family-Controlled Businesses

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Abstract

This study examines how environmental, social, and governance (ESG) practices influence firm performance in Thai family-controlled firms, which represent a dominant ownership structure in emerging markets. Using panel data from 2012–2021 and drawing on the Agency Theory Type II along with the Socioemotional Wealth perspective, the analysis shows that ESG engagement does not improve firm value in a uniform manner. Instead, family firms display a U-shaped pattern in which performance weakens when ESG involvement is minimal but strengthens once ESG commitment reaches a meaningful threshold. The results also show that ESG practices help firms withstand the COVID-19 crisis by providing resilience during periods of systemic disruption. Overall, the findings suggest that only substantive and well-integrated ESG initiatives contribute to long-term value creation in family-owned enterprises operating in emerging-market environments, while superficial or symbolic efforts do not deliver performance benefits.

Keywords: Family Firms; ESG Engagement; Firm Performance; Agency Theory; Nonlinear Effects

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Introduction

In recent years, environmental, social, and governance (ESG) factors have become central to how firms define their legitimacy, resilience, and long-term competitiveness. Investors and regulators increasingly demand not only financial returns but also accountability in sustainability, equity, and governance practices. These evolving expectations are particularly consequential for family-controlled businesses, often characterized by concentrated ownership, long-term orientation, and intergenerational stewardship, where stakeholder pressure intersects with distinct governance structures.

While these firms are often viewed as naturally aligned with sustainability goals due to their legacy-driven outlook, the reality is more complex. Family businesses may pursue ESG initiatives not solely for economic gain, but also to fulfill nonfinancial objectives rooted in Socioemotional Wealth (SEW), such as identity preservation, family reputation, and trusted stakeholder relationships (Berrone et al., 2010; Zellweger et al., 2013). However, the empirical relationship between ESG engagement and firm value in family businesses remains ambiguous. Some studies find that strong ESG performance enhances firm value (Broadstock et al., 2021; Ghoul et al., 2011), while others argue that the benefits are conditional upon internal governance quality, succession stages, and firm characteristics (Isakov & Weisskopf, 2014).

A compelling explanation for this variation lies in the unique agency conflicts within family firms. Unlike the classic principal-agent problem between managers and dispersed shareholders (Agency Type I) (Jensen & Meckling, 1976), family-controlled businesses often face Type II agency issues, where controlling families may act in ways that diverge from the interests of minority shareholders (Anderson & Reeb, 2003; Villalonga & Amit, 2006). In such cases, ESG investments, particularly those with long payback horizons or uncertain returns, may be deprioritized if they fail to reinforce the family's control or private goals (Anderson & Reeb, 2003; Young et al., 2008). This perspective suggests that underinvestment in ESG may arise not from managerial inefficiency but from value preferences embedded in ownership concentration.

However, these agency dynamics are not uniform across all family firms. Significant heterogeneity exists in terms of firm size, ownership structure, generational stage, and external visibility, all of which shape ESG responsiveness. Larger, more professionalized family firms often face greater stakeholder scrutiny and are more likely to implement credible ESG strategies (Cai et al., 2012). In contrast, smaller or more insular firms may perceive ESG as an avoidable cost, particularly when operating under financial constraints or limited regulatory oversight (Anderson et al., 2012). This diversity raises a critical question: Is the ESG–performance relationship in family firms inherently linear, or does it vary across ownership and governance contexts?

This question gains further complexity considering recent evidence suggesting that ESG impacts may be nonlinear. Specifically, insufficient ESG may expose firms to reputational or regulatory risk, while excessive or poorly integrated ESG may result in overinvestment and diminishing returns (Hawn et al., 2018; Krüger, 2015). Family firms may show this pattern acutely, as symbolic or superficial ESG adoption can initially generate positive market signaling, but only deeper, authentically embedded ESG practices are likely to yield sustainable performance benefits. Understanding where such thresholds lie, and under what conditions ESG moves from a cost to a value enhancer, is vital for both strategic decision-making and policy design.

The relevance of this inquiry is magnified in emerging markets like Thailand, where pyramidal ownership structures, weak investor protection, and concentrated family control are pervasive. In such contexts, the credibility and effectiveness of ESG engagement remain underexamined. Investigating the interplay between family governance and ESG legitimacy can offer critical insights into how firm value is created, sustained, or undermined under institutional constraints.

Recent research has begun to examine ESG and family ownership in Thailand. Pongsatitpat et al. (2025) investigate sustainability-designated firms (THSI/SET100) and find that family ownership weakens the positive association between ESG and firm value. Their analysis, however, relies on a binary ESG classification and a linear ESG–family interaction, and focuses only on high-sustainability firms. These design choices limit the ability to capture variation in ESG intensity, nonlinear effects, or governance dynamics within the broader population of family-controlled firms. Building on their work, the present study advances the literature by using continuous Refinitiv ESG scores, a broader market sample covering all listed Thai firms, and a nonlinear ESG specification (ESG²) that allows the identification of U-shaped relationships that linear models cannot detect. This broader and more flexible empirical design enables a deeper examination of how ESG effectiveness differs across family governance contexts.

Therefore, this study addresses this gap by examining whether and how ESG engagement affects firm value in Thai family-controlled businesses. It focuses on the conditional and nonlinear nature of this relationship, testing whether ESG contributes to firm performance only beyond certain thresholds and when moderated by family ownership characteristics. Using panel data from Thai listed firms between 2012 and 2021, the study applies interaction and quadratic modeling techniques to identify turning points in ESG effectiveness across governance structures.

By integrating Agency Theory, Socioemotional Wealth Theory, and Legitimacy Theory, this research contributes to an improved understanding of the contextual drivers of ESG value creation in family enterprises. This study offers both theoretical advances and practical recommendations, shedding light on how family firms in emerging markets can align ESG practices with long-term value creation, while preserving the strategic distinctiveness of family ownership.

Literature Review and Hypotheses Development

Environmental, social, and governance (ESG) practices have become integral to contemporary corporate strategy, marking a fundamental transition in how firms are evaluated by investors, regulators, and broader society. Moving beyond regulatory compliance and philanthropic engagement, ESG participation is increasingly viewed as a deliberate response to stakeholder expectations for long-term value creation and institutional legitimacy. These pressures are particularly pronounced for family-controlled firms, where concentrated ownership, legacy preservation, and reputational exposure converge with increasing demands for accountability.

The growing emphasis on ESG is reinforced by mounting institutional investor activism, policy reforms, and rising public consciousness (Gillan et al., 2021). A robust body of empirical literature supports the positive correlation between ESG strength and superior financial performance, including enhanced firm valuation, reduced risk exposure, and

improved long-term returns (Ghoul et al., 2011; Godfrey et al., 2009). Thus, ESG has evolved into both a strategic and legitimate mechanism, providing companies with dual benefits: financial stability and reputational capital.

This dual function is especially salient for family firms. Anchored in intergenerational stewardship and community relationships, these firms often prioritize nonfinancial goals alongside profit maximization. Socioemotional Wealth (SEW) theory (Berrone et al., 2010) illustrates this dynamic, emphasizing that family enterprises derive utility not only from economic outcomes but also from preserving identity, sustaining familial reputation, and fostering long-term relational trust. Consequently, ESG initiatives in family firms may reflect both authentic commitment and strategic distinction. These embedded values can strengthen moral legitimacy and stakeholder confidence.

Agency Theory provides more explanatory depth for ESG decision-making in family firms. Unlike traditional agency conflicts between managers and dispersed shareholders (Type I), family firms often experience Type II agency problems, where controlling families may pursue goals misaligned with those of minority investors (Jensen & Meckling, 1976; Villalonga & Amit, 2008). While such ownership structures may curb short-term managerial opportunism, they can also suppress ESG investment when it threatens the family's control or financial interests. Nonetheless, ESG may serve as a credible commitment device, aligning dominant shareholder behavior with stakeholder expectations and mitigating expropriation concerns (Abeysekera & Fernando, 2020).

Evidence from periods of economic stress substantiates ESG's role in firm resilience. During crises like the 2008 financial downturn and the COVID-19 pandemic, firms with robust ESG profiles showed superior financial stability and investor confidence (Cornett et al., 2016; Ding et al., 2021). These benefits were particularly evident in family firms, where relational and reputational capital buffers external shocks. Moreover, ESG transparency plays a critical role in mitigating information asymmetries, thereby enhancing market credibility and facilitating access to capital (Carnini Pulino et al., 2022).

Despite these advantages, the ESG–performance link is neither linear nor assured. Symbolic or superficial ESG engagement, particularly when misaligned with a firm's core operations, can undermine credibility and yield minimal financial benefit (Krüger, 2015). For family firms, where authenticity is central to stakeholder relationships, performative ESG may erode trust. Thus, it becomes essential to differentiate between genuine, embedded ESG practices and those adopted primarily for image management. When ESG is authentically embedded into a family firm's strategic framework, outcomes tend to be more sustainable. These firms typically pursue ESG not out of obligation but as a reflection of deeply held values and long-term orientation. Madden et al. (2020) find that family firms engaging in ESG with selective but strategic commitment tend to show greater performance consistency and stakeholder support. Their practices focus on consistency, generational continuity, and principled governance, characteristics of effective family firm leaders.

Drawing upon these theoretical frameworks and empirical patterns, we propose the following hypothesis:

Hypothesis 1: ESG participation improves long-term firm performance in family-owned businesses.

The impact of ESG engagement on firm value is unlikely to be uniform across ownership structures. Family-controlled firms possess distinctive governance characteristics, such as concentrated control, Socioemotional Wealth concerns, and long-term strategic orientation, that may alter how ESG activities are interpreted by the market. Prior research suggests that ownership identity can moderate the valuation relevance of ESG, with investors reacting differently depending on who controls the firm (Anderson & Reeb, 2003; Villalonga & Amit, 2006). Building on these insights, it is plausible that the value implications of ESG are conditional on whether a firm is family-controlled, as family owners may pursue ESG initiatives for legitimacy, reputation, or risk-management motives in ways that differ from non-family firms. Synthesizing these insights, the relationship between ESG engagement and firm value is expected to vary across ownership types. Accordingly, we advance the following hypothesis:

Hypothesis 2: ESG has different value implications for family-controlled firms relative to non-family firms.

Beyond differences between ownership structures, the effect of ESG engagement on firm value may also vary across levels of ESG intensity. Prior research suggests that ESG investments can generate diminishing marginal returns, where moderate levels of ESG strengthen legitimacy, stakeholder trust, and operational resilience, but excessive or symbolic ESG activities may be perceived as overinvestment or managerial overreach (Gillan et al., 2021; Krüger, 2015). Family-controlled firms, in particular, may be more sensitive to this pattern due to their emphasis on Socioemotional Wealth, resource preservation, and reputation management. These characteristics imply that ESG engagement may yield benefits up to an optimal point, after which the costs or market skepticism outweigh the perceived value. Drawing on these insights, we propose the following hypothesis:

Hypothesis 3: The relationship between ESG engagement and firm value exhibits a nonlinear (U-shaped) pattern in family-controlled firms.

Research Methodology

Data Collection

This study empirically investigates how ESG practices influence firm performance in family-owned businesses, with particular emphasis on the moderating roles of financial leverage and firm size. The empirical context is Thailand, where family-controlled firms play a prominent role in capital formation and corporate governance structures (Villalonga & Amit, 2006; Wiwattanakantang, 2001).

The dataset comprises nonfinancial firms listed on the Stock Exchange of Thailand (SET) between 2012 and 2021. Firms operating in the financial services sector, such as banking and insurance, are excluded due to their distinct regulatory environments and accounting conventions. The remaining sample represents a diverse cross-section of industries and ownership structures relevant for assessing ESG impacts.

Firm-level financial indicators and ownership information were collected from Form 56-1 filings, which are publicly available disclosures submitted by listed firms to the SET. These documents provide comprehensive information on financial performance, shareholder structure, and corporate governance practices. For non-listed companies, share ownership data

was manually collected from Thailand's Department of Business Development (DBD). This manual process involved tracing ownership chains by hand and identifying controlling shareholders.

To determine whether a firm is family-owned, this study follows the methodology outlined by La Porta et al. (1999) for identifying the ultimate controlling shareholder. Specifically, both direct and indirect ownership chains, voting rights, and pyramidal structures disclosed in Form 56-1 (and supplemented by DBD data for non-listed firms) are analyzed to establish the identity of the final owner. This study also departs from prior literature by incorporating Thai corporate law in its classification of the controlling shareholder. Under this legal framework, a shareholder is considered a controlling owner if they hold at least 25% of shareholdings, thereby granting the legal right to block or nullify corporate decisions. A firm is classified as family-owned (FAMILY = 1) if it meets these criteria; otherwise, it is coded as FAMILY = 0.

ESG scores were obtained from the Refinitiv database, which compiles standardized environmental, social, and governance ratings based on company filings, public disclosures, and third-party data sources. These scores are reported on a scale from 0 to 100 and incorporate both quantitative indicators, such as emissions data and board diversity, and qualitative measures, like ESG controversies and disclosure quality. The scoring system ensures comparability across firms and provides an integrated view of ESG performance.

Although Thailand maintains domestic ESG benchmarks such as the Thai Sustainability Investment (THSI) Index and the Corporate Governance Report (CGR), these sources were not used in this study due to important data limitations. THSI and CGR provide only partial firm coverage, are available for a limited number of years, and classify firms using categorical or ranking-based assessments rather than continuous ESG scores. These characteristics make them less suitable for longitudinal regression analysis, particularly for detecting nonlinear ESG effects and estimating interaction terms. In contrast, Refinitiv ESG offers consistent, comparable, and continuous scores for all listed firms throughout the entire 2012–2021 period, enabling a more robust examination of ESG variation across firms and across time. Moreover, Refinitiv ESG scores are globally standardized and constructed using a transparent, unified methodology, making them a reliable and widely used measure for cross-firm and cross-country ESG comparisons in academic research. For these reasons, Refinitiv ESG scores are adopted as the primary ESG measure in this study.

The dataset was subjected to a rigorous cleaning process to ensure data integrity. Firms with incomplete ESG scores, inconsistent financial records, or ambiguous ownership classifications were removed. The dataset was then winsorized at the 1% level to mitigate the influence of extreme values and outliers. This yielded a final panel of 561 firm-year observations, providing sufficient variation across time and firm characteristics to support robust statistical inference.

Model Specification

To evaluate the impact of ESG practices on firm performance in family-owned businesses, this study uses Tobin's Q as the performance metric, calculated as the sum of the market value of equity and total debt, divided by total assets. The analysis draws upon three interrelated theoretical foundations. First, Agency Theory suggests that in firms with concentrated ownership, such as family businesses, the alignment of ESG initiatives with long-

term shareholder interests may help mitigate Type II agency conflicts (Jensen & Meckling, 1976; Villalonga & Amit, 2006). This insight forms the basis for investigating how family control influences ESG implementation as a governance mechanism.

Second, Socioemotional Wealth (SEW) Theory deepens this understanding by emphasizing nonfinancial goals unique to family firms, such as preserving reputation, legacy, and family identity (Berrone et al., 2010). These intrinsic motivations can enhance ESG commitment when family firms perceive sustainability as part of their stewardship responsibilities and long-term orientation.

Third, Motivation-Based Legitimacy Theory complements the above perspectives by positing that firms pursue ESG not only for internal alignment but also to secure external legitimacy. In stakeholder-rich environments where reputational capital is critical, ESG becomes a strategic tool to engage with external audiences and bolster credibility (Suchman, 1995). Recent empirical studies reinforce this claim. For instance, Xu et al. (2024) found that firms with high ESG scores improved their corporate image, strengthened competitive advantage, and gained greater investor confidence.

Synthesizing these theoretical insights, the study anticipates that ESG engagement may positively affect firm performance, particularly in family firms, yet the relationship may not be linear. Empirical research reveals that while ESG initiatives often enhance firm value by reducing downside risk and signaling ethical conduct (Broadstock et al., 2021; Ding et al., 2021), excessive or poorly integrated ESG practices can lead to diminishing returns or negative outcomes if perceived as symbolic (Hawn et al., 2018; Krüger, 2015).

The nonlinear ESG specification is motivated by evidence suggesting that the effect of sustainability engagement may follow a diminishing returns pattern. Moderate ESG investment can enhance stakeholder trust, reduce risk, and strengthen legitimacy, while excessively high ESG intensity may be perceived as overinvestment or misalignment with firm priorities (Gillan et al., 2021; Krüger, 2015). This dynamic is particularly relevant in family-controlled firms, where Socioemotional Wealth preservation, risk aversion, and reputation sensitivity may cause investors to evaluate high ESG intensity more critically.

Accordingly, the inclusion of the squared ESG term (ESG^2) enables the detection of non-monotonic, U-shaped performance effects that cannot be captured under linear specifications. The COVID-19 dummy is included as a control for the pandemic shock, rather than as a moderator of ESG behavior, distinguishing this study from symbolic ESG approaches (Hawn & Ioannou, 2016). A triple interaction term ($ESG \times COVID-19 \times FAMILY$) was not incorporated due to the limited number of COVID-affected years and the risk of multicollinearity and estimation instability. This specification balances theoretical rigor with empirical feasibility.

To capture this complexity, we employ a quadratic interaction model to assess both the linear and nonlinear effects of ESG on firm performance, while accounting for moderation by family ownership. The squared ESG term allows us to detect non-monotonic relationships, such as U-shaped effects, where moderate ESG improves performance but excessive investment may yield diminishing or negative returns. Interaction terms with the FAMILY variable test whether these effects are amplified or attenuated in family-owned firms.

The empirical model is specified as follows:

$$\begin{aligned} TobinQ_{i,t} = & \beta_0 + \beta_1 FAMIL Y_i + \beta_2 ESG_{i,t} + \beta_3 ESG_{i,t}^2 + \beta_4 LEV_{i,t} + \beta_5 SG_{i,t} + \beta_6 SIZE_{i,t} \\ & + \beta_7 AGE_{i,t} + \beta_8 COVID19_t + \beta_9 (ESG_{i,t} \times FAMIL Y_i) + \beta_{10} (ESG_{i,t}^2 \times FAMIL Y_i) \\ & + \beta_{11} YEAR_t + \beta_{12} SECTOR_i + \varepsilon_{i,t} \end{aligned}$$

This model enables us to test whether ESG participation improves firm value in general, whether the effect is nonlinear, and how it varies in family versus non-family firms.

Variable Definitions and Measurements

The main explanatory variable in this study is the ESG score, obtained from the Refinitiv ESG database. This score reflects a firm's performance across three key dimensions—environmental, social, and governance—using both quantitative data (e.g., greenhouse gas emissions, board diversity) and qualitative assessments (e.g., controversies, policy disclosure). Refinitiv rates firms on a scale from 0 to 100, facilitating comparability across firms and over time. The ESG score is widely used in academic research as a proxy for sustainability engagement and reputational quality (Azizah & Salma, 2025; Glova & Panko, 2025; Krüger, 2015; Lins et al., 2017; Pasupuleti et al., 2024).

To account for the possibility that ESG engagement does not have a strictly linear relationship with firm performance, a squared ESG term (ESG^2) is included. This enables testing for a U-shaped pattern, where moderate ESG efforts enhance value but excessive investment may lead to diminishing or adverse returns (Gillan et al., 2021; Krüger, 2015).

Firm performance is measured using Tobin's Q, a widely accepted market-based performance metric. It is computed as the market value of equity plus total debt, divided by total assets. Tobin's Q reflects investor expectations regarding a firm's growth potential and asset efficiency, making it particularly appropriate for assessing the long-term implications of ESG performance (Cornett et al., 2016; Elamer & Boulhaga, 2024; Espinosa-Méndez et al., 2024). Although Tobin's Q is formally categorized as a firm value measure, it is widely regarded as a forward-looking indicator that embeds market expectations of long-term performance. Thus, its use is fully consistent with the hypothesis and theoretical framing that emphasize long-term performance effects of ESG engagement.

The binary variable FAMILY identifies whether a firm is family-owned, following the classification method detailed in Section 3.1. A value of 1 is assigned if a family or its affiliates holds controlling ownership ($\geq 25\%$); otherwise, it is coded as 0. This variable captures the role of family control in shaping ESG engagement and its performance outcomes (Abeysekera & Fernando, 2020; Anderson & Reeb, 2003).

To assess how ESG effects differ across ownership types, interaction terms $ESG \times FAMILY$ and $ESG^2 \times FAMILY$ are included. These terms evaluate whether the impact of ESG, both linear and nonlinear, is significantly different in family-controlled firms, consistent with theories emphasizing long-term orientation and reputational concerns in such firms (Villalonga & Amit, 2008).

The model controls for several firm-specific characteristics:

- 1) Leverage (LEV): Defined as total liabilities divided by total assets, it captures financial risk and capital structure strategy (Anderson et al., 2012).
- 2) Firm Size (SIZE): Measured as the natural logarithm of total assets, it reflects economies of scale, stakeholder scrutiny, and resource availability for ESG implementation (Cai et al., 2012).
- 3) Firm Age (AGE): Calculated as the natural logarithm of years since incorporation, this variable proxies for organizational maturity and institutional knowledge (Cucculelli & Micucci, 2008).
- 4) Sales Growth (SG): Defined as the annual percentage change in sales revenue, it signals market momentum and operational scalability (Bhagat & Bolton, 2008).
- 5) COVID-19 Dummy: A binary variable equal to 1 for the year 2020 and 0 otherwise, accounting for the systemic shock of the pandemic on firm behavior and performance (Ahmad et al., 2023; Ding et al., 2021).

Finally, year fixed effects and sector fixed effects are incorporated to control for time-variant macroeconomic conditions and industry-specific factors, thereby minimizing omitted variable bias and enhancing the model's internal validity.

Research Findings

Table 1 presents the summary statistics for the sample. The average Tobin's Q is 2.04, indicating that firms in the sample are, on average, valued by the market at roughly twice their book value, suggesting strong investor confidence in future growth and intangible assets such as innovation or sustainability initiatives. The mean ESG score is 52.10, with substantial variation, reflecting differing levels of ESG engagement across firms.

Among the ESG components, social scores are highest (57.97), followed by governance (51.11) and environmental (44.94), implying that firms place greater emphasis on social and governance practices. Leverage has a mean of 1.40, showing variability in capital structure, while average sales growth is 10.1%, though the wide range suggests considerable performance dispersion. Firms are generally large, as shown by the mean log of total assets at 24.79, and similar in age, with minimal variation in the log of firm age. Family-owned businesses account for 52% of the observations, and 19% of the data corresponds to the COVID-19 period.

Table 1: Summary Statistics

Variable	Mean	SD	Max	Min	Frequency (%)	Obs.
Panel A:						
FAMILY					51.872	291
COVID-19					19.430	109
Panel B:						
TobinQ	2.037	1.464	7.688	0.661		561
ESG	52.103	18.523	87.803	11.571		561
ENV	44.938	26.268	95.028	0.000		561
SOC	57.971	21.276	93.418	10.493		561
GOV	51.113	20.801	89.460	8.055		561
LEVER	1.403	1.210	7.566	0.150		561
SG	0.101	0.354	2.163	-0.595		543
SIZE Log (Asset)	24.787	1.511	28.434	21.669		561
AGE Log (Firm age)	7.592	0.013	7.608	7.540		561

Notes: The sample comprises 561 firm-year observations from 2012 to 2021. All variables have been winsorized at the 1% and 99% levels to eliminate outliers.

Table 2 presents the mean differences in key variables between family and non-family firms. The results indicate that family firms exhibit significantly higher firm performance, with an average Tobin's Q of 2.295 compared to 1.758 for non-family firms, yielding a statistically significant difference of 0.536 ($p < 0.01$). This suggests that family-controlled businesses are, on average, more highly valued by the market.

However, non-family firms show significantly higher ESG scores across all major dimensions except governance. The total ESG score is 7.122 points higher in non-family firms ($p < 0.01$), while the environmental and social scores are also notably higher by 11.836 and 6.770 points, respectively (both $p < 0.01$). These findings suggest that non-family firms engage more robustly in sustainability practices, particularly in environmental and social areas. The governance score difference (2.347 points) is not statistically significant, indicating comparable governance practices between the two groups.

Differences in control variables are mixed. Firm size is significantly larger among non-family firms, with a mean difference in log assets of -0.595 ($p < 0.01$), suggesting that larger firms are more likely to be non-family-controlled. Meanwhile, leverage, sales growth, and firm age do not differ significantly between the two groups, indicating similar financial risk, growth patterns, and maturity levels.

Table 2: Mean Differences between Family and Non-Family Businesses

	Family		Non-Family		Differences
	Mean	n	Mean	n	
<i>TobinQ</i>	2.295	291	1.758	270	0.536***
<i>ESG</i>	48.675	291	55.797	270	-7.122***
<i>ENV</i>	39.241	291	51.077	270	-11.836***
<i>SOC</i>	54.713	291	61.483	270	-6.770***
<i>GOV</i>	49.983	291	52.330	270	-2.347
<i>LEVER</i>	1.448	291	1.354	270	0.094
<i>SG</i>	0.104	282	0.097	261	0.006
<i>SIZE</i>	24.501	291	25.096	270	-0.595***
<i>AGE</i>	7.591	291	7.592	270	-0.002

Notes: The sample comprises 561 firm-year observations from 2012 to 2021. All variables have been winsorized at the 1% and 99% levels to eliminate outliers. ***, **, and * denote statistical significance for mean differences (t-test) at the 1, 5, and 10 percent levels (two-tailed), respectively.

Table 3 shows that correlations among independent variables are generally below 0.80, indicating no serious multicollinearity concerns. ESG is strongly correlated with its subcomponents, especially SOC and ENV, as expected, but these are not used together in the same model. Other variables such as SIZE, LEVER, SG, and AGE exhibit low to moderate correlations with ESG and Tobin's Q, further confirming that the model's predictors are sufficiently distinct for reliable regression analysis.

Table 4 presents the regression estimates examining the effect of family ownership and ESG engagement on firm performance, including its environmental (ENV), social (SOC), and governance (GOV) components, using Tobin's Q as the performance measure. The models explain a substantial share of the variation in firm value, with adjusted R² values ranging from 0.398 to 0.414, and all F-statistics are significant at the 1% level, confirming overall model validity. These results highlight the importance of considering both ownership structure and the nonlinear nature of ESG activities when assessing how sustainability strategies influence market valuation, particularly in family firms.

Table 3: Correlation Matrix

	TobinQ	ESG	ENV	SOC	GOV	LEVER	SG	SIZE
TobinQ								
ESG	-0.213***							
ENV	-0.267***	0.886***						
SOC	-0.216***	0.902***	0.788***					
GOV	-0.066	0.607***	0.294***	0.337***				
LEVER	-0.146***	-0.055	0.024	-0.030	-0.144***			
SG	-0.005	-0.028	-0.015	-0.021	-0.014	0.061		
SIZE	-0.234***	0.411***	0.462***	0.426***	0.045	0.263***	0.017	
AGE	0.073	-0.083	-0.043	-0.089*	-0.066	0.025	0.019	-0.102*

Notes: The sample comprises 561 firm-year observations from 2012 to 2021. All variables have been winsorized at the 1% and 99% levels to eliminate outliers. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels (two-tailed), respectively.

Table 4: Regression Estimates Explaining TobinQ by FAMILY and ESG

Variables	Dependent Variable: <i>TobinQ</i>			
	ESG	ENV	SOC	GOV
<i>FAMILY</i>	2.475*** (0.706)	1.017*** (0.270)	2.244*** (0.631)	0.299 (0.616)
<i>ESG</i>	0.034** (0.015)			
<i>ESG</i> ²	-0.0003** (0.0001)			
<i>ENV</i>		0.008 (0.007)		
<i>ENV</i> ²		-0.0001* (0.0001)		
<i>SOC</i>			0.004 (0.015)	
<i>SOC</i> ²			-0.0003 (0.0001)	
<i>GOV</i>				0.002 (0.018)
<i>GOV</i> ²				0.00003 (0.0002)
<i>LEVER</i>	-0.227*** (0.057)	-0.233*** (0.057)	-0.241*** (0.058)	-0.238*** (0.062)
<i>SG</i>	0.293 (0.198)	0.312 (0.202)	0.316 (0.197)	0.308 (0.198)
<i>SIZE</i>	-0.134*** (0.041)	-0.101** (0.040)	-0.144*** (0.041)	-0.134*** (0.039)
<i>AGE</i>	18.466*** (5.115)	18.562*** (5.052)	18.819*** (5.115)	20.214*** (5.296)
COVID-19	-0.923** (0.357)	-0.746*** (0.276)	-0.931*** (0.351)	-0.468 (0.375)
ESG * COVID-19	0.010* (0.005)			
ENV * COVID-19		0.009** (0.004)		
SOC * COVID-19			0.009* (0.005)	
GOV * COVID-19				0.001 (0.006)
ESG * FAMILY	-0.083*** (0.030)			
ESG ² * FAMILY	0.001*** (0.0003)			
ENV * FAMILY		-0.028** (0.013)		
ENV ² * FAMILY		0.0003* (0.0001)		
SOC * FAMILY			-0.069*** (0.025)	
SOC ² * FAMILY			0.001*** (0.0002)	
GOV * FAMILY				0.011 (0.028)
GOV ² * FAMILY				-0.0001 (0.0003)

Table 4: Regression Estimates Explaining TobinQ by FAMILY and ESG (Cont.)

Variables	Dependent Variable: <i>TobinQ</i>			
	ESG	ENV	SOC	GOV
Constant	-136.471*** (38.876)	-137.330*** (38.395)	-138.223*** (38.946)	-149.329*** (40.377)
Year effect	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes
<i>Obs.</i>	543	543	543	543
R^2	0.448	0.451	0.456	0.442
Adjusted R^2	0.405	0.408	0.414	0.398
<i>F</i> -statistic	10.463***	10.593***	10.824***	10.196***

Notes: The sample comprises 561 firm-year observations from 2012 to 2021. All variables have been winsorized at the 1% and 99% levels to eliminate outliers. Robust (heteroskedasticity-consistent) standard errors are reported in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels (two-tailed), respectively.

Across all specifications, the FAMILY variable remains consistently positive and statistically significant at the 1% level, reaffirming that family-controlled firms outperform non-family firms in terms of market valuation. In the main ESG model, the coefficient for FAMILY is 2.475 ($p < 0.01$), showing a strong and economically meaningful valuation premium associated with family ownership. Similar patterns appear in the ENV (1.017) and SOC (2.244) models, while the corresponding coefficient in the GOV model is positive but statistically insignificant (0.299), suggesting that family firm advantages do not stem from formal governance disclosures captured by ESG datasets.

Examining the standalone ESG dimensions, none of the linear terms—ENV, SOC, or GOV—exhibit significant direct effects on Tobin's Q in the full sample. However, the nonlinear specification reveals more nuanced patterns. For the overall ESG score, ESG is positive and significant (0.034, $p < 0.05$), while ESG^2 is negative and significant (-0.0003 , $p < 0.05$), supporting the presence of a U-shaped relationship in the full sample.

More importantly, strong heterogeneity arises once family ownership is incorporated. The interaction between ESG and FAMILY is negative and highly significant (-0.083), while $ESG^2 \times FAMILY$ is positive and significant (0.001). This indicates that in family firms, moderate levels of ESG engagement may initially reduce firm value, but performance improves at higher ESG levels, consistent with a nonlinear U-shaped pattern that becomes more pronounced within family-controlled firms.

Figure 1 illustrates the family-firm-specific part of the ESG effect, captured by the expression $-0.083 \times (ESG \times FAMILY) + 0.001 \times (ESG^2 \times FAMILY)$, across the observed range of ESG scores. The curve is U-shaped, beginning at a relatively less negative level when ESG is low, declining steadily as ESG increases, and reaching its most negative point around $ESG \approx 53.39$ (the estimated turning point, computed as $-\left[\frac{-0.0830}{2 \times 0.00077}\right]$), which represents the turning point of the nonlinear function. This shows that at moderate levels of ESG engagement, the incremental effect of being a family firm is most detrimental to market valuation, consistent with the interpretation that partial or superficial ESG efforts may impose costs without delivering tangible credibility benefits to investors. As ESG becomes more intensive, approaching the higher end of the observed range, the curve rises, meaning the negative family-specific effect weakens. This upward movement suggests that substantial, deeply embedded

ESG commitments mitigate concerns of symbolic compliance and are interpreted more favorably by the market. The visual pattern therefore reinforces the nonlinear narrative observed in the regression results: in family firms, ESG efforts generate value only when they exceed a certain depth and authenticity threshold, while minimal or moderate ESG engagement may be insufficient—or even counterproductive—from the perspective of firm valuation.

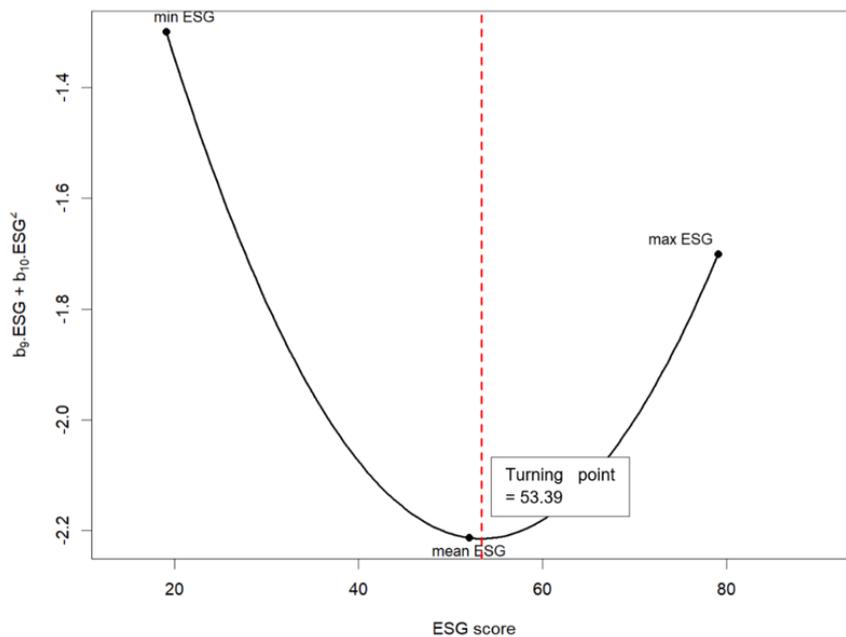


Figure 1: U-Shaped Nonlinear Effect of ESG on Tobin's Q in Family-Controlled Firms

Similar nonlinear effects are observed for the ENV and SOC dimensions. For ENV, the linear interaction with FAMILY is negative and significant (-0.028 , $p < 0.05$), while the squared interaction is positive and significant (0.0003 , $p < 0.10$). The SOC dimension shows an even stronger pattern: $\text{SOC} \times \text{FAMILY}$ is negative and significant (-0.069), whereas $\text{SOC}^2 \times \text{FAMILY}$ is positive and highly significant (0.001). These findings imply that for family firms, the value relevance of ESG—particularly in environmental and social areas—emerges only at higher intensities of engagement, reinforcing the nonlinear (U-shaped) ESG–performance relationship.

In contrast, neither the GOV component nor its interactions with FAMILY show meaningful associations with firm valuation. This suggests that governance-related ESG disclosures provide limited additional information for family firms. Family enterprises often rely on internal governance structures, such as concentrated monitoring, reputation-driven discipline, and long-term stewardship, which may substitute for the formal governance signals emphasized in ESG ratings.

This finding is consistent with prior research on the governance structures of family-controlled firms. Family owners typically exert strong, centralized control and maintain close involvement in strategic oversight, which reduces agency conflicts and can operate as an internal governance mechanism (Anderson & Reeb, 2003; Villalonga & Amit, 2006). These intrinsic monitoring arrangements may already fulfill many of the oversight functions that

formal governance disclosures are intended to signal. As a result, external GOV indicators may provide limited incremental information to the market in the case of family firms, helping to explain the weaker valuation effect of the governance dimension observed in our results.

Among the control variables, LEVER consistently displays a negative and highly significant effect across all specifications ($p < 0.01$), indicating that firms with higher leverage are valued less by the market, potentially due to increased financial risk. SIZE also shows a negative and significant relationship with Tobin's Q, while AGE is consistently positive and significant ($p < 0.01$), suggesting that more mature firms benefit from accumulated reputation, operational experience, or stability. The COVID-19 indicator is negative and significant in the ESG, ENV, and SOC models, reflecting pandemic-related adverse effects on firm valuation.

Notably, the interaction terms between COVID-19 and ESG (and its components) are positive and statistically significant in the ESG (0.010), ENV (0.009), and SOC (0.009) models, implying that ESG engagement served as a partial buffer during the crisis. This finding supports the notion that ESG practices can provide resilience under adverse conditions by enhancing stakeholder trust and reducing downside risk (Ahmad et al., 2023; Ding et al., 2021).

Discussions

This study investigates how environmental, social, and governance (ESG) practices relate to firm performance, with a particular emphasis on family-controlled firms in Thailand. Using a panel dataset of 543 firm-year observations of nonfinancial firms listed on the Stock Exchange of Thailand from 2012 to 2021, the analysis is situated within Agency Theory Type II and the Socioemotional Wealth (SEW) framework. These theoretical perspectives highlight how ownership structure shapes the incentives behind ESG engagement and its eventual impact on firm value.

Across all model specifications, the FAMILY dummy is consistently positive and highly significant. In the baseline ESG model, family-controlled firms exhibit a valuation premium of 2.475 ($p < 0.01$), supporting prior research that emphasizes long-term orientation, monitoring efficiency, and reputational motivations inherent to family enterprises (Anderson & Reeb, 2003; Berrone et al., 2010; Villalonga & Amit, 2006).

Considering ESG engagement, the results reveal a nuanced pattern. In the full sample, ESG itself shows a nonlinear effect. The linear ESG term is positive and significant (0.034, $p < 0.05$), while the squared term is negative and significant (-0.0003 , $p < 0.05$), suggesting diminishing returns, consistent with a U-shaped relationship. However, the most substantive insights appear when family ownership is incorporated into the analysis. The interaction terms $ESG \times FAMILY$ (-0.083 , $p < 0.01$) and $ESG^2 \times FAMILY$ (0.001, $p < 0.01$) reveal a strong nonlinear effect. Moderate ESG engagement may initially reduce firm value in family firms, but higher and more sustained ESG efforts are rewarded in the form of increased market valuation. This supports a threshold-based interpretation of ESG in family-controlled contexts.

This nonlinear pattern extends to pillar-level results. For both environmental (ENV) and social (SOC) dimensions, the linear interaction terms with FAMILY are negative and significant, while the squared interaction terms are positive and significant. These findings indicate that environmental and social initiatives generate value for family firms only when carried out at sufficiently high levels, highlighting again that superficial or symbolic ESG efforts are unlikely to be valued. In contrast, the governance (GOV) pillar demonstrates no

statistically meaningful impact, either directly or through interactions with family ownership. This likely reflects the fact that family firms already possess strong internal governance arrangements, such as concentrated control, relational contracting, and direct oversight, which may substitute for formal governance disclosures embedded in ESG ratings.

These results align with prior evidence on the governance structures of family businesses. Family owners often maintain centralized control and close strategic oversight, effectively mitigating agency conflicts and serving as internal governance mechanisms (Anderson & Reeb, 2003; Villalonga & Amit, 2006). Consequently, external governance indicators may provide limited incremental value to investors evaluating family firms, explaining the consistently insignificant results for the GOV dimension.

The COVID-19 pandemic provides an additional layer of insight. The COVID-19 dummy is negative and significant across the ESG, ENV, and SOC models, showing broad market distress during the crisis. Yet, the interaction terms $ESG \times COVID-19$, $ENV \times COVID-19$, and $SOC \times COVID-19$ are all positive and significant, suggesting that ESG engagement enhanced resilience during the crisis period. Firms with stronger ESG profiles, particularly along the environmental and social dimensions, appeared better positioned to withstand pandemic-related disruptions. This supports the risk mitigation hypothesis, consistent with prior work showing that ESG can enhance stakeholder confidence and reduce downside risk during turbulent periods (Ahmad et al., 2023; Ding et al., 2021).

Theoretical Contributions

This study contributes to the literature on family business, corporate governance, and sustainability by showing that the relationship between ESG engagement and firm performance is fundamentally conditional on ownership structure. Grounded in Agency Theory Type II and the socioemotional wealth (SEW) perspective, the findings show that although family control is often associated with risks of private benefit extraction and minority shareholder expropriation (Villalonga & Amit, 2008), strategic ESG engagement can function as an alternative governance mechanism. By aligning the interests of controlling owners with those of external stakeholders, ESG helps mitigate agency concerns in ownership-concentrated firms (Abeysekera & Fernando, 2020; Anderson et al., 2012).

Second, the identification of a nonlinear, U-shaped relationship between ESG and firm performance challenges the assumption that sustainability engagement uniformly enhances firm value. The results reveal that, in family firms, moderate ESG activities may be insufficient or perceived as symbolic, while only deeper and more sustained ESG commitments generate positive valuation effects. This insight reinforces emerging arguments that ESG effectiveness depends on strategic depth rather than mere disclosure quantity (Berrone et al., 2010; Gillan et al., 2021; Krüger, 2015).

Finally, by examining Thai listed firms, this study extends ESG–performance debates into an emerging-market context characterized by concentrated family ownership, evolving governance institutions, and heterogeneous sustainability expectations. The findings underscore that the value of ESG is shaped by institutional and cultural conditions, illustrating that sustainability practices are not universally effective but rather depend on local ownership structures and governance traditions (Rees & Rodionova, 2015; Wiwattanakantang, 2001).

Managerial Implications

This study offers several practical insights for managers, particularly in family-owned firms. The results show that the benefits of ESG engagement depend primarily on the depth and intensity of ESG activities, as reflected in the U-shaped relationship observed in the regression models. While the study does not directly measure the authenticity of ESG practices, the empirical evidence indicates that higher and more substantial levels of ESG engagement, rather than minimal or low-level efforts, are associated with improved firm valuation in family firms. This suggests that managers should prioritize integrated and strategically aligned ESG initiatives, as these are more likely to generate meaningful market responses.

At lower levels of ESG engagement, the marginal effects of ESG×FAMILY are negative, which, although not definitive evidence of symbolic ESG, is consistent with prior research suggesting that limited or superficial ESG efforts may fail to deliver performance benefits. Thus, family firms should avoid treating ESG as a checkbox exercise or purely symbolic disclosure. Instead, they should ensure that ESG initiatives are embedded within core operations and communicated transparently to stakeholders to avoid perceptions of greenwashing or cosmetic compliance.

Thus, the findings demonstrate that ownership identity plays a critical role in shaping how investors evaluate ESG actions. For family-controlled firms, this implies that credible, consistent, and well-integrated ESG practices can function as a strategic differentiator. By providing clear, substantive, and evidence-based ESG disclosures, family firms can strengthen market trust, reinforce alignment between family values and corporate strategy, and enhance long-term performance outcomes.

Conclusion

Therefore, this study contributes to the literature in several ways. First, it highlights ESG as a contingent governance mechanism, whose effectiveness depends on ownership structure, particularly the unique incentives of family-controlled firms. Second, it provides robust evidence of nonlinear ESG effects, showing that benefits emerge only at higher levels of engagement, consistent with threshold dynamics identified in recent studies (Gillan et al., 2021). Third, by focusing on an emerging market context characterized by concentrated ownership and evolving sustainability practices, the study enhances our understanding of the institutional factors shaping ESG–performance relationships.

Brief Summary

This study examines how environmental, social, and governance (ESG) practices influence firm performance in Thailand, with a particular emphasis on family-owned firms. Using panel data from 2012 to 2021 and drawing on the Agency Theory Type II and the Socioemotional Wealth (SEW) perspective, the results show that ESG engagement does not enhance firm performance in the full sample. However, a nonlinear, U-shaped pattern appears among family-controlled firms, indicating that only substantial and deeply embedded ESG efforts translate into higher market valuation. The analysis further reveals that ESG participation strengthens firm resilience during systemic shocks such as the COVID-19 pandemic. Overall, the findings highlight that the value of ESG is contingent on ownership structure, the depth of sustainability commitment, and the broader institutional context.

Limitations and Directions of Future Research

Although this study offers new evidence on how ESG engagement interacts with family ownership to shape firm performance in Thailand, several limitations should be noted. First, the analysis focuses solely on firms listed on the Stock Exchange of Thailand. As institutional environments, governance traditions, and ESG reporting standards vary widely across countries, the generalizability of the findings may be limited. Future research could adopt a cross-country or regional comparative design to examine how regulatory and cultural differences influence the ESG–performance relationship.

Second, while Refinitiv ESG scores provide a standardized and widely used measure of sustainability performance, they may not fully capture the authenticity, depth, or qualitative aspects of ESG activities, especially in emerging markets, where disclosure quality can be uneven. Future work could integrate alternative data sources, such as textual analysis, ESG assurance reports, interviews, or case studies, to obtain a richer understanding of ESG implementation and credibility.

Third, this study treats family ownership as a single, homogeneous category. However, heterogeneity within family firms—such as generational stage, founder control versus descendant control, family involvement in management, or board representation—may shape how ESG strategies are adopted and valued. Future research could investigate these intra-family differences to clarify the specific governance conditions under which ESG generates strategic benefits.

Addressing these limitations would deepen understanding of ESG’s contingent value across ownership structures and institutional settings and support more context-specific theoretical development and policy guidance for sustainability in emerging markets.

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