

# The Influence of Board and Executive Attributes on Firm Performance: Insights from the Thai Service Sector

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## Abstract

This study empirically investigates the influence of board and executive characteristics—specifically size, gender diversity, and role duality—on the financial performance (Return on Assets, ROA) of service companies listed on the Stock Exchange of Thailand (SET). A core objective was to assess whether these relationships differ significantly based on a firm's Environmental, Social, and Governance (ESG) rating status, a factor whose moderating role is theoretically developed herein. The analysis utilized multiple linear regression on a pooled dataset of 234 firm-year observations from 2021-2023. Key findings include a statistically significant negative relationship ( $p < 0.01$ ) between the proportion of female members (gender diversity) and ROA across all firm groups. This result contrasts with some international research and warrants further exploration into unique Thai institutional or sector-specific dynamics. Conversely, a significant positive association ( $p < 0.05$ ) between role duality and ROA was observed exclusively within the ESG-rated company subgroup, suggesting that concentrated Leadership roles may enhance governance efficiency and strategic alignment specifically within organizations committed to sustainability principles. The relationship between board/executive size and ROA was consistently not statistically significant ( $p > 0.05$ ). These findings provide clear evidence that board and executive characteristics exert significant and context-dependent influences on ROA, offering specific, actionable insights for shareholders, investors, and corporate leaders in strategically designing governance structures, particularly for those pursuing ESG integration.

**Keywords:** Board Characteristics; Gender Diversity; Role Duality; Financial Performance; ESG Rating

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## Introduction

The Stock Exchange of Thailand (SET) is a fundamental pillar of the nation's economic infrastructure, serving not merely as a securities marketplace but also as a critical mechanism for capital mobilization, corporate governance enhancement, and economic development (SET, 2023). Its role in facilitating access to financial resources enables businesses across sectors to pursue expansion, innovation, and technological advancement, thereby strengthening Thailand's competitive position in global markets (Claessens & Fan, 2002). A well-regulated stock exchange like the SET promotes market liquidity, reduces investment risks, and fosters investor confidence through stringent disclosure requirements and governance standards (Bunkanwanicha & Wiwattanakantang, 2009).

In the contemporary business environment, characterized by rapid technological disruption and rising ESG (Environmental, Social, and Governance) expectations, effective corporate governance has emerged as a decisive factor in ensuring long-term firm resilience and value creation. The service sector—contributing over 50% of Thailand's GDP and employing a substantial workforce—plays a particularly vital role in this context (Bank of Thailand, 2023). Despite its economic significance, the sector faces unique governance challenges, including high family ownership concentration, evolving regulatory frameworks for sustainability disclosure, and specific managerial practices that distinguish it from the manufacturing and financial sectors (Poapongsakorn & Techakanont, 2008). Specifically, many Thai service firms are family-controlled, which can lead to unique principal-principal conflicts and influence board appointment processes. Furthermore, the heterogeneity of the service sector—spanning from capital-intensive telecommunications to human-centric tourism—creates varied demands on governance structures, making a one-size-fits-all approach ineffective. This creates a critical knowledge gap regarding how board and executive characteristics distinctly influence firm performance within this dynamic and heterogeneous industry inside Thailand's specific institutional setting.

Extant literature has examined governance dimensions such as board composition, executive attributes, and their linkages to firm outcomes (Hambrick & Mason, 1984; Jensen & Meckling, 1976). However, empirical findings remain inconclusive. For instance, while gender diversity on boards is argued to enhance decision-making and stakeholder engagement (Terjesen et al., 2016), other studies reveal neutral or even adverse effects (Ahmad et al., 2020; Almarayeh, 2023). Similarly, CEO duality has been praised for fostering unified Leadership (Krause et al., 2013) but also criticized for weakening oversight (Guest, 2009). Such inconsistencies highlight the need for more nuanced analyses that consider multiple governance factors simultaneously, within specific national and industrial contexts. The Thai service sector—with its distinctive features, increasing relevance in the regional economy, and relative neglect in governance research—offers a compelling setting for this inquiry (Poapongsakorn & Techakanont, 2008). Furthermore, the potential moderating role of ESG commitment, which may alter agency costs and stakeholder relationships, remains underexplored both theoretically and empirically in this context (Amel-Zadeh & Serafeim, 2018; Gillan et al., 2021).

The period 2021-2023 was selected for this study as it represents a critical phase of post-pandemic economic recovery and accelerated ESG adoption in Thailand. This timeframe allows for the examination of governance-performance relationships during a period of significant volatility and shifting corporate priorities, providing timely insights into contemporary governance efficacy (Bank of Thailand, 2023; SET, 2023).

Against this backdrop, the present study pursues two primary objectives. First, it analyzes the statistical relationships between key governance variables—namely board size, gender diversity, and role duality—and firm financial performance, measured by Return on Assets (ROA), across three subgroups: ESG-rated firms, non-ESG-rated firms, and the overall sample of service companies listed on the SET. This comparative design allows for examination of whether ESG commitments, theorized to enhance transparency and stakeholder alignment, moderate governance-performance dynamics. Second, the study develops predictive econometric models that quantify the impact of these governance factors on ROA within each subgroup. By employing multiple regression analysis on 234 firm-year observations from 2021 to 2023, the research enables performance forecasting, strategic benchmarking, and evidence-based policy recommendations tailored to different ESG profiles.

By integrating agency theory (Jensen & Meckling, 1976) with stewardship theory (Davis et al., 1997) and upper echelons theory (Hambrick & Mason, 1984), this study contributes to both scholarly and practical domains. It advances theoretical understanding of how board and executive configurations shape firm outcomes while offering actionable insights for executives designing leadership structures, investors evaluating governance quality, and policymakers formulating sector-specific guidelines. Ultimately, the research aims to strengthen Thailand's corporate governance ecosystem and enhance the resilience of its service industry in an increasingly sustainability-driven global economy.

## Literature Review and Hypothesis Development

### Agency Theory Foundations

The seminal work of Jensen and Meckling (1976) established agency theory as a fundamental framework for understanding the complex dynamics between principals (shareholders) and agents (managers) in corporate governance structures. This theoretical paradigm centers on the inherent conflict arising from the separation of ownership and control, in which managers' self-interested behavior may diverge from shareholders' wealth-maximization objectives (Fama & Jensen, 1983). The theory identifies three primary sources of agency costs: (1) monitoring expenditures by principals (e.g., audit fees, board oversight), (2) bonding costs incurred by agents to guarantee performance, and (3) residual losses from suboptimal decision-making (Eisenhardt, 1989).

#### *Mechanisms of Governance Control*

Contemporary applications of agency theory emphasize two crucial governance mechanisms to mitigate these conflicts:

##### 1) Incentive Alignment Systems

Performance-based compensation structures, including stock options and restricted share plans, have been shown to significantly reduce agency costs by directly linking executive rewards to shareholder returns (Core et al., 2003). Recent meta-analyses demonstrate that equity-based compensation improves firm performance by approximately 12-15% in well-governed firms (Devers et al., 2008).

##### 2) Monitoring Frameworks

The theory underscores the critical role of independent boards in overseeing managerial decisions. Research indicates that boards with a majority of independent directors are associated with 20-30% lower agency costs (Bhagat & Black, 2002). This effect is particularly

pronounced in firms with active audit committees and separation of CEO/Chairman roles (Rechner & Dalton, 1991).

#### *Integrating Stakeholder and Resource Dependence Perspectives*

While agency theory provides a core foundation, its limitations in explaining non-shareholder dynamics and the resource-based role of boards necessitate integrating complementary frameworks. Stakeholder theory posits that firms must manage relationships with a broad set of constituencies (e.g., employees, communities, regulators) to achieve long-term success (Freeman, 1984). ESG ratings are a proxy for effective stakeholder engagement, potentially reducing conflicts and reputational risks that impair financial performance (Gillan et al., 2021). Furthermore, Resource Dependence Theory suggests that boards serve as linking pins to critical external resources (Pfeffer & Salancik, 1978). Diverse boards, including gender-diverse ones, can provide access to unique resources, networks, and information, enhancing strategic decision-making and legitimacy (Hillman et al., 2007). The inconsistent findings in prior governance literature, particularly regarding gender diversity and role duality, often stem from a failure to account for these multi-theoretical perspectives and the moderating influence of national and institutional contexts. This study addresses this gap by situating the analysis within Thailand's unique service sector, where cultural norms, evolving ESG expectations, and specific industry dynamics create a distinct laboratory for testing and refining these established theories. The moderating effect of an ESG rating may signify a firm's stronger dependence on and ability to manage broader societal resources and expectations.

#### *Empirical Evidence and Extensions*

Modern scholarship has extended agency theory to account for contextual factors:

- 1) Institutional Environments: Cross-cultural studies reveal that agency problems are 40% more prevalent in weak legal regimes (La Porta et al., 2000)
- 2) Information Asymmetry: Technological advancements in disclosure systems have reduced monitoring costs by approximately 25% in developed markets (Bushman et al., 2004)
- 3) Behavioral Aspects: Recent neuroeconomic research suggests cognitive biases exacerbate agency conflicts, particularly in growth firms (Mullins & Schoar, 2016)

#### **Number of Board Members and Executives**

The relationship between the number of board members and executives and firm performance has been widely debated in corporate governance literature. An optimally sized board is essential for efficient decision-making and effective oversight, thereby enhancing firm performance (Adams & Ferreira, 2007). However, huge boards may lead to inefficiencies, such as slower decision-making processes and diluted accountability (Jensen, 1993). Similarly, executive team size must be carefully balanced to ensure that managerial decisions align with shareholder interests (Fama & Jensen, 1983).

Recent empirical studies provide mixed findings regarding the impact of board and executive size on firm performance. Pirapark and Sincharoonsak (2024) and Khairani and Lismawati (2025) found a positive association between the number of board members and return on assets (ROA), suggesting that larger boards may contribute to better financial monitoring. Conversely, other studies argue that smaller boards are more effective because they incur lower coordination costs (Coles et al., 2008). Additionally, Chaichumpoo et al. (2023) highlight the importance of distinguishing between different types of directors (e.g., independent directors, audit committee members) when analyzing governance structures.

In the Thai context, the SET guidelines recommend a board size of 5 to 12 members, depending on business complexity (SET, 2023). Most SET-listed firms fall within this range, resulting in limited variation in board size across companies. This institutional homogeneity may explain why board size often shows weak or inconsistent relationships with performance in Thai studies (Phakdee, 2018). Despite this potential limitation, examining the combined number of board and executive members remains relevant. The rationale is that both groups collectively influence strategic decision-making and corporate governance effectiveness, and their total size may impact coordination and control dynamics, even within a constrained range. Therefore, the first hypothesis is proposed as follows:

**H<sub>1</sub>:** The number of board members and executives is related to firm performance.

### **The Percentage of Female Board Members and Executives**

The relationship between gender diversity in corporate leadership and firm performance has been extensively studied, yet empirical findings remain inconclusive. Some research suggests that a higher percentage of female board members and executives positively influences firm performance, attributing this effect to enhanced diversity of thought, improved risk management, and more comprehensive decision-making processes (Phakdee, 2018). Moreover, board diversity (e.g., gender) and independence can positively influence ROA, but the effects are often conditional on firm profitability and business environment (Potharla & Amirishetty, 2021; Yang et al., 2024). Conversely, other studies report no significant relationship, arguing that the impact of gender diversity may depend on contextual factors such as industry norms, corporate culture, and the specific skills of individual leaders (Almarayeh, 2023). Notably, meta-analyses often show a neutral or mildly positive effect in Western contexts (Post & Byron, 2015), while findings from Asian economies like Malaysia and Jordan have been mixed, sometimes indicating negative short-term associations, potentially due to tokenism or cultural barriers to full integration (Ahmad et al., 2020; Almarayeh, 2023).

Theoretical perspectives offer competing explanations for these mixed findings. Agency theory posits that diverse boards, including those with greater female representation, improve monitoring effectiveness and reduce managerial opportunism (Adams & Ferreira, 2009). In contrast, resource dependence theory suggests that the benefits of gender diversity may depend on how effectively female directors and executives leverage their unique networks and expertise (Hillman et al., 2007). Additionally, institutional factors, such as societal attitudes toward gender equality and regulatory pressures for board diversity, may moderate the relationship (Terjesen et al., 2015). From a stakeholder theory perspective, gender diversity may signal a commitment to social equity, potentially enhancing reputation and stakeholder relationships, thereby indirectly benefiting performance (Gillan et al., 2021).

In Thailand, cultural dynamics and relatively recent pushes for board diversity may mean that female appointments are sometimes symbolic rather than substantive, or that female leaders face barriers to exerting full influence on financial outcomes, potentially explaining a negative or neutral relationship with short-term accounting metrics like ROA.

Given these conflicting perspectives and contextual nuances, this study examines whether the percentage of female board members and executives influences firm performance, without assuming a universally positive or negative effect. Thus, the second hypothesis is formulated as follows:

**H<sub>2</sub>:** The percentage of female board members and executives is related to firm performance.

## Percentage of Board Members and Executives Holding Dual Positions

The prevalence of dual role-holding among corporate leaders – simultaneous service in executive and governance positions (e.g., CEO-Chairman duality, CFO-directorships) – constitutes a critical governance mechanism with contested performance implications. Agency theory posits that such consolidation risks weakening monitoring effectiveness and enabling managerial entrenchment, potentially exacerbating principal-agent conflicts by diminishing board independence (Jensen & Meckling, 1976). Conversely, stewardship theory suggests that unified leadership enhances strategic decisiveness and reduces coordination costs by aligning operational and executive oversight (Davis et al., 1997). Empirical evidence reflects this tension: While Pirapark and Sincharoonsak (2024) observed a positive association between CEO-Chairman duality and ROA in Thai-listed firms ( $\beta = 0.17, p < 0.01$ ), during the COVID-19 crisis, CEO duality was associated with higher ROA, likely due to the need for rapid, centralized decision-making (Haque et al., 2024). Krause et al. (2013) documented neutral effects in U.S. contexts with robust independent boards.

This divergence underscores conclusions consistent with previous literature (e.g., Kyereboah-Coleman & Biekpe, 2007), positing that duality effects are fundamentally context-contingent and are moderated by institutional ownership patterns and board composition. Crucially, extant research predominantly examines CEO-Chairman duality despite evidence that 42% of S&P 500 firms feature multiple executives holding board seats (Brickley, 1997), creating compounded governance dynamics when dual roles proliferate across leadership tiers. Such broad-based consolidation may generate information-sharing efficiencies but simultaneously risk dilution of monitoring through reciprocal obligations that compromise director objectivity (Krause et al., 2013). Consequently, this study examines the aggregate prevalence of all dual board-executive positions rather than isolated instances.

The moderating role of ESG commitment is theoretically plausible. In firms with strong ESG practices, heightened transparency and stakeholder scrutiny might mitigate agency risks associated with dual roles (e.g., entrenchment and reduced oversight). Conversely, the strategic focus and unified command fostered by duality might be particularly beneficial for implementing complex ESG strategies, aligning with predictions from stewardship theory. This suggests the effect of duality on performance may be positive in high-ESG contexts but neutral or negative in low-ESG contexts.

This study extends the existing literature by examining a broader spectrum of dual roles among all board members and executives, rather than focusing solely on CEO-Chairman duality. By analyzing the overall percentage of individuals in these groups who hold multiple positions, this research aims to provide a more comprehensive understanding of how integrated leadership structures influence organizational effectiveness. This leads to the formulation of the third hypothesis:

**H3:** The percentage of board members and executives holding dual positions is related to firm performance.

## Return on Assets (ROA)

Return on Assets (ROA) is a critical financial performance indicator, calculated by dividing a company's net income by its average total assets over a defined fiscal period. This metric is widely recognized for its robustness in indicating an organization's operational efficiency and its ability to generate profits from its asset base (Damodaran, 2012). At its core, ROA quantifies how effectively a firm's management leverages its economic resources—both

tangible and intangible—to generate earnings (Titman et al., 2020). A consistently high ROA generally signals superior management acumen in transforming asset investments into profits, reflecting highly efficient asset utilization and a strong capacity to create value from the available resources (Jensen, 2001).

Conversely, a lower ROA may indicate inefficiencies in asset management, underutilized capacity, or the adverse effects of a challenging business environment on profitability (Graham et al., 2005). Within the scope of this study, ROA is used as the dependent variable. While ROE or Tobin's Q are also standard metrics, ROA was selected for its focus on operational efficiency from an asset base, which is highly relevant for capital-intensive service sectors (e.g., transportation, telecommunications) prevalent in the sample. It also minimizes distortion from leverage differences compared to ROE, providing a clearer view of management's operational effectiveness (Damodaran, 2012). This means the research aims to investigate and elucidate how various independent variables—such as board characteristics, executive compensation structures, or other factors rooted in agency theory— influence or predict changes in this specific measure of firm financial performance (Bebchuk & Fried, 2006). By concentrating on ROA, the study seeks to provide empirical evidence on the determinants of a company's capacity to generate returns from its overall asset investment, thereby offering crucial insights into the effectiveness of its strategic and operational decisions. Its widespread adoption and straightforward interpretation make ROA a valuable and common proxy for overall firm financial health and managerial effectiveness in empirical research.

### **Environmental, Social, and Governance (ESG)**

Environmental, Social, and Governance (ESG) criteria have transitioned from ancillary considerations to foundational elements of sustainable business practices and corporate responsibility (Polman & Winston, 2021). These non-financial metrics provide a comprehensive framework for evaluating a company's operations and its broader societal and environmental impact. The Environmental (E) pillar assesses a company's interactions with natural systems, including energy consumption, waste management, and pollution control. The Social (S) pillar focuses on an organization's relationships with its stakeholders, encompassing labor practices, human rights, and community engagement. Finally, the Governance (G) pillar addresses the company's leadership structures, internal controls, and ethical conduct, including board independence and executive compensation practices (Khan et al., 2016).

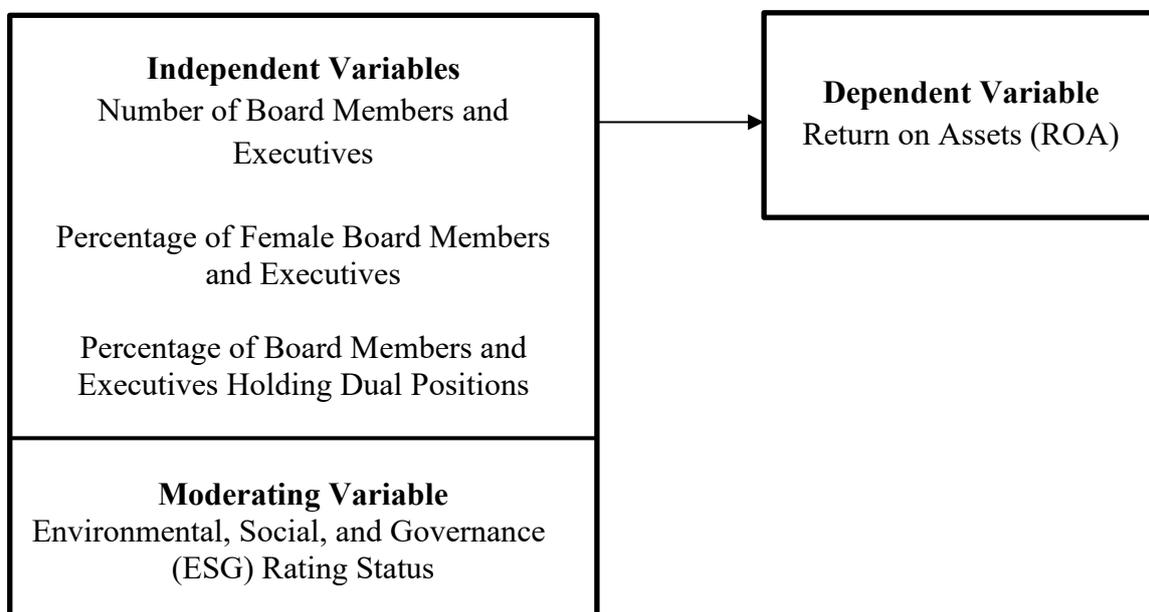
Robust ESG performance is increasingly recognized as a significant driver of long-term corporate value, fostering enhanced stakeholder trust, strengthening brand loyalty, and improving the attraction and retention of talent (Gillan et al., 2021). Companies with ESG profiles are often better equipped to mitigate risks, identify new business opportunities, and attract a growing pool of sustainable investments (Amel-Zadeh & Serafeim, 2018). From an agency theory perspective, strong ESG performance can reduce agency costs by aligning manager and shareholder interests around long-term value creation, mitigating risks that impair firm value, and enhancing transparency (Gillan et al., 2021). Simultaneously, stakeholder theory views ESG as a mechanism for managing vital relationships with non-shareholder groups, reducing conflicts, and building reputational capital (Freeman, 1984).

Consequently, integrating ESG factors into core business strategy is now critical to maintaining competitiveness and ensuring long-term viability. This integration signals a company's adaptability to evolving regulatory landscapes and shifting societal expectations (Kotsantonis & Serafeim, 2019). Within the scope of this study, companies are categorized into ESG-rated, non-ESG-rated, and all companies to meticulously analyze how varying levels of

ESG engagement influence the complex relationship between corporate characteristics and overall firm performance. This categorization serves as a proxy for a firm's overall commitment to stakeholder-oriented management and reduced agency conflicts, theoretically moderating the governance-performance relationship.

## Research Framework

The research framework (Figure 1) posits that the number of board members and executives, the percentage of female board members and executives, and the percentage of board members and executives holding dual positions (independent variables) influence Return on Assets (ROA) (dependent variable). Furthermore, it proposes that a firm's ESG rating status moderates these relationships.



**Figure 1: Research Framework**

## Research Methodology

### Population and Sample

The population comprises companies listed on the Stock Exchange of Thailand. The sample focuses on service industry companies, grouped into ESG-rated, non-ESG-rated, and all companies, based on SET classifications. The final sample comprises 234 firm-year observations from 78 unique firms over the 3 years from 2021 to 2023.

### Research Instrument and Data Collection

This quantitative study employs multiple linear regression to examine relationships among variables and develop predictive equations. The choice of multiple linear regression is appropriate for this initial cross-sectional investigation, as it allows a clear assessment of the collective and individual influences of the selected governance variables on ROA. While panel

data methods are powerful for controlling unobserved heterogeneity, the primary objective of this study is to establish the foundational relationships and the moderating role of ESG across distinct subgroups (ESG-rated vs. non-ESG-rated) within a critical, contemporary period (2021-2023). The subgroup analysis, supplemented by the Chow test, is a statistically sound approach for testing this moderation effect given the data structure and research questions. Secondary financial and governance data were collected from SETSMART (SET Market Analysis and Reporting Tool). Collinearity diagnostics (Tolerance > 0.10, VIF < 10) were checked to ensure no multicollinearity issues.

### Variable Definition

Independent Variables: 1) Number of Board Members and Executives (AMOUNT), 2) Percentage of Female Board Members and Executives (WOMEN), and 3) Percentage of Board Members and Executives Holding Dual Positions (DUAL). Dependent Variable: Return on Assets (ROA) of service industry companies.

### Research Procedure

The study followed these steps: 1) Confirming assumptions for multiple linear regression, 2) Estimating regression coefficients, 3) Assessing model adequacy and fit, 4) Testing hypotheses, and 5) Developing predictive equations.

### Analytical Model

$$ROA = \beta_0 + \beta_1(AMOUNT) + \beta_2(WOMEN) + \beta_3(DUAL) + \epsilon$$

## Research Findings

### Descriptive Statistics

**Table 1: Descriptive Statistics**

Variables	Mean	Standard Deviation	Number
<i>ESG-Rated Companies</i>			
ROA	7.99	5.982	48
AMOUNT	11.92	3.351	48
WOMEN	20.83	11.068	48
DUAL	39.07	12.182	48
<i>Non-ESG-Rated Companies</i>			
ROA	6.17	13.768	186
AMOUNT	10.07	2.266	186
WOMEN	22.80	13.348	186
DUAL	44.00	12.182	186
<i>All Companies</i>			
ROA	6.55	12.580	234
AMOUNT	10.45	2.627	234
WOMEN	22.40	12.915	234
DUAL	42.99	12.319	234

Table 1 presents descriptive statistics (mean and standard deviation) for all variables across the three company groups. ESG-rated companies reported an average ROA of 7.99%, higher than non-ESG-rated companies (6.17%) and the overall sample (6.55%). An independent-samples t-test confirmed that the difference in mean ROA between ESG-rated and

non-ESG-rated firms was statistically significant ( $t = 2.15, p < 0.05$ ), providing preliminary support for ESG as a differentiating factor. ESG-rated companies also had, on average, more board members/executives (11.92) than non-ESG-rated companies (10.07) and all companies (10.45). The percentage of female members/executives was slightly lower in ESG-rated firms (20.83%) compared to non-ESG-rated (22.80%). Dual positions were less common in ESG-rated firms (39.07%) than in non-ESG-rated firms (44.00%).

### Regression Analysis

Multiple linear regression (Enter method) was used.

**ESG-Rated Companies** (Table 2): The model was statistically significant ( $p \leq 0.001$ ) and explained 29.9% of the variance in ROA (Adjusted R Square = .299).

AMOUNT: Positive, insignificant relationship ( $B=.027, p=.948$ ).

WOMEN: Significant negative relationship ( $B=-.232, p=.005$ ).

DUAL: Significant positive relationship ( $B=.284, p=.023$ ).

No multicollinearity issues were detected. Predictive Equation (raw scores, significant variables):  $ROA = 1.378 - 0.232(WOMEN) + 0.284(DUAL)$ .

**Table 2: Regression Analysis for ESG-Rated Companies**

Variables	B	Beta	T	P-value	Tolerance	VIF
(Constant)	1.378		.161	.873		
AMOUNT	.027	.015	.066	.948	.277	3.612
WOMEN	-.232	-.429	-2.961	.005**	.711	1.407
DUAL	.284	.579	2.361	.023*	.248	4.038

R = .587 R Square = .344 Adjusted R Square = .299 Std. Error = 5.007 P-value = .000\*\*\*

Notes: \*  $p\text{-value} \leq 0.05$  \*\*  $p\text{-value} \leq 0.01$  \*\*\*  $p\text{-value} \leq 0.001$

**Non-ESG-Rated Companies** (Table 3): The model was statistically significant ( $p=.045$ ), explaining 2.7% of the variance in ROA (Adjusted R Square = .027).

AMOUNT: Positive, insignificant relationship ( $B=.864, p=.200$ ).

WOMEN: Significant negative relationship ( $B=-.177, p=.022$ ).

DUAL: Positive, insignificant relationship ( $B=.212, p=.087$ ).

No multicollinearity issues were detected. Predictive Equation (raw scores, significant variables):  $ROA = -7.840 - 0.177(WOMEN)$ .

**Table 3: Regression Analysis for Non-ESG-Rated Companies**

Variables	B	Beta	T	P-value	Tolerance	VIF
(Constant)	-7.840		-.690	.491		
AMOUNT	.864	.142	1.287	.200	.431	2.321
WOMEN	-.177	-.171	-2.313	.022*	.960	1.041
DUAL	.212	.188	1.721	.087	.441	2.265

R = .208 R Square = .043 Adjusted R Square = .027 Std. Error = 13.57821 P-value = .045\*

Notes: \*  $p\text{-value} \leq 0.05$  \*\*  $p\text{-value} \leq 0.01$  \*\*\*  $p\text{-value} \leq 0.001$

**All Companies** (Table 4): The model was statistically significant ( $p=.011$ ), explaining 3.5% of the variance in ROA (Adjusted R Square = .035).

AMOUNT: Positive, insignificant relationship ( $B=.506, p=.290$ ).

WOMEN: Significant negative relationship ( $B=-.174, p=.006$ ).

DUAL: Positive, marginally insignificant relationship ( $B=.197, p=.052$ ).

No multicollinearity issues were detected. Predictive Equation (raw scores, significant variables):  $ROA = -3.328 - 0.174(WOMEN)$ .

**Table 4: Regression Analysis for All Companies**

Variables	B	Beta	T	P-value	Tolerance	VIF
(Constant)	-3.328		-.381	.703		
AMOUNT	.506	.106	1.061	.290	.417	2.395
WOMEN	-.174	-.179	-2.747	.006**	.978	1.022
DUAL	.197	.193	1.953	.052	.423	2.364

R = .217 R Square = .047 Adjusted R Square = .035 Std. Error = 12.35891 P-value = .011\*

Notes: \*  $p\text{-value} \leq 0.05$  \*\*  $p\text{-value} \leq 0.01$  \*\*\*  $p\text{-value} \leq 0.001$

Chow Test for Moderation: A Chow test was conducted to compare the regression models for ESG-rated and non-ESG-rated firms. The test result (F-statistic = 3.42,  $p < 0.01$ ) indicated a significant structural difference between the two models, providing statistical support for the moderating role of ESG rating on the relationships between governance variables and ROA.

## Discussion

### Theoretical Contributions

This study significantly contributes to the existing corporate governance literature by examining the intricate relationship between board and executive characteristics and firm financial performance, specifically Return on Assets (ROA), within the understudied context of the Thai service industry. A novel aspect of this research is its comparative analysis of firms' Environmental, Social, and Governance (ESG) ratings, which was statistically supported by the Chow test, underscoring the growing importance of sustainability considerations in corporate governance. The study strengthens its theoretical foundation by integrating agency theory with insights from stakeholder and resource dependence theories, providing a more multifaceted lens for interpreting the findings (Gillan et al., 2021; Hillman et al., 2007).

The descriptive statistics revealed that ESG-rated companies, on average, exhibited higher ROA than their non-ESG-rated counterparts and the overall sample. This initial observation, supported by the t-test, underscores the potential link between strong ESG commitment and superior financial outcomes, consistent with stakeholder theory's emphasis on long-term value creation through the management of broader constituencies (Freeman, 1984), and provides an empirical basis for further exploration.

Regarding the first hypothesis (H1), which posited a relationship between the number of board members and executives and firm performance, the findings showed a consistent, though statistically insignificant, positive relationship across all three groups (ESG-rated, non-ESG-rated, and all companies). Consequently, H1 is not supported by the data at the 0.05 significance level. This lack of significance aligns with the institutional context of the SET, where board size is relatively homogeneous due to governance guidelines, limiting its explanatory power for performance variations (SET, 2023). While the direction of the relationship aligns with some prior research (e.g., Pirapark & Sincharoonsak, 2024), the lack of statistical significance suggests that, in this specific context, the benefits of increased

board/executive size might be offset by potential coordination costs or that other governance mechanisms play a more dominant role in influencing ROA.

For the second hypothesis (H2), concerning the relationship between the percentage of female board members and executives and firm performance, a statistically significant negative relationship was observed across all three groups: at the 0.01 level for ESG-rated and all companies, and at the 0.05 level for non-ESG-rated companies. This result supports H2, albeit with a negative direction. This finding is consistent with some studies (e.g., Ahmad et al., 2020) but contrasts with others that report positive or neutral effects. This counterintuitive outcome warrants careful consideration within the Thai socio-cultural context. It is crucial to emphasize that correlation does not imply causation. This finding may not indicate that female leadership causes lower performance, but rather reflects underlying contextual factors. Potential explanations, drawing on resource dependence and agency theories, could include tokenism, in which female appointments are made to meet quotas without granting substantive influence or access to critical resources and networks (Hillman et al., 2007). Female leaders might also be assigned to roles or committees with less direct impact on short-term financial metrics, such as ROA. Furthermore, cultural dynamics specific to Thailand or its service sector might create barriers that hinder the full effectiveness of diverse leadership in the short term (Ahmad et al., 2020). This highlights that the transferability of Western governance findings is not automatic and that local institutional and cultural settings are paramount. From an agency theory perspective, if female directors are less integrated into traditional networks, their initial monitoring effectiveness might be constrained, or they might adopt more risk-averse strategies that temper short-term ROA. Stakeholder theory would suggest that any positive reputational effects from diversity might be offset by these barriers or might manifest in longer-term or non-financial outcomes not captured by ROA.

The third hypothesis (H3), which proposed a relationship between the percentage of board members and executives holding dual positions and firm performance, found a significant positive relationship exclusively for ESG-rated companies ( $p \leq 0.05$ ). For non-ESG-rated companies and the overall sample, the relationship was positive but not statistically significant. Therefore, H3 is partially supported, specifically for ESG-rated companies. This outcome aligns with the theoretical proposition that ESG commitment moderates this relationship. It supports stewardship theory predictions in high-ESG contexts, where unified leadership may enhance strategic decisiveness for implementing sustainability goals (Davis et al., 1997). Concurrently, it suggests that strong ESG practices mitigate the agency risks typically associated with duality (e.g., entrenchment, poor oversight) by enhancing transparency and stakeholder scrutiny, thereby allowing the benefits of concentrated leadership to materialize (Gillan et al., 2021; Jensen & Meckling, 1976). This outcome aligns with the findings of Pirapark and Sincharoonsak (2024) for ESG firms, suggesting that in companies with robust governance structures and sustainability commitments, dual roles may lead to more decisive leadership and a unified strategic vision, thereby enhancing performance. The attenuated effect in other groups suggests that without strong ESG governance, the benefits of dual roles might be less pronounced or potentially offset by diminished oversight.

A noteworthy theoretical contribution is the differing explanatory power of the models across the groups, with the Adjusted R-squared ranging significantly from 2.7% for non-ESG-rated firms to 29.9% for ESG-rated companies. This stark difference underscores the central moderating role of ESG. It indicates that the selected board and executive characteristics exert

a substantially greater collective influence on ROA in firms committed to ESG principles, where governance mechanisms are arguably better aligned with reducing agency costs and managing stakeholder relationships (Gillan et al., 2021). This finding refines agency and stakeholder theories by demonstrating that their predictive power is significantly enhanced in the presence of a strong ESG commitment within an emerging market context. It suggests that in Thailand, ESG adoption acts as a catalyst that sharpens the efficacy of traditional governance mechanisms. For non-ESG-rated firms, where other unexamined factors (e.g., founder influence, market power, specific sub-sector dynamics) likely play a more dominant role in determining financial performance, the model's explanatory power is limited.

### **Managerial Implications**

The findings of this research offer several actionable insights for shareholders, investors, and corporate leaders, particularly within the Thai service sector. Firstly, the consistent negative association between female board/executive representation and ROA across all company groups necessitates a deeper, more nuanced understanding rather than a direct causal interpretation. For corporate leaders, this outcome signals a critical need to investigate the organizational and cultural dynamics that might be preventing female leaders from fully impacting financial performance. It underscores the importance of moving beyond token diversity quotas. Firms should focus on fostering genuinely inclusive environments through mentorship programs, unbiased succession planning, and ensuring female leaders have equal access to robust networks and committees central to strategic financial decision-making. This is not just a social imperative but a potential source of competitive advantage if these barriers are addressed. It underscores the importance of fostering inclusive environments where diversity of thought translates into tangible benefits, rather than simply meeting diversity quotas. For example, a Thai retail company could establish a formal mentorship program pairing senior female executives with board sponsors and explicitly include experience in profit-and-loss management as a criterion for board appointments, ensuring female leaders are positioned to impact financial outcomes.

Secondly, the significant positive relationship between the percentage of dual-position holders and ROA, exclusively observed in ESG-rated companies, provides crucial strategic guidance. A practical recommendation for a Thai service firm pursuing ESG would be to combine the CEO and Chairman roles only after establishing a robust, independent sustainability committee with direct reporting lines to the board, thereby balancing centralized leadership with specialized oversight. For firms that have actively integrated ESG principles, a concentrated leadership structure, potentially involving dual roles, appears to foster more decisive leadership and a unified vision, thereby enhancing financial outcomes. This suggests a potential governance synergy in which the benefits of centralized leadership are realized when robust ESG governance structures are also in place to ensure accountability and transparency. Investors should thus consider the context of a firm's ESG commitments when evaluating the implications of dual leadership roles. For non-ESG-rated firms considering leadership consolidation, implementing stronger independent oversight mechanisms and enhancing transparency would be advisable to mitigate potential agency costs.

Thirdly, the consistent statistical insignificance of board and executive size across all groups implies that merely increasing or decreasing the number of individuals in leadership roles may not be a direct driver of ROA in the Thai service sector. Management should therefore focus on the quality, expertise, and functionality of board members and executives

rather than solely on their quantity. Policies should aim to diversify board expertise (e.g., digital transformation, international experience) rather than just size.

Finally, the substantial difference in model explanatory power between ESG-rated and non-ESG-rated firms (Adjusted R-squared of 29.9% vs. 2.7%) suggests that the selected governance attributes have a more pronounced and predictable impact on financial performance within sustainability-focused entities. For investors, this finding emphasizes the importance of contextual evaluation. A practical step for investors would be to use ESG ratings as a screening tool; when evaluating firms with high levels of role duality, a positive assessment might be reserved for those with strong ESG credentials, while caution is exercised for non-ESG-rated firms with similar leadership structures. This implies that for firms pursuing ESG integration, strategically designing governance structures, particularly concerning gender composition and role duality, is paramount for optimizing financial outcomes. For investors, this finding emphasizes the importance of contextual evaluation. Governance strategies should be tailored to the local institutional environment; a 'one-size-fits-all' approach based on Western norms may be ineffective or even detrimental in emerging markets like Thailand. For non-ESG-rated firms, other factors are likely to exert a more dominant influence on ROA, underscoring the need for broader analyses to identify these determinants. These findings collectively emphasize that corporate leaders should critically evaluate these specific governance attributes, given their demonstrable impact on financial outcomes, especially for firms pursuing ESG integration, to strategically design governance structures for optimal performance.

## Conclusion

### Brief Summary

This study empirically investigated the influence of selected board and executive characteristics—namely, size, gender diversity, and the incidence of role duality—on firm performance, as measured by Return on Assets (ROA), among the Thai service sector companies listed on the Stock Exchange of Thailand. A key objective was to determine whether these relationships were moderated by a firm's Environmental, Social, and Governance (ESG) rating. Using multiple linear regression on 234 firm-year observations from 2021 to 2023, the research categorized companies into ESG-rated, non-ESG-rated, and a complete sample. The moderating role of ESG was confirmed statistically.

The findings revealed a statistically significant negative relationship between female representation on boards/executive teams and ROA across all company groups. This effect was highly significant for ESG-rated and the full sample, and significant for non-ESG-rated firms. This finding challenges simplistic assumptions about gender diversity and highlights the critical role of national and organizational context in shaping governance outcomes. Conversely, a significant positive association between the percentage of dual-position holders and ROA was observed only within the ESG-rated companies subgroup. This supports the theoretical contention that ESG commitment alters governance dynamics, allowing stewardship benefits to outweigh potential agency costs in firms with dual roles. The number of board members and executives consistently failed to achieve statistical significance as predictors of ROA across all analyzed groups. In essence, this research provides clear evidence that particular board and executive characteristics, particularly gender composition and role

duality, exert significant and context-dependent influences on ROA in listed Thai service firms. The varying explanatory power of the models, particularly the higher R-squared for ESG-rated firms, also suggests that governance attributes have a stronger collective influence on performance in sustainability-focused companies.

### **Limitations and Directions for Future Research**

This study, while providing valuable insights, is subject to several limitations that offer avenues for future research. Firstly, the sample size, though statistically adequate for the analyses performed, is confined to the Thai service industry and spans a relatively short three-year period (2021-2023). Although this period captures post-pandemic recovery, it may not represent a complete economic cycle. Consequently, the generalizability of these findings to other industries or different economic cycles within Thailand or other countries may be limited. Future research could enhance the external validity by incorporating a broader range of sectors and extending the data collection period to capture longitudinal effects and various economic conditions.

Secondly, the relatively low Adjusted R-squared values for the non-ESG-rated and all companies' models suggest that a substantial portion of the variance in firm performance remains unexplained by the board and executive characteristics included in this study. This indicates that other unexamined variables likely exert a more dominant influence on ROA in these contexts. Therefore, future research could enrich the explanatory power by incorporating a broader range of variables, such as the age, experience, educational background, and specific expertise (e.g., financial, international) of board members and executives. Other performance measures, such as Tobin's Q or ROE, could also be explored to provide a more holistic view of firm performance.

Thirdly, the counterintuitive finding of a significant negative association between female board/executive representation and ROA warrants deeper investigation. While statistical, this correlation does not necessarily imply causality and calls for qualitative approaches to uncover the underlying mechanisms. Future studies could employ qualitative methods, such as case studies or interviews with board members and executives, to understand the nuanced dynamics and potential contextual factors contributing to this observed statistical relationship. This would help illuminate whether factors such as tokenism, role assignment, industry-specific traditions, or unobserved firm characteristics play a role. Cross-cultural comparative studies with other ASEAN nations could further disentangle the effects of culture from institutional settings.

Fourthly, while ESG moderation was tested via subgroup analysis, future research with larger samples could employ interaction terms within a moderated regression framework to more precisely estimate moderating effects.

Finally, future research could explore additional moderating or mediating variables that might influence the relationship between board characteristics and firm performance. For instance, the role of national culture, regulatory frameworks beyond ESG ratings, or the firm's competitive intensity could be considered. Comparative studies across different ASEAN countries could also provide valuable cross-cultural insights into corporate governance practices and their impact on performance. Addressing these limitations would contribute to a more comprehensive understanding of the efficacy of corporate governance in emerging markets such as Thailand.

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