The Relationship between Board Characteristics and Environmental Disclosure of Listed Firms in the Stock Exchange of Thailand

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Abstract

The study examines the relationship between the characteristics of boards of directors and the environmental disclosures of companies listed in the Stock Exchange of Thailand (SET). As global pressures for environmental accountability rise, corporate transparency in environmental practices has become increasingly significant. This research focuses on key board characteristics, such as board size, board independence, gender diversity, and the presence of accounting professionals on the board, and their influence on environmental disclosures. By analyzing data from 453 listed companies in the Stock Exchange of Thailand (SET), spanning from 2018 to 2023. The researchers employ multiple regression analysis to evaluate the hypothesis. The results demonstrate that board size, board independence, and the inclusion of accounting professionals on the board positively affect environmental disclosure reporting. However, the proportion of women on the board does not have a significant influence, does not a significant influence on environmental disclosure practices. These findings provide valuable insights into corporate governance mechanisms that enhance environmental transparency. Emphasizing the need for companies to adopt governance structures that prioritize board independence and accounting expertise to meet the growing demands for environmental responsibility.

Keywords: Board Characteristics, Environmental Disclosure, Stock Exchange of Thailand (SET)

Introduction

Environmental disclosures have become a critical aspect of corporate governance, reflecting the increasing global focus on sustainability and corporate responsibility. In Thailand, as the economy grows and integrates with international markets, listed companies are under greater pressure to disclose their environmental impacts transparently (Suttipun, 2015). These Environment disclosures not only fulfill regulatory requirements but also enhance the company's reputation, attract environmentally conscious investors, and foster the long-term sustainability of the enterprise (Peng et al., 2022a). A pivotal element that impacts these disclosures is the role undertaken by the board of directors, whose composition, dispositions, and leadership methodologies can profoundly influence corporate transparency regarding environmental issues (Arena et al., 2015).

The importance of this issue is highlighted by the growing demands for environmental accountability from a range of stakeholders, which includes governmental institutions, investors, and the public. As the severity of environmental challenges, including climate change, pollution, and the depletion of natural resources, escalates, it is anticipated that corporations will exhibit transparency regarding their strategies for alleviating these risks (Tadros et al., 2020). In reaction to this phenomenon, numerous entities across the globe, including those in Thailand, have integrated environmental disclosures into their annual reporting frameworks and sustainability initiatives. Nevertheless, the degree and caliber of these disclosures frequently often vary, raising concerns about the factors affecting corporate environmental transparency (Sirirat, 2017).

Numerous factors, including firm size, industry type, and external pressures from stakeholders and authorities, have been identified by this research as having an impact on environmental disclosures (Purwanto & Nugroho, 2020). Studies have also highlighted the significant role of corporate governance, particularly the board of directors, in shaping these disclosures. For instance, prior research has demonstrated that boards with a higher proportion of independent directors, environmental expertise, or female representation tend to provide more comprehensive environmental reporting (Odoemelam & Okafor, 2018). Nevertheless, the relationship between the attributes of board of directors and the disclosures regarding environmental practices must be thoroughly examined within the framework of publicly listed corporations in the Stock Exchange of Thailand, where cultural, regulatory, and market variables diverge significantly from those prevalent in western economies (Suttipun & Stanton, 2012). Conversely, some scholars argue that elements such as board diversity or independence may not consistently result in enhanced environmental performance or disclosure. For instance, Jizi (2017) discovered that although board independence is crucial for oversight, it does not invariably result in proactive environmental disclosure, particularly in organizations where short-term financial objectives prevail.

From an examination of prior scholarly works within the framework of Thailand, it has been determined that investigations concerning the relationship between the disclosure of environmental information in annual reports (56-1) and the disclosure of environmental information are associated with the performance of companies. The researcher aims to address this gap by examining how the board of directors of Stock Exchange of Thailand companies influences the extent and quality of environmental disclosures. Specifically, the research endeavor will investigate the influence of board attributes, including board size, board independence, gender diversity within the board, and the presence of accounting professionals on the board, on corporate transparency in environmental reporting. Additionally, the researcher aims to study the relationship between board characteristics and environmental disclosure of listed firms in the Stock Exchange of Thailand is keen on examining the determinants associated with the board of directors that influence the revelation of environmental disclosure of Stock Exchange of Thailand companies.

Literature Review

Agency Theory

Agency theory offers a conceptual paradigm that connects the principles of corporate governance to the practice of environmental disclosure, as the mechanisms of corporate governance are designed to mitigate the agency dilemma and harmonize the interests of management with those of stakeholders through the reduction of information asymmetry (Kultys, 2016). Within this conceptual framework, it is asserted that the board of directors functions as the foremost internal regulatory mechanism for overseeing the conduct of managerial agents on behalf of shareholders and other relevant stakeholders (Fenwick et al., 2023). This research endeavors to amalgamate the existing scholarship on corporate governance with environmental disclosure by investigating the relationship between corporate governance, particularly the attributes of the board, and the degree of environmental disclosures within firms operating in Thailand.

This study analyzes four distinct characteristics of corporate boards, as indicated by the existing academic literature. These features include board size, board independence, gender diversity, and the presence of accounting professionals in the board composition. A comprehensive examination of the current academic literature about these four board variables has been conducted, and the hypotheses pertaining to their correlation with the level of environmental disclosure are outlined below:

Board Characteristics and Environmental Disclosure

The board of directors assumes a pivotal role in determining a corporation's environmental disclosure practices. Attributes of the board, including board size, gender diversity, board independence, and the presence of accounting professional committees, exert a substantial impact on both the quantity and quality of environmental information that a corporation discloses (Al-Absy, 2024). These attributes have the capacity to either enhance or hinder transparency and accountability in environmental reporting, contingent upon their organization and implementation within the entity (Yahaya et al., 2022).

Environmental disclosure in Thailand presents numerous advantages, particularly in the enhancement of corporate reputation, market valuation, and sustainable advancement. The practices surrounding environmental disclosure are increasingly recognized as a strategic instrument for enterprises to bolster their competitive edge and foster relationships with stakeholders (Petcharat & Srinammuang, 2019). Since 2021, the Securities and Exchange Commission (SEC) has undertaken a revision of the reporting format utilized by companies listed in the Stock Exchange of Thailand (SET) by combining the annual information form (Form 56-1) and the annual report (Form 56-2) into a unified report designated as "Form 56-1 One Report", which took effect for the accounting period concluding on December 31, 2021, and corporations are required to prepare and disseminate it in the year 2022. Consequently, listed corporations will be obligated to commence the preparation of sustainability reports to methodically disclose Environmental, Social, and Governance (ESG) information to enhance strategies and governance aimed at managing risks, fostering sustainability, and competing effectively within the marketplace. (The Securities and Exchange Commission, Thailand, 2020)

Therefore, the researcher would like to present the factors of the relationship board directors and environmental disclosure of listed firms in the Stock Exchange of Thailand as follows:

Board Size Impact on Environmental Disclosure

Concerning board size (BS), previous empirical investigations have demonstrated that the transparency regarding environmental issues will augment in direct relation to the magnitude of the board of directors, indicating that larger boards are associated with a greater breadth of disclosures concerning environmental affairs. It is asserted that more extensive boards provide a broader spectrum of knowledge and perspectives, thus enhancing accountability within the domain of environmental reporting (Budiyani & Erawati, 2024). The influence of corporate governance on corporate social responsibility disclosures, encompassing environmental disclosures, within local contexts is significant. Their research indicates that the size of the board exhibits a positive correlation with the degree of environmental reporting, predominantly due to the fact that larger boards are more adept at overseeing sustainability practices (Amalia et al., 2022). It has been observed that boards of greater size generally exhibit elevated degrees of environmental reporting. This phenomenon is attributed to the premise that more expansive boards exhibit a greater propensity to include individuals who possess expertise in environmental disclosure or have a vested interest in ecological responsibility (Li & Peng, 2022). Past research discourse concerning the dimensions of corporate boards and their corresponding environmental disclosures indicates a predominantly affirmative relation, whereby boards of greater size tend to exhibit more extensive and thorough environmental reporting. While that the dimensions of a board may not have a direct effect on the disclosure of environmental matters. This viewpoint contends that "internal organizational elements" such as corporate culture, support from top management, or the overarching environmental strategy of the firm exert greater influence than board size in isolation (Tarus, 2020). Consequently, the research hypothesis is articulated as follows:

H_1: The board size positively influences environmental disclosure.

Board Independence Impact on Environmental Disclosure

Concerning board independence (BI), previous research has demonstrated that the revelation of environmental information is significant. The board of directors typically comprises both affiliated and independent members. Affiliated members are individuals who either possess direct responsibilities in the administration of the company or are relatives of the corporation's owners. Conversely, independent members primarily advocate for the interests of minority shareholders, as they do not engage directly in the operational activities of the firm, their sole association being through their role as directors (Chouaibil et al., 2022). Consequently, from the perspective of agency theory, it is widely recognized that an increase in the proportion of independent directors on the board is positively associated with the board's effectiveness in monitoring and governing managerial practices (Okere et al., 2021). The impact of board independence on environmental disclosure within emerging economies such as Malaysia, where regulatory frameworks concerning the environment are in a state of evolution, and corporations are compelled to embrace more transparent reporting methodologies (Li & Peng, 2022). Another perspective posits that the mere independence of the board does not suffice to facilitate substantial environmental disclosure. The dedication of management towards sustainability and the overarching culture of transparency within the organization are pivotal in influencing environmental reporting practices. In certain instances, independent directors may encounter opposition from entrenched management who prioritize profitability over sustainability, resulting in diminished levels of environmental disclosure (Ardillah, 2022). Consequently, the research hypothesis is articulated as follows:

H_2: The board independence positively influences environmental disclosure.

Gender Diversity Board Impact on Environmental Disclosure

Concerning gender diversity board (GD) previous research has demonstrated that individuals who identify as female and male have historically, culturally, and socially unique backgrounds; thus, the presence of gender diversity on the board within corporate boards is considered a crucial element of corporate governance that may profoundly influence the extent of environmental disclosure (Ali & Firmansyah, 2023). Gender diversity on the board enhances the transparency of environmental practices. The authors contend that the presence of women on corporate boards is associated with heightened social and environmental awareness, resulting in increased focus on environmental matters and enhanced sustainability disclosures (Alkhawaja et al., 2023). A significant relationship was observed between the proportion of female directors on corporate boards and the quality of environmental reporting. Considering that women fulfill different societal roles compared to their male counterparts, female directors on the board may embrace a divergent viewpoint concerning environmental issues (Peng et al., 2022b). Certain research endeavors posit that the impact of gender diversity on environmental disclosure may not exhibit uniformity across various sectors or cultural contexts. For instance, enterprises operating within industries characterized by minimal environmental impact may not experience the same degree of compulsion to divulge environmental information as their counterparts in sectors that prioritize environmental consciousness, the presence of female directors in such industries may not exert a significant influence on the practices pertaining to environmental disclosure (Ardillah, 2022). Consequently, the research hypothesis is articulated as follows:

H_3: The Gender Diversity Board positively influences environmental disclosure.

Accounting Professional Board Impact on Environmental Disclosure

Concerning accounting professional board (AP), previous research has indicated that the potential impact of accounting professionals on corporate boards in relation to environmental disclosure is increasingly acknowledged.

The clarity and accuracy of environmental reporting may be enhanced through the proficiency of accounting experts in financial reporting, auditing, and regulatory compliance. It has been observed that European corporations are more inclined to generate comprehensive environmental reports when their directors possess accounting expertise. This phenomenon is attributable to the priority placed by accounting professionals on transparency and their understanding of disclosure regulations (Pinheiro et al., 2023). The caliber and precision of environmental disclosures are significantly augmented by the inclusion of accounting professionals on board, especially within sectors that are subject to stringent regulations. Such accounting professionals ensure that environmental disclosures adhere to corporate governance mandates and financial reporting standards, the presence of accounting expertise on boards is of paramount importance in establishing a connection between environmental performance and financial performance, thereby guaranteeing that environmental initiatives are accurately quantified and reported. This fosters a more cohesive methodology to sustainability reporting (Unerman, 2021). Some studies contend that professional accounting boards frequently place significant emphasis on financial materiality, which may consequently result in the undervaluation of environmental factors that lack an immediate or direct influence on a corporation's financial performance. This may lead to corporations disclosing only environmental data that are considered pertinent from a financial standpoint, thereby potentially excluding critical non-financial environmental information (Xie et al., 2023). Consequently, the research hypothesis is articulated as follows:

H_4: The accounting professional board positively influences environmental disclosure.

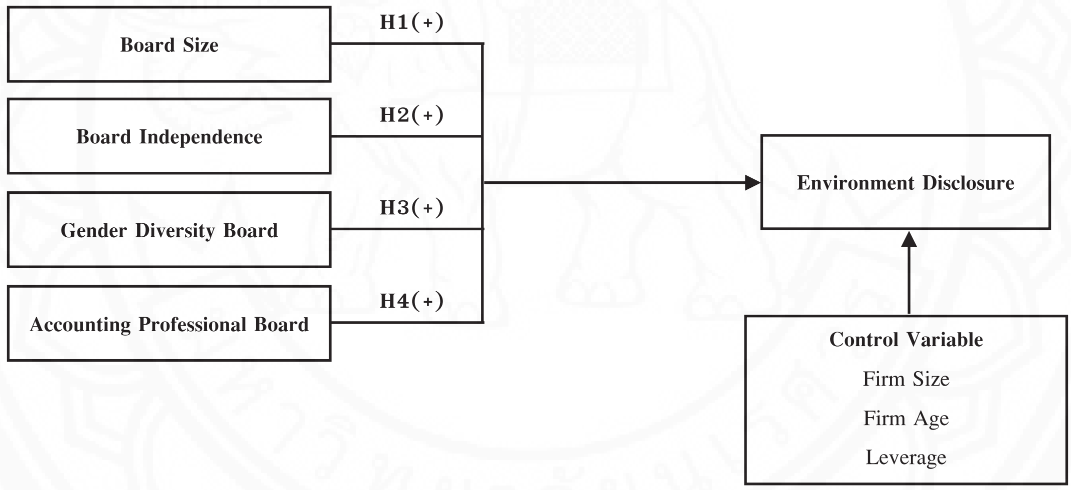

Figure 1 Research Framework.

Research Methodology

Sample

The research sample was chosen based on a conceptual framework and the ability to evaluate the disclosure of environmental data related to 897 companies listed in the Stock Exchange of Thailand, excluding the financial and provident fund group, which consists of 89 companies, as the business consortium has distinct operational attributes compared to other sectors. Additionally, entities focused on asset protection and those in the process of recovering their operations were excluded, as they do not operate under standard conditions where annual reports are publicly available via the Stock Exchange of Thailand. Companies with less than six years of operation 81 companies were also excluded, as well as organizations that failed to divulge environmental information within their sustainability reports or did not exhibit information related to board characteristics 274 companies. Therefore, the sample group used for the research consists of 453 companies, as illustrated in Table 1. It was imperative for this study to encompass a total of seven sectors, comprising the sample group as shown in Table 2, from which data was disclosed between 2018 and 2023, resulting in a comprehensive dataset of 2,718 research samples (from 453 firms).

Table 1 Distribution of Sample Size

Population and Sample	Companies
Population: The total number of companies registered on the SET.	897
Exclude the financial and provident fund groups in the SET.	89
Exclude companies focused on asset protection and those with less than six years of operation in the SET.	81
Exclude companies that do not disclose environmental information in the SET.	274
Sample Size for Each Year	**453**
Total Sample Size for Six Years	**2,718**

Table 2 Distribution of Companies by Industries

Industries	Companies	Percentage
Argo and Food	50	11.04
Consumer Products	34	7.51
Industrials	86	18.98
Property and Construction	92	20.31
Resource	54	11.92
Services	105	23.17
Technology	32	7.07
Total	**453**	**100**

Variables

Table 3 present variables measurement. Dependent variable pertains to the degree of environmental disclosure (ED) exhibited by Thai publicly listed corporations. The annual reports of the selected firms spanning the years 2018 to 2023. The measurement is operationalized through the application of the natural logarithm, which entails the enumeration of terminologies pertinent to environmental disclosure, Through the assessment of the breadth of environmental disclosure information, one can derive insights from a meticulous content analysis based on the specified categories of disclosure, which include energy consumption, greenhouse gas emissions, water resource management, waste management, utilization of natural resources, biological impacts, innovation development, and strategies for climate risk mitigation, according to the Global Reporting Initiative (GRI) criteria. Given that the quantity of words within a record facilitates categorization and necessitates evaluative judgments by researchers, the degree of environmental disclosure is ascertained by enumerating the words pertinent to environmental disclosure derived from Gamerschlag et al. (2011); Akbas (2016); Sucena and de Oliveira Marinho (2019).

Independent variables identified in this study encompass, firstly, board size (BS), which is quantified by the aggregate number of board director within the organization, as referenced by Al-Janadi et al. (2013). Secondly, board independence (BI) is evaluated through the proportion of independent members within the board of directors of the organization, as derived from the findings of Fuzi et al. (2016). Thirdly, gender diversity on the board (GD) is assessed by the proportion of female directors relative to the total number of directors serving on the board of the organization, as reported by Akbas (2016). Fourthly, the presence of accounting professionals on the board (AP) is determined by the proportion of directors who possess academic qualifications in accounting within the organization, derived from Chancharat et al. (2012).

Control variables are as follows: First, firm size (FS) is ascertained through the natural logarithm of the company's total assets. Second, firm age (FA) is evaluated based on the year in which the firm became listed on the Thai Stock Exchange, calculated in years. Third leverage is the ratio debt to equity ratio in companies.

Table 3 Variable Measurement

Variables	Notaion	Measurement
Environmental Disclosure	ED	The natural logarithm of environmental disclosure word count
Board Size	BS	The number of board directors in a company
Board Independence	BI	The proportion of independent members within the board of directors
Gender Diversity Board	GD	The proportion of female directors relative to the total number of directors
Accounting Professional Board	AP	The proportion of directors with academic qualifications in accounting within the organization
Firm Size	FS	The natural logarithm of total asset
Firm Age	FA	The age of the company
Leverage	LEV	The debt to asset ratio
Industries Type	IND	Industries type 1 to 7, where 1 is specified industry (Argo and food, consumer products, industrials, property and construction, resource, services, technology) and 0 is other industries
Year of Environmental Disclosure	YEAR	Year from 1 to 6, where 1 is the specified year (from 2018 to 2023) and 0 is other year

Model and Methodology of Estimation

To assess the veracity of the previously mentioned hypotheses and to explore the relation between board characteristics and the degree of environmental disclosure, the subsequent Ordinary Least Squares (OLS) regression model employing cross-sectional data is formulated:

$$ED = \alpha + \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 GD_{it} + \beta_4 AP_{it} + \beta_5 FS_{it} + \beta_6 FA_{it} + \beta_7 LEV_{it} \sum \beta_k IND_{it} + \sum \beta_k YEAR_{it} + \varepsilon$$

Results

Descriptive Statistics

Table 4 presents descriptive statistics. The parameters of interest, including the mean, standard deviation, maximum, minimum, and median values, are delineated. The mean value of the logarithm of environmental disclosure (ED), quantified by the number of words is 2.509 with a range of 0 to 4.236. The mean value of board size (BS) is 10.406 with a range of 4 to 25. The mean value of board independence (BI) is 0.404 with a range of 0.212 to 0.781. The mean value of gender diversity on the board (GD) is 0.214 with a range of 0 to 2.667. The mean value of accounting professionals on the board (AP) is 0.182 with a range of 0 to 0.910. The mean value of firm size (FS), represented as the logarithm of total assets, is 3.877 with a range of 2.130 to 6.539. The mean value of firm age (FA) is 21.333 with a range of 5 to 50, the last mean value of leverage (LEV) is 0.856 with a range of 0.001 to 1.132.

Table 4 Descriptive Statistics

Variables	N	Mean	SD	Max	Min	Median
Environmental Disclosure	2,718	2.509	0.642	4.236	0	2.580
Board Size	2,718	10.406	2.816	25	4	10
Board Independence	2,718	0.404	1.217	0.781	0.212	0.375
Gender Diversity Board	2,718	0.214	0.181	2.667	0	0.182
Accounting Professional Board	2,718	0.182	0.138	0.910	0	0.153
Firm Size	2,718	3.877	0.683	6.539	2.130	3.776
Firm Age	2,718	21.333	1.138	50	5	20
Leverage	2,718	0.856	2.059	1.132	0.001	0.436

Pearson Correlation Matrix

Table 5 present the Pearson correlation matrix for the variables utilized in the study. The results from the correlation analysis indicate that environmental disclosure (ED) is positively correlated with board size (BS), as demonstrated by a correlation coefficient of 0.086 ($P < 0.01$) in the first hypothesis. Additionally, it is correlated with board independence (BI), evidenced by a positive correlation value of 0.111 ($P < 0.01$) as stated in the second hypothesis. Furthermore, it is correlated with the accounting professional board (AP), exhibiting a positive correlation coefficient of 0.211 ($P < 0.01$), as demonstrated in the fourth hypothesis. Finally, it is correlated with firm size (FS), as indicated by a positive correlation value of 0.211 ($P < 0.01$) within the framework of the control variable.

Conversely, all variables, devoid of multicollinearity issues, can coexist when the intercorrelation among each predictor variable reaches a maximum of 0.338. Table 5 unequivocally illustrates that no variables exhibit a correlation over ± 0.70. Consequently, it may be inferred that no factors were identified as interrelated, based on the findings Hair et al. (2014). Finally, the Variance Inflation Factor (VIF) and Tolerance values of all independent variables were tested, revealing that the VIF values remained below the threshold of 10 for each variable, and the tolerance values approached unity for all variables. Consequently, it can be inferred that there is no significant multicollinearity among the independent variables, based on the findings of Yoon et al. (2018).

Table 5 Pearson Correlation Matrix

Variable	ED	BS	BI	GD	AP	FS	FA	LEV	VIF	Tolerance
ED	1									
BS	0.086**	1							1.391	0.719
BI	0.111**	-0.286**	1						1.196	0.836
GD	0.037	0.021	-0.021	1					1.125	0.889
AP	0.090**	-0.045*	0.029	0.258**	1				1.121	0.892
FS	0.211**	0.338**	0.134**	-0.109**	-0.051**	1			1.432	0.698
FA	0.019	0.170**	-0.081**	-0.058**	-0.005	0.037	1		1.087	0.920
LEV	-0.009	-0.03*	0.32	0.30	0.058**	-0.014**	-0.13	1	1.009	0.991

*Correlation is significant at the 0.05 level (-2 tailed)

**Correlation is significant at the 0.01 level (2-tailed)

OLS Regression Result

Before conducting the multiple regression analysis, the normal distribution of the data was checked and it was found that the data was approximately normally distributed, as the mean and median were slightly different (according to Table 5). Therefore, to make the data more closely approximate a normal distribution, this study used the robust standard errors technique to address the non-normal distribution and deal with heteroskedasticity. Additionally, the Hausman test technique was used to test the random effects model in the hypothesis-testing model to ensure the reliability of the study results before testing the hypothesis based on the findings of Lee (1992).

Table 6 delineates the findings of the OLS regression analysis of board size (BS), which signifies a substantial relation with corporate environmental disclosure (ED), thereby corroborating hypothesis H1 (β = 0.013, α = 1% level). Secondly, board independence (BI) demonstrates a noteworthy association with environmental disclosure (ED), thereby endorsing hypothesis H2 (β = 0.503, α = 1% level). Thirdly, the presence of accounting professionals on the board indicates a significant relationship with environmental disclosure (ED), thus supporting hypothesis H4 (β = 0.441, α = 1% level). Lastly, control variable firm size (FS) exhibits a significant relation with environmental disclosure (ED) (β = 0.177, α = 1% level).

Conversely, the presence of gender diversity within the board (GD) does not exhibit a significant relation with environmental disclosure (ED), as the results do not substantiate hypothesis H3 (β = 0.090), In addition, control variable firm age (FA) (β = 0.001). and leverage (LEV) (β = 0.000) also does not demonstrate a significant relationship with environmental disclosure (ED).

Furthermore, This study includes industry type and disclosure year as fixed effects in examining the relationship between board characteristics and environmental disclosure, the R square value derived from the models is 0.102, while the Adjusted R-squared is 0.096 period based on the aforementioned results, R square and adjusted R square do not pose a challenge for the evaluation of the model, as the analytical findings continue to demonstrate that the coefficients of the multiple regression model retain their significance in elucidating the dependent variable in relation to the independent variables this allows for the reporting of results and the summarization of the interrelationships among all variable consequently, this does not present an obstacle in the formulation of a model for the examination of the research hypothesis based on the findings of Moksony and Heged (1990) indicating that the F-value in the model accounts for approximately 17.053 percent of the variance within the dataset.

Table 6 Result of OLS Regression Analysis Testing Hypothesis

Variable	Coefficient (β)	Std. Error	T-stat	P-value	Results
Constant	1.278	0.098	13.013	0.000	
BS	0.013	0.005	2.601	0.009*	Support H1
BI	0.503	0.105	4.774	0.000*	Support H2
GD	0.090	0.068	1.308	0.191	Not Support H3
AP	0.441	0.089	4.930	0.000*	Support H4
FS	0.177	0.020	8.618	0.000*	
FA	0.001	0.001	0.660	0.504	
LEV	0.000	0.001	-0.798	0.425	
Industry Fix Effects	Included				
Year Fix Effects	Included				
R Square	0.102				
Adj R Square	0.096				
F-Value (sig.)	17.053				
N	2,718				

*Significant at the 0.01 level

Discussion

The OLS regression results in Table 6 indicating that the initial hypothesis H1 indicates a very significant relation between environmental disclosure and board size at the 0.01 level, it was found that increasing augmenting the size of the board may serve as a viable strategy to enhance environmental transparency, which, in turn, could bolster stakeholder relations, improve reputation, and potentially mitigate the risk of regulatory sanctions. For regulators and policymakers, these findings emphasize the necessity of promoting the adoption of governance frameworks by firms that advance environmental accountability. Policy makers might consider providing of incentives for the establishment of larger and more diverse boards to encourage superior environmental reporting. The empirical data indicating that this aligns with the research outcomes from Amalia et al. (2022); Li and Peng (2022); Budiyani and Erawati (2024). Furthermore, the second hypothesis H2 was found to be highly significant at a level of 0.01 in the environmental disclosure, which indicates that board independence and environmental disclosure have substantial implications for both corporate governance practices and policy formulation. Findings can be implied that an increased in proportion of independent directors may augment their environmental disclosure, thereby enhancing their corporate reputation and ensuring adherence to environmental regulations. This is particularly pertinent for enterprises operating within industries characterized by elevated environmental risks, where transparency and stakeholder engagement are paramount for sustained success. The independence of the board is regarded as having a beneficial effect on environmental disclosure, as it enhances transparency and accountability within the framework of corporate governance. Independent board members are frequently viewed as more impartial and less swayed by internal management, which may result in more thorough and candid reporting of environmental practices. The empirical data indicating that this aligns with the research outcomes form Okere et al. (2021); Chouaibil et al. (2022); Li and Peng (2022). Moreover, the third hypothesis H3 revealed that the proportion of female directors on the board was not significant in the environmental disclosure. This finding has significant implications for corporate governance practices, as it indicates that there is no definitive relation between the transparency of environmental disclosures and the representation of women on corporate boards. This phenomenon may be attributable to contextual disparities, including cultural, regulatory, or institutional elements, resulting in no discernible variations in the ratio of female executives relative to their male counterparts in the facilitating environmental disclosure. The empirical data indicates that this aligns with the research outcomes form Ardillah (2022); Wang et al. (2023). Eventually, the last hypothesis H4 was found to be highly significant at a level of 0.01 in the environmental disclosure: the accounting professional board, which found that boards comprising accounting experts are more inclined to provide thorough disclosures regarding environmental information. The expertise possessed by accounting professionals is pivotal in enhancing corporate governance and promoting environmental transparency. Accounting specialists contribute a heightened awareness of the significance of reliable, quantifiable, and verifiable data, which consequently results in more comprehensive environmental reporting. The empirical data indicates that this aligns with the research outcomes form Pinheiro et al. (2023); Unerman (2021).

Conclusion and Suggestions

Conclusion

This research endeavor sought to investigate the relation between the attributes of boards of directors and the degree of environmental disclosures among companies listed in the Stock Exchange of Thailand. The main findings suggest that certain board characteristics, particularly board size, independence, and the presence of accounting professionals, positively influence the level of environmental disclosure. However, gender diversity on the board does not show a significant effect on environmental reporting practices in the context of Thai firms.

The findings derived from this study have significant implications for corporate governance within Thailand and in other jurisdictions. For corporations, the results indicate that strengthening the board's independence, size, and accounting proficiency can significantly enhance environmental transparency. These elements may also help corporations effectively navigate the escalating demands from regulators and stakeholders for the provision of superior environmental disclosures. For policymakers, these findings provide compelling evidence that the promotion of board structures prioritizing independence and financial expertise may enhance environmental accountability.

The quality of environmental disclosure has the potential to significantly affect a corporation in numerous ways, influencing its financial outcomes, attractiveness to investors, and overall corporate reputation. Superior environmental disclosure is regarded as a strategic tool for corporations to demonstrate their environmental accountability and commitment to sustainability. This can result in enhanced financial performance, improved investment guidance, and more favorable stakeholder relationships. While exemplary environmental disclosure can provide numerous advantages to a corporation, it is imperative for investors to recognize that the caliber of such disclosures does not always correspond with a corporation's reputation. The effectiveness of environmental disclosures may fluctuate based on a corporation's reputation, regulatory environment, and regional cultural circumstances.

Suggestions and Future Research

While this investigation provides significant insights, it is not without limitations. Firstly, the study focuses solely on companies listed in the Stock Exchange of Thailand, which may limit the applicability of the results to other regions or countries with different governance and regulatory frameworks. The use of longitudinal data in future research could offer a more comprehensive understanding of the impact of changes in board composition on environmental transparency over time.

Future Research the investigator is encouraged to focus exclusively on the sample cohort of corporations listed on the stock exchange, specifically the SET50 and SET100 groups, as these represent a collection of securities characterized by high liquidity and enduring stability. Alternatively, the investigator may choose to examine the category of sustainable stocks that align with ESG criteria, which govern the principle of environmental information disclosure within sustainability reports. The investigator may also elect to examine additional dependent variables to assess the quality of environmental information disclosure and its relationship with other factors, such as performance, social pressures, economic ramifications, or investor confidence. Additionally, the investigator may choose to scrutinize a selection of corporations listed on the stock exchanges of ASEAN member states to compare the results of environmental information disclosure within sustainability reports against the contextual frameworks of the respective ASEAN nations.

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