

DOI: 10.5281/zenodo.11032540

# THE MODERATING ROLE OF EXECUTIVE COMPENSATION AND ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) FACTORS IN THE RELATIONSHIP BETWEEN BOARD CHARACTERISTICS AND FIRM VALUE OF COMPANIES LISTED ON THE STOCK EXCHANGE OF THAILAND

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Received: 28/05/2025  
Accepted: 28/08/2025

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## ABSTRACT

*This study investigates the influence of board characteristics, executive compensation, and environmental, social, and governance (ESG) practices on the firm value of companies listed on the Stock Exchange of Thailand. Specifically, it examines the direct effects of board attributes, the direct impact of executive compensation and ESG, and the moderating roles of these factors on the relationship between board characteristics and firm value. Drawing on agency and stakeholder theories, the study emphasizes the importance of governance mechanisms, performance-linked incentives, and sustainability practices in shaping firm performance. Using quantitative analysis of Thai listed firms, the findings reveal that among board characteristics, only the presence of directors with accounting and finance expertise significantly enhances firm value. Other structural features, including board size, proportion of independent directors, frequency of board meetings, and CEO-Chairman non-duality, do not directly affect firm value. Executive compensation alone does not exhibit a direct influence, whereas ESG practices show a negative direct effect on firm value, reflecting early-stage adoption challenges in Thailand. However, both executive compensation and ESG demonstrate significant moderating effects. Executive compensation strengthens the positive impact of independent directors on firm value, while ESG practices enhance the effectiveness of boards with accounting and finance expertise and those that meet regularly. These findings highlight the critical interplay between board competence, incentive structures, and sustainability engagement in improving corporate performance. The study contributes to the understanding of corporate governance in emerging markets and provides practical insights for regulators, investors, and managers regarding board composition, performance-linked incentives, and ESG integration. Policy and managerial implications suggest the strategic appointment of skilled directors, alignment of compensation with performance, and embedding ESG into corporate decision-making to enhance long-term firm value. The study also identifies avenues for future research, including exploring additional board characteristics, dissecting ESG components, and conducting comparative analyses across industries and countries.*

**KEYWORDS:** Board Characteristics, Executive Compensation, ESG, Firm Value, Corporate Governance.

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## 1. INTRODUCTION

### 1.1. Background and Importance of the Problem

In the context of modern business and policy, corporate governance has gained significant importance as a key mechanism for mitigating conflicts of interest between shareholders (principals) and managers (agents), as well as for building trust among stakeholders (Jensen & Meckling, 1976; Eisenhardt, 1989).

The board of directors, as an internal governance mechanism, plays a crucial role in setting strategic direction, managing risks, and monitoring performance, all of which directly affect firm value (Beasley et al., 2000; Fama & Jensen, 1983).

Previous research has suggested that board characteristics, such as the proportion of independent directors, board size, the proportion of directors with accounting and financial expertise, frequency of meetings, and the separation of the CEO and chairperson roles, can significantly influence firm value in both developed and emerging markets (Bhagat & Black, 2002; Klein, 1998; Pfeffer & Salancik, 1978; Yermack, 1996; Al-Daoud et al., 2016).

Recent empirical evidence further demonstrates that larger board size can significantly reduce environmental, social, and governance (ESG) controversies. Specifically, a one-standard-deviation increase in board size reduces ESG controversies by 4.30% (Treepongkaruna et al., 2024).

However, these impacts may vary depending on the internal incentive mechanisms of organizations, particularly executive compensation structures. According to agency theory, when compensation is properly aligned with performance (pay-performance sensitivity), it can reduce agency costs and enhance decision-making efficiency (Jensen & Murphy, 1990; Core et al., 1999).

In the Thai context, research has shown that executive compensation is positively associated with firm performance and can contribute to future performance improvements (Lhaopadchan, 2025).

At the same time, environmental, social, and governance (ESG) factors have increasingly been recognized as indicators of sustainability and accountability to stakeholders.

The Stock Exchange of Thailand (SET) has promoted ESG through the SET ESG Rating and the One Report framework.

Empirical studies indicate that firms with higher SET ESG ratings tend to achieve significantly higher firm value, as effective management of environmental and social risks reduces regulatory

and reputational risks (Mookham, 2025).

Furthermore, ESG may act as a moderating variable in the relationship between board characteristics and firm value (Aguilera et al., 2007; Fatemi et al., 2018). In developing countries, ESG performance plays a critical moderating role in the relationship between corporate governance and firm value (Bukari et al., 2024).

Although numerous studies have examined board characteristics, executive compensation, and ESG factors separately, there remains a lack of integrated research that explores the moderating roles of executive compensation and ESG in the relationship between board characteristics and firm value.

This gap is particularly relevant in the Thai capital market, where corporate governance structures and ownership patterns differ from those in developed markets, potentially creating unique governance and incentive mechanisms. Yet, empirical evidence on this matter remains limited.

Therefore, this study aims to fill the gap by generating findings that broaden the understanding of governance and sustainability in developing countries, and by providing valuable policy implications for policymakers, investors, and regulators to enhance corporate governance quality and promote sustainable firm value in Thailand's economic context.

### 1.2. Research Question

Based on the above background, the study addresses the following research question is how do executive compensation and environmental, social, and governance (ESG) factors moderate the relationship between board characteristics and firm value among companies listed on the Stock Exchange of Thailand?

### 1.3. Research Objectives

1. To examine the influence of board characteristics on the firm value of companies listed on the Stock Exchange of Thailand.
2. To investigate the effects of executive compensation and environmental, social, and governance (ESG) factors on the firm value of companies listed on the Stock Exchange of Thailand.
3. To analyze the moderating roles of executive compensation and ESG factors in the relationship between board characteristics and firm value of companies listed on the Stock Exchange of Thailand.

## 2. LITERATURE REVIEW

### 2.1. Related Concepts and Theories

#### 2.1.1. Agency Theory

Agency theory is a fundamental framework for understanding the relationship between shareholders (principals), executives (agents), and boards of directors (Jensen & Meckling, 1976). The core idea of this theory is that managers may pursue personal interests and goals that diverge from those of shareholders, such as seeking private benefits, expanding the firm's size to gain power, or avoiding excessive risk (Eisenhardt, 1989). Therefore, corporate governance mechanisms are essential to mitigate these conflicts. Within the context of this study, agency theory provides a conceptual basis for examining the role of boards of directors, executive compensation, and ESG mechanisms in aligning managerial objectives with those of shareholders, thereby enhancing firm value (Fama & Jensen, 1983).

#### 2.1.2. Resource Dependence Theory

Resource dependence theory suggests that boards of directors not only play a monitoring role but also serve as vital sources of resources for firms (Pfeffer & Salancik, 1978). Directors can provide expertise, networks, strategic information, and access to financial capital. This theory supports the idea that boards should be sufficiently large and diverse in expertise to improve access to various resources. However, such diversity must be balanced against coordination efficiency and effective decision-making (Dalton et al., 1999).

#### 2.1.3. Stakeholder Theory

Stakeholder theory emphasizes that firms should consider the interests of all stakeholder groups, not only shareholders but also employees, customers, communities, and the environment (Freeman, 1984). This perspective underpins the concept of ESG, which highlights sustainable development. Giving due attention to stakeholders helps reduce business risks, build investor confidence, and generate long-term positive impacts on firm value (Jones, 1995).

## 2.2. Literature Surveys

### 2.2.1. Concept of Board Characteristics and Firm Value

The board of directors serves as a central mechanism of corporate governance, playing a direct role in strategy formulation, risk management, and monitoring operations, all of which influence overall firm value. Key board characteristics that have been

widely studied in relation to firm value include the proportion of independent directors, board size, and the proportion of directors with accounting and financial expertise, the frequency of board meetings, and the separation of the CEO and chair roles. Each of these characteristics enhances governance effectiveness and mitigates conflicts of interest between shareholders and managers, consistent with the agency theory perspective (Fama & Jensen, 1983; Beasley et al., 2000; Krishnan, 2005). Resource dependence theory suggests that larger boards may provide better access to resources and strategic information (Pfeffer, 1972), although excessively large boards can be inefficient (Yermack, 1996). Financial expertise among directors improves the quality of financial reporting and reduces risk exposure (Beasley et al., 2000), while frequent and effective board meetings signal greater attentiveness in governance. Likewise, the separation of top executive positions serves as a counterbalance of power and promotes transparency (Brickley et al., 1997). Within this context, executive compensation and ESG factors may moderate the relationship between board characteristics and firm value. Appropriately structured compensation enhances directors' incentives to perform effectively, while ESG considerations strengthen sustainability-oriented governance (Aguilera et al., 2007; Fatemi et al., 2018). Recent studies by Hashad (2023) and Teerawat and Penprapak (2024) also highlight that specific board features, such as independence and optimal size, reinforce the positive impact of ESG on firm value.

#### 2.2.2. Concept of Firm Value

Tobin's Q is a financial ratio commonly used to measure firm value by comparing the market value of a company's assets to their replacement cost, as conceptualized by Tobin and Brainard (1977). In this study, Tobin's Q is employed as the dependent variable for evaluating firm value in relation to board characteristics, executive compensation, and ESG factors. Agency theory suggests that boards with greater independence, appropriate size, and relevant expertise can reduce agency conflicts and promote strategies that enhance shareholder value (Claessens et al., 2000). In addition, executive compensation tied to performance functions as an incentive mechanism that fosters long-term value creation (Core et al., 1999). ESG factors further reflect a firm's commitment to sustainability, social responsibility, and sound governance, which collectively strengthen investor confidence and market valuation (McConnell & Servaes, 1990). In the specific context

of companies listed on the Stock Exchange of Thailand, Tobin's Q remains a key measure for analyzing how governance structures, compensation policies, and sustainability practices influence firm value.

### 2.2.3. Control Variables

Control variables are essential in research to ensure that the observed relationships accurately reflect causal effects rather than external influences. In this study, several external factors that may affect firm value are controlled. Company size can influence firm value through economies of scale, resource access, and varying growth potential (Umboh & Yanti, 2025). The debt ratio reflects the level of financial risk and the cost of capital, directly affecting investors' perception of firm value; therefore, managing capital structure appropriately is critical for long-term firm valuation (Al-Slehat, 2020). Additionally, the presence of a Big Four auditing firm serves as a signal of audit quality and reliability of financial information, influencing investor confidence and firm valuation (Hossain et al., 2022; Kim et al., 2023).

## 2.3. Conceptual Framework

This study investigates the moderating roles of

executive compensation and environmental, social, and governance (ESG) factors on the relationship between board characteristics and firm value of companies listed on the Stock Exchange of Thailand.

### 1) Independent Variables (Board Characteristics)

- Proportion of independent directors
- Board size
- Proportion of directors with accounting and financial expertise
- Frequency of board meetings
- Separation of CEO and Chairman roles

### 2) Moderating Variables

- Executive compensation
- Environmental, social, and governance (ESG) factors

### 3) Dependent Variable

- Firm value (measured by Tobin's Q)

### 4) Control Variables

- Company size
- Debt ratio
- Big Four auditor presence

The conceptual framework (Figure 1) illustrates the hypothesized relationships, highlighting the moderating effects of executive compensation and ESG practices on the board characteristics-firm value relationship.

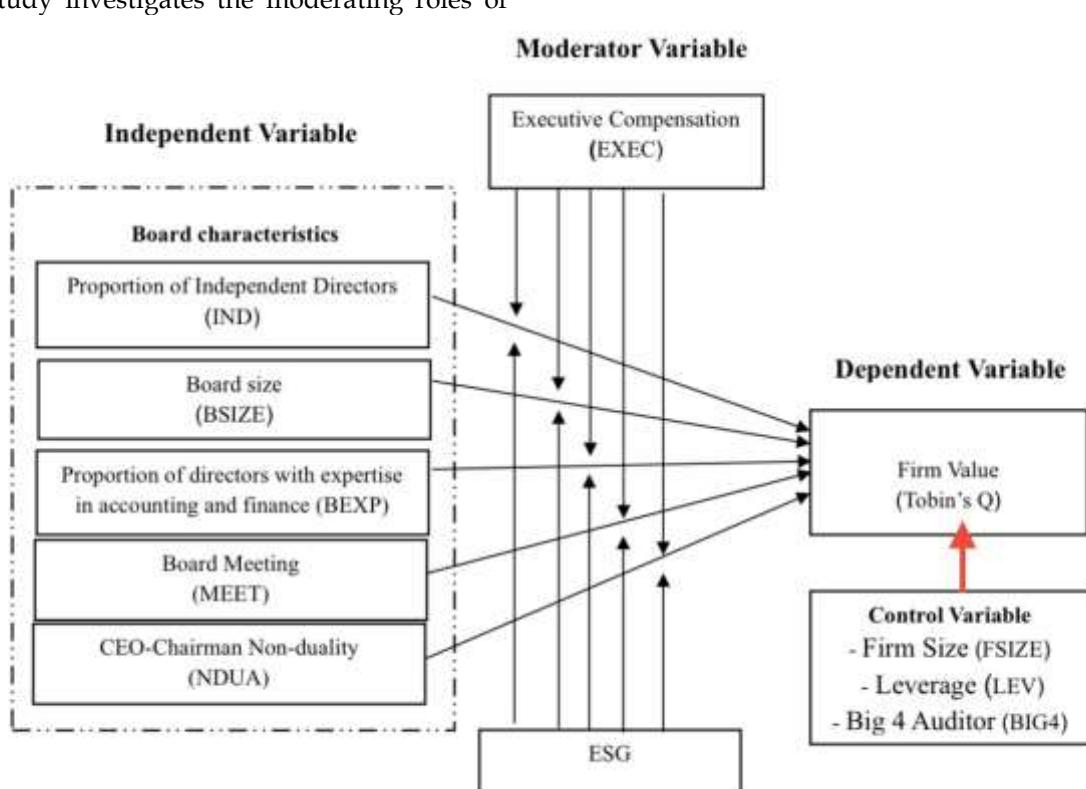


Figure 1: Conceptual Framework.

## 2.4. Research Hypotheses

### 2.4.1. Board Characteristics and Firm Value

H1: The proportion of independent directors on the board has a positive influence on the firm value of companies listed on the Stock Exchange of Thailand.

H2: Board size has a positive influence on the firm value of companies listed on the Stock Exchange of Thailand.

H3: The proportion of directors with accounting and financial expertise has a positive influence on the firm value of companies listed on the Stock Exchange of Thailand.

H4: The frequency of board meetings has a positive influence on the firm value of companies listed on the Stock Exchange of Thailand.

H5: The separation of top executive roles has a positive influence on the firm value of companies listed on the Stock Exchange of Thailand.

### 2.4.2. Executive Compensation and Firm Value

H6: Executive compensation has a positive influence on the firm value of companies listed on the Stock Exchange of Thailand.

### 2.4.3. ESG and Firm Value

H7: Environmental, social, and governance (ESG) practices have a positive influence on the firm value of companies listed on the Stock Exchange of Thailand.

### 2.4.4. Moderating Role of Executive Compensation

H8: Executive compensation positively moderates the relationship between the proportion of independent directors and firm value.

H9: Executive compensation positively moderates the relationship between board size and firm value.

H10: Executive compensation positively moderates the relationship between the proportion of directors with accounting and financial expertise and firm value.

H11: Executive compensation positively moderates the relationship between board meeting frequency and firm value.

H12: Executive compensation positively moderates the relationship between the separation of CEO and Chairman roles and firm value.

### 2.4.5. Moderating Role of ESG

H13: ESG positively moderates the relationship between the proportion of independent directors and firm value.

H14: ESG positively moderates the relationship between board size and firm value.

H15: ESG positively moderates the relationship between the proportion of directors with accounting and financial expertise and firm value.

H16: ESG positively moderates the relationship between board meeting frequency and firm value.

H17: ESG positively moderates the relationship between the separation of CEO and Chairman roles and firm value.

## 3. RESEARCH METHODOLOGY

### 3.1. Research Design

This study adopts a quantitative research design, employing panel data from secondary sources covering the period 2019 to 2023. The design is suitable for testing the relationships between board characteristics, executive compensation, ESG factors, and firm value, as well as for assessing the moderating effects of compensation and ESG practices. By utilizing longitudinal data, the study captures both cross-sectional and time-series variations, thereby improving the robustness and reliability of the findings.

**Table 1: Measurement of Variables Used in the Study.**

| Variable Type         | Variable   | Abbreviation | Measurement   |
|-----------------------|--|--------------|---|
| Dependent Variable    | Firm Value (Tobin's Q)                           | TBQ          | (Market value of common equity at year-end + Total liabilities) ÷ Total assets                |
| Independent Variables | Proportion of Independent Directors              | IND          | Number of independent directors ÷ Total number of board members                               |
|                       | Board Size                                       | BSIZE        | Total number of directors on the board in each year   |
|                       | Proportion of Directors with Financial Expertise | BEXP         | Number of directors with accounting/financial expertise ÷ Total number of board members       |
|                       | Board Meeting                                    | MEET         | Number of board meetings in each year   |
|                       | CEO-Chairman Non-duality                         | NDUA         | Dummy variable: coded 1 if the CEO does not simultaneously serve as Chairman, and 0 otherwise |

|                      |   |       |  |
|----------------------|---|-------|--|
| Moderating Variables | Executive Compensation                      | EXEC  | Total executive director compensation ÷ Total board compensation                               |
|                      | Environmental, Social, and Governance (ESG) | ESG   | Dummy variable: coded 1 if the company has implemented ESG-related governance, and 0 otherwise |
| Control Variables    | Firm Size                                   | FSIZE | Natural logarithm of total assets  |
|                      | Leverage                                    | LEV   | Total liabilities ÷ Total assets   |
|                      | Big 4 Auditor                               | BIG4  | Dummy variable: coded 1 if audited by one of the Big 4 accounting firms, and 0 otherwise       |

### **3.2. Population and Sample**

The population of this study consists of 843 companies listed on the Stock Exchange of Thailand (SET). To ensure consistency and reliability in the analysis, a screening process was conducted. Specifically, 185 companies listed on the Market for Alternative Investment (MAI) were excluded, along with 5 companies undergoing business rehabilitation, 67 firms in the financial sector, and 68 real estate investment trusts (REITs) in the real estate and construction sector. Additionally, 80 companies with incomplete data over the five-year study period were removed. After these exclusions, the final sample comprised 438 non-financial listed companies, resulting in 2,190 firm-year observations (438 companies multiplied by five years).

### **3.3. Research Instruments**

This research relies entirely on secondary data collected from publicly available and official sources. The main instruments include annual reports, financial statements, and the annual information form (Form 56-1). Data were obtained from the websites of the Securities and Exchange Commission of Thailand (SEC) and the Stock Exchange of Thailand (SET), as well as from the SETSMART database. To ensure accuracy and completeness, information was further verified using company websites and other reliable online sources. The use of these data sources enables the effective testing of the research hypotheses through multiple regression analysis with interaction terms, which is essential for assessing the moderating effects of executive compensation and ESG factors.

### **3.4. Data Collection**

The data collected for this study consist of both financial and governance-related information. Financial numerical data include firm value measured by Tobin's Q (TBQ), firm size (FSIZE), and leverage ratio (LEV). Corporate governance characteristics include the proportion of independent directors (IND), board size (BSIZE), the proportion of

directors with accounting and financial expertise (BEXP), the number of board meetings (MEET), and whether the roles of CEO and chairman are separated (NDUA). In addition, data on executive compensation (EXEC), ESG performance, and the presence of a Big Four audit firm (BIG4) were gathered. This comprehensive dataset captures the key constructs of the study and supports a rigorous examination of the hypothesized relationships.

### **3.5. Statistics Used for Data Analysis**

The data analysis process involves both descriptive and inferential statistical techniques. Descriptive statistics, including mean, standard deviation, maximum, and minimum values, are used to summarize and describe the characteristics of the study variables. Inferential statistics are employed to test the research hypotheses. Pearson correlation analysis is conducted to examine the relationships among independent variables and to check for potential multicollinearity issues. Multiple regression analysis is then used to evaluate the direct effects of board characteristics, executive compensation, and ESG factors on firm value. Furthermore, interaction terms are incorporated into the regression models to test the moderating effects of executive compensation and ESG factors, ensuring a comprehensive analysis of the conceptual framework.

## **4. DATA ANALYSIS AND FINDINGS**

### **4.1. Introduction**

This section presents the analysis and findings of the study, which aim to examine the influence of board characteristics, executive compensation, and environmental, social, and governance (ESG) factors on the firm value of listed companies in the Stock Exchange of Thailand (SET). The analysis is structured in two main parts: descriptive statistics, which summarize the key characteristics of the variables, and inferential statistics, which test the hypothesized relationships using correlation and multiple regression analyses. The study employs three regression models to address the research

objectives. Model 1, the baseline model, investigates the direct effects of board characteristics, including the proportion of independent directors, board size, proportion of directors with accounting and finance expertise, board meeting frequency, and CEO-Chairman non-duality, on firm value, measured by Tobin's Q. Model 2 extends this analysis by incorporating executive compensation and ESG performance to assess their direct effects on firm value beyond board composition. Model 3 examines the moderating roles of executive compensation and ESG factors on the relationship between board characteristics and firm value, with interaction terms such as IND  $\times$  EXEC and BEXP  $\times$  ESG capturing potential enhancement or weakening effects. The findings from these analyses provide insights into the effectiveness of corporate governance mechanisms, incentive structures, and sustainability practices in influencing firm performance. This section also evaluates multicollinearity, variance inflation, and the explanatory power of each model to ensure robustness and reliability of the results. The subsequent descriptive and inferential analyses form the basis for interpreting the influence of board attributes, executive compensation, and ESG practices on firm value in the context of Thai listed companies.

## 4.2. Data Analysis of the Quantitative Data

### 4.2.1. Model Specification and Definition of Variable

To examine the hypothesized relationships, three regression models were specified. All models use Tobin's Q as the dependent variable, representing firm value. Subscript i denotes the firm, and t represents the year.

*Model 1 – Baseline Model: Direct Effects of Board Characteristics*

$$\text{Tobin's Q}_{it} = \beta_0 + \beta_1 \text{IND}_{it} + \beta_2 \text{BSIZE}_{it} + \beta_3 \text{BEXP}_{it} + \beta_4 \text{MEET}_{it} + \beta_5 \text{NDUA}_{it} + \beta_6 \text{FSIZE}_{it} + \beta_7 \text{LEV}_{it} + \beta_8 \text{BIG4}_{it} + \varepsilon_{it}$$

Where Tobin's Q represents firm value, measured as the market value of common equity plus total liabilities divided by total assets. The independent variables include the proportion of independent directors (IND), board size (BSIZE), proportion of directors with accounting and finance expertise (BEXP), board meetings (MEET), and CEO-Chairman non-duality (NDUA). Control variables are firm size (FSIZE), leverage (LEV), and audit quality (BIG4). This model tests whether variations in board structure directly influence firm value.

*Model 2 – Extended Model: Adding Executive Compensation and ESG*

$$\text{Tobin's Q}_{it} = \beta_0 + \beta_1 \text{IND}_{it} + \beta_2 \text{BSIZE}_{it} + \beta_3 \text{BEXP}_{it} + \beta_4 \text{MEET}_{it} + \beta_5 \text{NDUA}_{it} + \beta_6 \text{EXEC}_{it} + \beta_7 \text{ESG}_{it} + \beta_8 \text{FSIZE}_{it} + \beta_9 \text{LEV}_{it} + \beta_{10} \text{BIG4}_{it} + \varepsilon_{it}$$

In addition to board characteristics, Model 2 incorporates executive compensation (EXEC) and ESG performance (ESG) as predictors. The expected signs for EXEC and ESG are positive, as incentive alignment and sustainability engagement are theorized to enhance firm value. This model assesses the direct contribution of these factors beyond board composition.

*Model 3 – Moderation Model: Interaction Effects of EXEC and ESG*

$$\text{Tobin's Q}_{it} = \beta_0 + \beta_1 \text{IND}_{it} + \beta_2 \text{BSIZE}_{it} + \beta_3 \text{BEXP}_{it} + \beta_4 \text{MEET}_{it} + \beta_5 \text{NDUA}_{it} + \beta_6 \text{EXEC}_{it} + \beta_7 \text{ESG}_{it} + \beta_8 (\text{IND}_{it} \times \text{EXEC}_{it}) + \beta_9 (\text{BSIZE}_{it} \times \text{EXEC}_{it}) + \beta_{10} (\text{BEXP}_{it} \times \text{EXEC}_{it}) + \beta_{11} (\text{MEET}_{it} \times \text{EXEC}_{it}) + \beta_{12} (\text{NDUA}_{it} \times \text{EXEC}_{it}) + \beta_{13} (\text{IND}_{it} \times \text{ESG}_{it}) + \beta_{14} (\text{BSIZE}_{it} \times \text{ESG}_{it}) + \beta_{15} (\text{BEXP}_{it} \times \text{ESG}_{it}) + \beta_{16} (\text{MEET}_{it} \times \text{ESG}_{it}) + \beta_{17} (\text{NDUA}_{it} \times \text{ESG}_{it}) + \beta_{18} \text{FSIZE}_{it} + \beta_{19} \text{LEV}_{it} + \beta_{20} \text{BIG4}_{it} + \varepsilon_{it}$$

This model evaluates the moderating roles of executive compensation and ESG performance on the board characteristics-firm value relationship. Interaction terms such as IND  $\times$  EXEC or BEXP  $\times$  ESG measure whether the governance-value link is strengthened or weakened under different levels of incentives and sustainability practices. A positive and statistically significant coefficient on an interaction term would indicate that the moderator enhances the effect of the corresponding board attribute on firm value.

*Table 2: Descriptive Statistics of Independent, Control, Moderating, and Dependent Variables.*

| Variable | Minimum | Maximum | Mean  | Standard Deviation |
|----------|---------|---------|-------|--------------------|
| IND      | 0.30    | 0.83    | 0.43  | 0.10               |
| BSIZE    | 5.00    | 20.00   | 9.99  | 2.41               |
| BEXP     | 0.00    | 0.71    | 0.12  | 0.12               |
| MEET     | 3.00    | 41.00   | 7.74  | 3.55               |
| NDUA     | 0.00    | 2.00    | 0.17  | 0.38               |
| EXEC     | 14.21   | 20.34   | 17.25 | 0.92               |
| ESG      | 0.00    | 1.00    | 0.80  | 0.40               |
| FSIZE    | 11.96   | 21.96   | 15.91 | 1.58               |
| LEV      | 0.00    | 56.50   | 0.74  | 3.36               |
| BIG4     | 0.00    | 1.00    | 0.59  | 0.49               |
| TBQ      | 0.05    | 586.86  | 7.26  | 35.20              |

From Table 2, the descriptive statistics indicate that the proportion of independent directors (IND) has a mean of 0.43, while the board size (BSIZE) has a mean of 9.99. The proportion of directors with accounting and financial expertise (BEXP) has a mean of 0.12, and the number of board meetings (MEET) has a mean of 7.74. For non-dual CEO and chairman positions (NDUA), the mean is 0.17.

Executive compensation (EXEC) shows a mean of 17.25, and the environmental, social, and governance score (ESG) has a mean of 0.80. Among the control variables, firm size (FSIZE) has a mean of 15.91, leverage (LEV) has a mean of 0.74, and Big 4 audit firm indicator (BIG4) has a mean of 0.59. Finally, the firm value measured by Tobin's Q (TBQ) has a mean

of 7.26.

#### 4.2.2. Inferential Statistics Analysis

- 1) Correlation Analysis, Variance Inflation Factor (VIF), and Tolerance of Variables

**Table 3: Results of the Pearson Correlation Analysis among the Variables.**

| Variables | Pearson Correlation Coefficient |          |          |          |         |          |          |          |        |        |     |
|-----------|---------------------------------|----------|----------|----------|---------|----------|----------|----------|--------|--------|-----|
|           | IND                             | BSIZE    | BEXP     | MEET     | NDUA    | EXEC     | ESG      | FSIZE    | LEV    | BIG4   | TBQ |
| IND       | 1                               |          |          |          |         |          |          |          |        |        |     |
| BSIZE     | -0.234**                        | 1        |          |          |         |          |          |          |        |        |     |
| BEXP      | 0.015                           | -0.184** | 1        |          |         |          |          |          |        |        |     |
| MEET      | 0.132**                         | 0.148**  | -0.098** | 1        |         |          |          |          |        |        |     |
| NDUA      | -0.005                          | 0.052*   | -0.033   | -0.003   | 1       |          |          |          |        |        |     |
| EXEC      | -0.009                          | 0.312**  | -0.101** | 0.175**  | 0.004   | 1        |          |          |        |        |     |
| ESG       | -0.049*                         | -0.136** | -0.047*  | -0.068** | 0.080** | -0.093** | 1        |          |        |        |     |
| FSIZE     | 0.105**                         | 0.420**  | -0.139** | 0.282**  | 0.006   | 0.621**  | -0.147** | 1        |        |        |     |
| LEV       | -0.058**                        | 0.061**  | -0.053*  | 0.046*   | 0.034   | 0.095**  | 0.100**  | 0.083**  | 1      |        |     |
| BIG4      | 0.022                           | -0.010   | 0.008    | 0.010    | 0.014   | 0.014    | 0.013    | 0.029    | 0.045* | 1      |     |
| TBQ       | -0.011                          | -0.095** | 0.080**  | -0.015   | -0.021  | -0.131** | -0.059** | -0.172** | -0.013 | -0.016 | 1   |
| VIF       | 1.149                           | 1.396    | 1.052    | 1.110    | 1.012   | 1.649    | 1.060    | 1.970    | 1.031  | 1.004  |     |
| Tolerance | 0.870                           | 0.716    | 0.950    | 0.901    | 0.988   | 0.606    | 0.943    | 0.508    | 0.969  | 0.996  |     |

Note: \*\* and \* indicate statistical significance at the 0.01 and 0.05 levels, respectively.

The examination of relationships between pairs of independent variables using Pearson correlation statistics, as shown in Table 4, indicates that all independent variables have values below 0.65. When checked alongside Tolerance and Variance Inflation Factor (VIF) statistics in Table 4, all independent variables exhibit Tolerance values well above 0.10 and VIF values not exceeding 10, indicating no

multicollinearity issues. This suggests that the variance of errors is independently distributed (no autocorrelation).

#### 2) Multiple Regression Analysis

The researcher employed multiple regression analysis to test the hypotheses. The analysis was divided into three models, as follows:

**Table 4: Results of the Analysis of the Influence of Board of Directors' Characteristics on Firm Value of Listed Companies in the Stock Exchange of Thailand.**

| Variable    | Model 1 |        |         |
|-------------|---------|--------|---------|
|             | $\beta$ | t      | P-Value |
| Constant    |         | 7.559  | 0.000   |
| IND         | -0.004  | -0.174 | 0.862   |
| BSIZE       | -0.021  | -0.846 | 0.397   |
| BEXP        | 0.057   | 2.616  | 0.009** |
| MEET        | 0.041   | 1.841  | 0.066   |
| NDUA        | -0.017  | -0.772 | 0.440   |
| FSIZE       | -0.167  | -6.715 | 0.000** |
| LEV         | 0.005   | 0.211  | 0.833   |
| BIG4        | -0.012  | -0.567 | 0.571   |
| F-statistic |         | 9.686  |         |
| P-Value     |         | 0.000  |         |
| $R^2$       |         | 0.035  |         |
| Adj. $R^2$  |         | 0.032  |         |

Note: \*\* and \* indicate statistical significance at the 0.01 and 0.05 levels, respectively.

From Table 4, the results of the analysis of the influence of board characteristics on firm value of listed companies in the Stock Exchange of Thailand (Model 1) show that the analysis model has an F-statistic of 9.686 and a P-value of 0.000, which is less

than the significance level of 0.05. This indicates that all independent variables in the equation can jointly predict the dependent variable with statistical significance. The Adjusted  $R^2$  is 0.032, meaning that all independent variables can explain 3.20 percent of

the variance in firm value. Considering each component of board characteristics separately, it was found that the proportion of directors with expertise in accounting and finance (BEXP) has a positive influence on firm value (TBQ) at the 0.01 significance level, thereby supporting hypothesis H3. Other variables, including the proportion of independent directors (IND), board size (BSIZE), number of board

meetings (MEET), and CEO non-duality (NDUA), were found to have no influence on firm value (TBQ). Thus, hypotheses H1, H2, H4, and H5 are rejected. Regarding the control variables, firm size (FSIZE) was found to have a significant influence on firm value (TBQ) at the 0.01 significance level.

**Table 5: Results of the Analysis of the Influence of Executive Compensation and Environmental, Social, and Governance (ESG) Factors on Firm Value.**

| Variable    | Model 2 |        |         | Model 3 |        |         |
|-------------|---------|--------|---------|---------|--------|---------|
|             | $\beta$ | t      | P-Value | $\beta$ | t      | P-Value |
| (Constant)  |         | 5.790  | 0.000   |         | 5.746  | 0.000   |
| IND         | -0.011  | -0.483 | 0.629   | -0.004  | -0.178 | 0.859   |
| BSIZE       | -0.030  | -1.207 | 0.228   | -0.029  | -1.156 | 0.248   |
| BEXP        | 0.050   | 2.307  | 0.021*  | 0.049   | 2.173  | 0.030*  |
| MEET        | 0.039   | 1.762  | 0.078   | 0.028   | 1.220  | 0.222   |
| NDUA        | -0.010  | -0.459 | 0.647   | -0.010  | -0.442 | 0.658   |
| EXEC        | -0.038  | -1.408 | 0.159   | -0.044  | -1.626 | 0.104   |
| ESG         | -0.084  | -3.827 | 0.000** | -0.092  | -4.098 | 0.000** |
| FSIZE       | -0.152  | -5.088 | 0.000** | -0.152  | -5.021 | 0.000** |
| LEV         | 0.015   | 0.691  | 0.490   | 0.018   | 0.843  | 0.399   |
| BIG4        | -0.011  | -0.531 | 0.595   | -0.016  | -0.746 | 0.456   |
| IND*EXCE    |         |        |         | 0.055   | 2.403  | 0.016*  |
| BSIZE*EXCE  |         |        |         | 0.047   | 1.951  | 0.051   |
| BEXP*EXCE   |         |        |         | 0.001   | 0.027  | 0.979   |
| MEET*EXCE   |         |        |         | -0.032  | -1.360 | 0.174   |
| NDUA*EXCE   |         |        |         | 0.016   | 0.734  | 0.463   |
| IND*ESG     |         |        |         | -0.027  | -1.118 | 0.264   |
| BSIZE*ESG   |         |        |         | -0.003  | -0.119 | 0.905   |
| BEXP*ESG    |         |        |         | 0.086   | 3.902  | 0.000** |
| MEET*ESG    |         |        |         | 0.076   | 2.996  | 0.003** |
| NDUA*ESG    |         |        |         |         |        |         |
| F-statistic |         | 9.460  |         |         | 6.254  |         |
| P-Value     |         | 0.000  |         |         | 0.000  |         |
| $R^2$       |         | 0.043  |         |         | 0.056  |         |
| Adj. $R^2$  |         | 0.038  |         |         | 0.047  |         |

Note: \*\* and \* indicate statistical significance at the 0.01 and 0.05 levels, respectively.

From Table 5, the results of the analysis of the influence of executive compensation and environmental, social, and governance (ESG) factors on firm value of listed companies in the Stock Exchange of Thailand (Model 2) show that the analysis model has an F-statistic of 9.460 and a P-value of 0.000, which is less than the significance level of 0.05. This indicates that all independent variables in the equation can jointly predict the dependent variable with statistical significance. The Adjusted R<sup>2</sup> is 0.038, meaning that all independent variables can explain 3.80 percent of the variance in firm value.

When considering each variable separately, ESG factors were found to have a negative influence on firm value (TBQ) of listed companies in Thailand at the 0.01 significance level, while executive compensation (EXEC) had no influence on firm value (TBQ). Consequently, hypotheses H6 and H7 are rejected. Regarding the control variables, firm size (FSIZE) was found to have a significant influence on firm value (TBQ) at the 0.01 significance level.

The results of the analysis of the moderating role of executive compensation and ESG factors in the relationship between board characteristics and firm value of listed companies in the Stock Exchange of Thailand (Model 3) show that the analysis model has an F-statistic of 6.254 and a P-value of 0.000, which is less than the significance level of 0.05. This indicates that all independent variables, including the moderating variables, can jointly predict firm value with statistical significance. The Adjusted R<sup>2</sup> is 0.047, meaning that the independent and moderating variables can explain 4.70 percent of the variance in firm value, which is an improvement compared to Model 2 (Adjusted R<sup>2</sup> = 3.80). This demonstrates that the inclusion of moderating variables enhances the explanatory power of the model.

When considering each moderating effect separately, the results reveal the following:

1. Executive compensation positively moderates the relationship between the proportion of independent directors (INDEXEC) and firm value (TBQ) of listed companies in Thailand at the 0.05 significance level, thereby supporting hypothesis H8. However, no moderating effect of executive compensation was found in the relationships between other board characteristics, namely, board size (BSIZEEXEC), proportion of directors with accounting and finance expertise (BEXPEXEC), number of board meetings (MEETEXEC), and CEO non-duality (NDUA\*EXEC), and firm value. Therefore, hypotheses H9 through H12 are rejected.

2. ESG factors positively moderate the relationships between the proportion of directors with accounting and finance expertise (BEXPESG) and the number of board meetings (MEETESG) with firm value (TBQ) of listed companies in Thailand at the 0.01 significance level, thereby supporting hypotheses H15-H16. However, no moderating effect of ESG factors was found in the relationships between the proportion of independent directors (INDESG), board size (BSIZEESG), and CEO non-duality (NDUA\*ESG) with firm value (TBQ), leading to the rejection of hypotheses H13, H14, and H17.

These findings indicate that executive compensation and ESG factors play a moderating role that can alter the influence of certain board characteristics on firm value. This highlights the importance of incentive mechanisms and sustainability practices in enhancing firm value within the context of the Thai capital market.

#### **4.3. Summary of the Results**

The study explored the influence of board characteristics, executive compensation, and environmental, social, and governance (ESG) practices on the firm value of listed companies in Thailand. The findings indicate that among the board attributes, only the presence of directors with accounting and finance expertise positively affects firm value, highlighting the importance of specialized knowledge in enhancing corporate performance.

Other board characteristics, such as the proportion of independent directors, board size, frequency of board meetings, and separation of CEO and chairman roles, did not show a direct impact on firm value. Regarding executive compensation and ESG factors, the results reveal that ESG practices have a complex effect, and executive compensation alone does not directly influence firm value. However, both executive compensation and ESG practices play a significant moderating role. Executive compensation strengthens the positive influence of independent directors on firm value, suggesting that performance-linked incentives can enhance board oversight.

Similarly, ESG practices enhance the effectiveness of directors with specialized expertise and active board engagement, demonstrating that sustainability initiatives can reinforce the contribution of certain board characteristics to firm performance. Overall, the findings highlight that while board

characteristics alone may have limited direct effects, their influence on firm value can be strengthened through well-designed executive incentives and the integration of sustainability practices.

This underscores the importance of combining effective governance, incentive mechanisms, and ESG strategies to drive corporate value in the context of Thai listed companies.

## 5. CONCLUSION, DISCUSSION, AND RECOMMENDATION

### 5.1. Conclusion

This study finds that among board characteristics, only the proportion of directors with expertise in accounting and finance (BEXP) has a positive and significant influence on firm value, measured by Tobin's Q of Thai listed companies. Other variables, including the proportion of independent directors (IND), board size (BSIZE), frequency of board meetings (MEET), and CEO non-duality (NDUA), do not show direct significant effects. Regarding incentive and sustainability mechanisms, ESG factors exhibit a direct negative effect on firm value but positively moderate the relationships between accounting and finance expertise (BEXP), board meeting frequency (MEET), and firm value. Executive compensation, although showing no direct effect, strengthens the relationship between independent directors (IND) and firm value. Additionally, firm size (FSIZE), used as a control variable, consistently influences firm value across all models. These results highlight that the interplay between board characteristics, executive compensation, and ESG practices is crucial in enhancing firm value within the Thai capital market context.

## 6. DISCUSSION

### Objective 1: Board Characteristics and Firm Value

The findings indicate that directors with accounting and finance expertise positively influence firm value because they can effectively analyze financial statements, evaluate resource utilization, and provide strategic guidance, reducing decision-making risks and enhancing stakeholder confidence. This is consistent with Özcan (2021), who found that audit committee members with accounting and finance backgrounds positively affect firm value in listed companies on the Borsa Istanbul, and Phudphuek and Bosakoranut (2023), who demonstrated that accounting and finance expertise among audit committee members improves both operational performance and Tobin's Q in Thai listed firms. By contrast, other board characteristics,

including independent directors, board size, meeting frequency, and CEO non-duality, do not significantly affect firm value. Possible explanations include inactive board involvement, unclear roles in oversight, meetings focusing on regulatory compliance rather than strategic decision-making, and overly large boards causing delays and redundancy in decision-making due to diverse opinions. CEO non-duality, while theoretically promoting transparency, may be limited in practice if powerful top executives dominate decision-making. These results align with Arsh et al. (2025), who found large board size may negatively affect firm performance, Nongnit and Chamaiporn (2022), who reported that board diversity can reduce firm value, and Rifat et al. (2022), who suggested that independent directors do not always impact firm performance, highlighting that structural governance alone may not guarantee success.

### Objective 2: Executive Compensation and ESG Factors

The results reveal that ESG factors negatively affect firm value. This may be due to early-stage ESG adoption in Thailand and the broader Asian region, including high operating costs, lack of strategic integration, unclear measurement mechanisms, and shareholder focus on short-term financial returns. These findings support Korwatanasakul (2020), who noted that ESG adoption in Asia is at an early stage, with many firms perceiving ESG as a burden, and Prabawati and Rahmawati (2022), who found negative effects of ESG on Tobin's Q in ASEAN firms. Executive compensation does not directly influence firm value, possibly reflecting weak linkage between pay and performance, lack of transparency in compensation determination, or insufficient incentives for long-term value creation. This result aligns with Park and Byun (2021), who showed that executive pay affects firm value only when managers possess strong managerial ability, and Utomo and Machmuddah (2024), who emphasized that disclosure transparency is more critical than compensation levels alone.

### Objective 3: Moderating Role of Executive Compensation and ESG Factors

#### 1) Executive Compensation as a Moderator

Executive compensation positively moderates the relationship between the proportion of independent directors (IND\*EXEC) and firm value (TBQ), suggesting that performance-linked compensation enhances board monitoring and oversight, reduces agency conflicts, and aligns managerial and shareholder interests. This supports agency theory (Jensen & Meckling, 1976) and is consistent with

Liew et al. (2022) and Penjan et al. (2022), who found that appropriate compensation strengthens governance and firm value in the Thai context. However, executive compensation does not moderate the relationships between other board characteristics, board size (BSIZEEXEC), accounting and finance expertise (BEXPXEC), meeting frequency (MEETEXEC), and CEO non-duality (NDUAEXEC), and firm value. This may result from rigid internal structures, unclear board roles, or compensation schemes that fail to reflect managerial competence.

## **2) ESG Factors as a Moderator**

ESG factors positively moderate the relationships between accounting and finance expertise (BEXPESG) and board meeting frequency (MEETESG) with firm value. Boards with specialized expertise and regular meetings, when embedded in an ESG-oriented framework, strengthen governance mechanisms and enhance stakeholder confidence, increasing firm value in line with global sustainability priorities. These results align with Almaqtari et al. (2022), Bukari et al. (2024), Al-Daoud et al. (2016), Hossain and Oon (2021), and Xuan Tho (2024), emphasizing that accounting and finance expertise and frequent meetings are essential for driving ESG strategies. However, ESG factors do not moderate the relationships between independent directors (INDESG), board size (BSIZEESG), or CEO non-duality (NDUA\*ESG) and firm value, suggesting that in the Thai context, structural board features alone may not effectively leverage ESG to enhance firm value. Meeprom et al. (2024) similarly found that ESG alone may not improve board structural effectiveness or CEO role separation in creating firm value.

## **5.3. Recommendation**

### **5.3.1. Implications for Practice and Policy**

1. Theoretical Contribution: This study enhances understanding of corporate governance in emerging markets, particularly Thailand, by demonstrating that not all board characteristics directly influence firm value and that their effectiveness depends on complementary

**Acknowledgments:** The researcher would like to express sincere gratitude to the Faculty of Business Administration and Information Technology, Rajamangala University of Technology Suvarnabhumi, Suphanburi Campus, for their academic support and facilitation throughout the conduct of this research. Furthermore, the researcher would like to extend profound thanks to Asst. Prof. Dr. Ungul Laptaned for his kind guidance and valuable suggestions throughout the research process and the publication of this article, which greatly contributed to its successful completion.

mechanisms such as executive compensation and ESG practices. These findings help fill gaps in strategic corporate governance literature and provide a foundation for developing future theoretical frameworks.

2. Policy Contribution: Findings can guide regulators such as the SEC and SET to refine governance guidelines, including criteria for board selection, verification of director expertise, and improvements in ESG and executive compensation disclosures. The results may also inform Corporate Governance Scoring and ESG Rating systems, making them more aligned with Thai listed companies' realities.

3. Practical/Managerial Contribution: For companies, appointing directors with accounting and finance expertise and designing performance-linked compensation systems are effective strategies to improve firm performance. ESG should be integrated into corporate strategy and linked to board functions, not seen as a cost, to enhance investor confidence and long-term competitiveness.

4. Investor Implications: Investors and stakeholders can use these findings to evaluate board quality and ESG practices in making informed investment decisions, particularly for those seeking long-term returns from governance- and sustainability-oriented firms.

### **5.3.2. Suggestions for Future Research**

Future research could expand board characteristics to include gender diversity, board tenure, and meeting effectiveness, and examine non-linear effects of board size. Scholars may also analyze short-term versus long-term executive compensation components and decompose ESG into Environmental, Social, and Governance dimensions to assess their individual effects on firm value. Comparative studies across industries or countries, combined with qualitative methods such as interviews or case studies, could provide deeper insights into how executive compensation and ESG influence the effectiveness of board characteristics in capital markets.

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