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Examining the Nexus between Corporate Governance Mechanisms and Environmental, Social, and Governance: A Case Study of Malaysian Listed Firms

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Abstract: *The study examines the influence of corporate governance propositions concerning board composition and characteristics, board deliverables, and board cognitive and experiential diversity on the environment, social and governance (ESG) performance of publicly listed companies on the Main Board of Bursa Malaysia. The board's composition and characteristics are measured by members' performance and diversity, encompassing nationality, gender, age, and ethnicity, followed by industry knowledge, technical skills, emotional intelligence, persuasive skills, and diverse insights. The board deliverables are measured by how well the members enact ESG purposes within the company, connecting ESG purpose to company strategy, ownership of ESG, compensation metrics for championing ESG purposes, and exemplifying what the company is doing to fulfil its corporate purpose. Lastly, board cognitive and experiential diversity is measured with awareness of critical ESG issues, ability to articulate and communicate ESG strategic plans, adequate knowledge of core sustainability subjects, risk material disclosure, emerging-area regulations, and stance on social and political activity. The final data sample consists of 119 Bursa Malaysia companies with ESG disclosure. The findings indicate that the board composition, characteristics, and deliverables enhance ESG performance. However, board cognitive and experiential diversity is negatively related to ESG performance. This study provides new insights into the importance of*

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board composition, characteristics, and deliverables towards ESG performance in the Malaysian context.

Keywords: ESG performance; Board composition and characteristics; Board deliverables; Board cognitive; Professional board experience
JEL Classification: G30, M19, Q50

1. Introduction

The concept of environment, social, and governance or ESG has gained significant traction in the corporate world, with investors recognising its impact on sustainability, long-term value creation and profitability (Rajagopal et al., 2016; Selvaraju et al., 2017; Sundram et al., 2017). ESG-related questions now take precedence in corporate board meetings, focusing on supply chain waste reduction, modern slavery in procurement and supply systems, and low-carbon operations. As the key constituency enabling ESG performance, the board of directors plays a crucial role in driving sustainability practices (Gärling & Jansson, 2021). Existing literature has primarily focused on board composition, diligence, and their impact on corporate performance. It is typically measured using return on equity (ROE) and return on total assets (ROTA) as performance yardsticks. However, these financial metrics alone do not adequately reflect the contribution of sustainability practices to long-term value creation (Fahad & Busru, 2020; Zumente & Bistrova, 2021).

Previous studies, such as Barby et al. (2021), have focused on the need for board competencies and their impact on corporate performance, but often consider only a single dimension of corporate governance. Findings on the relationship between corporate governance and ESG performance have been mixed, highlighting the need for further research to determine the extent to which new dimensions of board competencies provide a valid measurement of ESG performance. For example, Munir et al. (2019) and Rooh et al. (2021) show that board characteristics such as gender diversity, independence, and size positively influence the ESG performance of the company, while other studies have found no direct relationship between board educational background and remuneration with ESG performance (Kola Benson & Ganda, 2022; Tjahjadi et al., 2021).

To address these gaps, examining the relationship between more up-to-date board competencies (composition, characteristics, deliverables, cognitive and experiential diversity) and ESG performance is crucial. In addition, there is a need to identify any missing variables that could explain the inconsistent findings in the literature. The involvement of the Oxford University Centre for Corporate Reputation, Harvard Law Forum on Corporate Governance, Rusell Reynolds, EY Centre of Board Matters, and PwC theory indicates that ESG performance of a company is linked to deliverable broad frameworks and systematic ESG metrics and ratings.

Since most research is conducted in Australia, the United Kingdom, the United States, South Korea, Indonesia, India, Pakistan, and South Africa, validating the developed instruments and theories in other cultural and business settings is essential to ensure their robustness. This study aims to fill this gap by focusing on corporate board competencies' present and current dimensions and their influence on ESG performance. Specifically, it aims to examine the influence of board composition, characteristics, and deliverables on ESG strategy, and board cognitive and experiential diversity on ESG performance. These factors will be benchmarked against overall company performance to provide empirical evidence of their relationship. This study will be conducted on publicly listed companies in Malaysia, contributing to understanding corporate governance mechanisms and their impact on ESG performance.

2. Literature Review

2.1 ESG performance

Over the past decade, institutional investors have taken hold of companies' ESG performance reports. In these reports, an independent external auditor provides the information for financial, operational, cyber, and worker audits. The route to ESG performance came about from metrics and ratings. These quantitative and qualitative measures are used to track progress and evaluate results, which are also translatable into a final benchmark or rating format. Meanwhile, metrics and rating tools are obtained from ESG standards, frameworks, and questionnaires (Freiberg et al., 2021; Twinamatsiko & Kumar, 2022). Furthermore, ESG performance is still fragmented, despite independent firms and regulatory bodies continually designing and improving metrics and standards. Moreover, these criteria must be used to adequately measure corporate sustainability performances (Sardanelli et al., 2022).

There is extensive research on the link between a company's ESG disclosure and corporate boards (Abdul Rahman & Alsayegh, 2021; Alsayegh et al., 2020; Disli et al., 2022; Sharma et al., 2020). Studies in this area are broad and have been reviewed methodically by early authors. Hence, instead of an extensive review, the present research describes the relevance of these studies' aims. Furthermore, the correlation between ESG disclosure and financial performance needs further clarification, as many use financial performance as the dependent variable. ESG disclosure entails presenting ESG data without underlying mechanisms for how the data came about. With ESG performance, a footprint can be traced together with valuable data throughout the value chain (Lopez-de-Silanes et al., 2020).

2.2 Board composition and characteristic

Many think a corporate board position is the cushiest sinecure in the corporate world. On the contrary, today's board members are under tremendous scrutiny. They must navigate geopolitical strife, war, climate change, activist shareholders, concerned employees, inflation, technological disruption, and other hypersensitive political environments. Stringent corporate governance has forced boards to be more responsible and accountable. Board members are also tasked with ensuring diversity within the organisation and the board itself (Peterson & Gardner, 2022).

A study by Kamaludin et al. (2022) examines the influence of board characteristics concerning independence, diversity and board diligence on ESG disclosure. The study was conducted with 786 Malaysian-listed companies, with only 91 companies obtaining an ESG disclosure score from Bloomberg from the sample size between 2006 and 2020. The findings positively affect the board's independence and diversity towards ESG disclosure. In contrast, board diligence is related negatively to ESG disclosure.

Disli et al. (2022) investigate the effects of characteristics on board independence, board size, gender diversity, and frequency of board meetings towards sustainability performance. They studied 439 publicly listed companies and non-financial industries from 20 emerging countries from

2010 to 2019, with ESG scores drawn from the Thomson Reuters Eikon database, and company data from the Morgan Stanley Capital International Emerging Market Index. Their findings show that gender diversity as well as significant numbers of independent board members convening frequently achieve better sustainability performance.

2.3 Board deliverables

ESG is the centre of attention of investors and chief executives in today's decision-making process. However, one influential constituency lagging is corporate boards. Whelan et al. (2021) report that many corporate boards are inadequate on matters related to ESG, and do not see the importance of their company examining material sustainability issues. When embracing sustainability, such boards remain stubborn outliers, pointing to a lack of expertise among members.

More recently, Sanderson et al. (2021) identified the attributes that allow board members to drive sustainability in their corporation effectively. Approximately 1,500 corporate directors and C-suite executives worldwide were surveyed. The study indicates how much directors struggle to take the first step towards corporate sustainability. Furthermore, through active engagement, board culture, leadership, purpose, strategy, risk alignment, structure and process, people and composition successfully show an assurance towards company performance. Eccles et al. (2020) arrive at a similar view. If the organisation emphasises sustainability deliverables as part of its long-term future viability and success, an effective board will ensure that the company works towards this goal (Sanderson & Galloway, 2023).

2.4 Board cognitive and experiential diversity

Over the years, competing notions of 'diversity' have emerged. Traditionally, this has been understood as demographic diversity—board gender composition and size, independence, and the number of activities. Today, it has been eclipsed by a new concept centred on experiential and cognitive differences. A study by de Anca and Aragon (2018) on diversity perception comprising 180 corporate managers splits diversity into three categories. Demographic diversity comprises gender, ethnicity, and sexual orientation;

experiential diversity includes affinities, hobbies, and abilities; and cognitive diversity explains how board members approach and think about problems. Deloitte, a corporate service provider for Fortune 500 companies, points out that the traditional focus on demographic diversity was anchored on fairness to legally protected populations. Now, companies can harness commanding and nuanced diversity, that is, diversity of thought (Bourke & Dillon, 2018). Similarly, Korn Ferry, a global management consulting company, argues that companies should indulge in diverse perspectives, experiences and contributions (Ashikali et al., 2021).

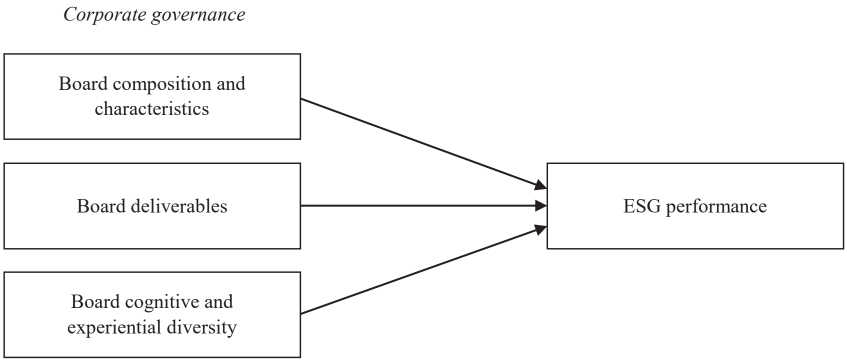
Kang et al. (2022) and Ali et al. (2021) examine whether cognitive diversity improves corporate governance and adds value to a company's stock market performance. They also determine whether board demographics relate to cognitive diversity by measuring dissenting views in the boardroom. The first viewpoint suggests cognitive diversity, measured using age, tenure, industry experience, gender, and nationality, results in director dissent and proposal rejection and adds value to the company's performance. The study also shows that directors with diverse backgrounds, characteristics, qualifications and skillsets, including a combination of female and male directors, provide diverse opinions in the boardroom, demonstrating that enhanced cognitive diversity increases company value by rejecting risky management manoeuvres.

3. Research Methodology

3.1 Research model and hypotheses

In this study, the development of the theoretical framework is based on the anticipated relationships between corporate governance and ESG performance, whereby the latter reflects the competencies of board members. The framework below, developed based on three hypotheses derived from the literature, depicts the relationship among the variables in the theoretical framework (Figure 1).

Figure 1: Theoretical Framework



Based on existing literature, board characteristics predominantly measure gender, age, independence and frequency of meeting attendance to determine the impact on ESG disclosure (Kamaludin et al., 2022). This study adds new dimensions to accurately reflect how board composition and characteristics influence ESG performance. Board composition includes diversity (nationality, gender, age and ethnicity) and technical skills. Board characteristics measure performance, industry knowledge, emotional and persuasive skills, and how it embraces diverse insights before deciding. This study uses board composition and characteristics as independent variables. Therefore, the following directional hypothesis is formulated by relating board composition and characteristics to ESG performance:

H_1 Board composition and characteristics are positively associated with ESG performance

An effective board ensures sustainability takes root in the company's ESG performance. Sanderson and Galloway (2023) find a significant relationship between board deliverables and company sustainability performance. Board deliverables are considered independent variables impacting ESG performance. The directional hypothesis is formulated as follows:

H_2 Board deliverables are positively associated with ESG performance

Based on de Anca and Aragon (2018) and Bourke and Dillon, (2018), more companies are looking at embracing cognitive and experiential diversity to further strengthen corporate performance. Board cognitive and experiential diversity is also taken as an independent variable to investigate its impact on ESG performance. The directional hypothesis is formulated as follows:

H_3 Board cognitive and experiential diversity is positively associated with ESG performance

3.2 Population and sampling procedure

The participants in this study consist of independent and non-independent directors, company secretaries, and CEOs of publicly listed companies as a sampling unit from the Main Board of Bursa Malaysia, known as a sampling frame. Snowball sampling is used when a limited number of targeted participants with specific characteristics and knowledge can be chosen using probability and non-probability sampling techniques within a population, where other participants recruit new participants for sampling (Majid, 2018; Sundram et al., 2022). This study uses snowball sampling with probability to select the board members to answer the questionnaire on corporate governance.

From the 787 companies listed on the Main Board of Bursa MalaysiaClick or tap here to enter text., 119 is the estimated required sample size for multiple regression analysis. The sample size was determined using G*Power software (version 3.1.9.4). The setting measure was set at alpha = 0.05, f^2= 0.15, and the number of predictors = 3 (representing board composition and characteristics, board deliverables, and board cognitive and experiential diversity). The power was set at 95%.

As Sundram et al. (2022) point out, the unit of analysis is the aggregation level of collected data in various stages for subsequent data analysis. The research question mainly determines the unit of analysis, which is the ‘who’ and ‘what’ this study will analyse. This study unit of analysis is derived from consolidated data on individuals (corporate board members).

3.3 Questionnaire development

This study’s main component (Set A) uses online questionnaires to consolidate participant feedback. The questionnaire constructs were developed upon finalisation of the literature review. The questionnaire draft was shared with academics for modifications, and subsequently, pilot studies were carried out for further refinement. Upon completion, the final survey was executed to consolidate the input from participants. Based on the objective of this study, the questionnaires were divided into four sections, including demographics.

Similarly, this study's Set B questionnaire, which measures the dependent variable, ESG performance, was also conducted using pre-determined questionnaires derived from the PwC ESG performance measurement framework, that measures ESG material matter (Linnenluecke, 2022). The questionnaires were divided into three sections based on the study's objective.

A five-point Likert scale was used to measure the constructs in three areas, each with six determinants, except for the demographic section for Set A questionnaires. The five-point Likert scale was also used to measure the material matter in all three sections of Set B questionnaires. The questions had multiple choices, and the evaluator could only pick one answer. Table 1 presents the measurement of variables in this study.

Table 1: Measurement of Variables

Variable	Measurement	Sources
Board composition and characteristics	• Board members' performances • Diversity in nationality, gender, age, and ethnicity • Industry and technical knowledge • Emotional intelligence and persuasive skills • Embraces diverse insights	• Kamaludin et al. (2022) • Disli, Yilmaz & Mohamed (2022) • Thompson & Adasi Manu (2020) • Boshnak (2021)
Board deliverables	• SCORE framework: Simplify ESG purpose • Connect ESG purpose with the audience • Ownership of ESG • Reward • Exemplify ESG	• Kamaludin et al. (2022) • Disli et al. (2022) • Thompson & Adasi Manu (2020) • Boshnak (2021)
Board cognitive and experiential diversity	• Clear, well-organised, and aware of critical ESG issues • Articulate and communicate the ESG strategic plan • Adequate knowledge of core subjects within sustainability • Adequate risk disclosure • Confidence, understanding of regulations in emerging areas • Stance on social issues and political activity	• Geletkanycz et al. (2018) • Kang et al. (2022) • Gilshan & Chambers M (2020) • Ali et al. (2021)

Variable	Measurement	Sources
ESG performances	• Environment (decarbonisation, water scarcity, waste and pollution, biodiversity fostering, sustainable supply chain) • Social (workforce, human rights, community, product responsibility) • Governance (corporate behaviour, management)	• Fahad & Busru (2020) • Sharma, Panday & Dangwal (2020) • Abdul Rahman & Alsayegh (2021) • Alsayegh, Rahman & Homayoun (2020) • Linnenluecke (2022)

The validity test applied to this study is content validity, which depends on the evaluation of experts in the field (Mohajan, 2017). For this study, a professor from Universiti Teknologi MARA (UiTM) Shah Alam, an expert in business research, was engaged to ensure that the validity of research instruments accords to the research objectives. Apart from validity, the instrument's reliability is considered by examining stability and internal consistency. An excellent stable measure will produce the same score result every time. This study uses Cronbach's alpha coefficient to determine the reliability value. The acceptable value for reliability is greater than 0.7 (Ravinder & Saraswathi, 2020).

3.4 Data collection procedures

Online questionnaires on Google Forms were used to consolidate data from the respondents. The questionnaires include demographics, board composition and characteristics, board deliverables, and board cognitive and experiential diversity. The primary respondents are the board members of the publicly listed companies on the Main Board of Bursa Malaysia. This questionnaire was circulated through three different methods: (i) LinkedIn, the social networking platform designed for business and professional communities, allowed researchers to connect with board members from publicly listed companies in Malaysia, which then enabled the questionnaires to be distributed. Recipients were also encouraged to redistribute the questionnaire to other board members with whom they were in contact. resulting in the snowballing effects of data gathering. Constant follow-up was needed to receive the answered questionnaires from participants; (ii) Researchers were also able to circulate the questionnaire to the Institute of Corporate Directors Malaysia (ICDM). In return, ICDM distributed the questionnaires to all its members, including board members from various publicly listed companies; and (iii) Researchers forwarded the questionnaire to the board members through the Regulatory Unit in Bursa Malaysia for re-circulation to all the publicly listed companies' board members.

To entice respondents to send back answered questionnaires, the researcher provided cases and articles on management insights, consolidated from republished articles on *Harvard Business Review* (HBR) in conjunction with its 100th anniversary. This process assisted the researcher in getting the filled questionnaires quickly and diligently. In the thank you note that appeared upon completion of the questionnaires, the respondents could follow a link to download 11 articles. The data collection procedure took three months, from December 2022 until the end of February 2023.

3.5 Data analysis

3.5.1 Response rate

An average of 320 online questionnaires were sent to corporate board members. Large-scale distribution lists were obtained from LinkedIn, as well as circulation through ICDM and Bursa Malaysia. Rigorous follow-up was needed to encourage the board members to revert with their answered questionnaires. Typical rejections include insufficient time to answer the question or being too apprehensive about responding, especially from non-independent executive directors. The process attracted 11 cases to encourage more significant responses, and articles from HBR were provided through a link at the end of the survey. A total of 125 respondents came through, and the questionnaire link was disabled upon reaching the minimum number of 119 required by G*Power, translating to a 37% response rate. A total of six responses were discarded due to inconsistencies.

Table 2 displays the profiles of the survey respondents. Respondents shared their name or email ID while providing their feedback on the board's approach towards sustainability. However, some respondents opted not to do so because they need to exercise caution while expressing their views.

Table 2: Profile of Respondents

	Categories	Frequency	Percentage (%)
Company name	(Unique)	119	100%
Respondent name	(Unique)	-	-
Respondent email	(Unique)	-	-
Respondent position	Independent, non-executive director	85	71.4
	Independent, executive director	12	10.1
	Non-independent, executive director	10	8.4
	Non-independent, non-executive director	11	9.2
	Chief executive officer	1	0.8
Company classification	Government-linked company (GLC)	13	10.9
	Government-linked investment company (GLIC)	1	1.0
	Multinational company (MNC)	15	12.6
	Large corporation	90	75.6

Survey respondents were collected from independent non-executive directors, independent executive directors, non-independent non-executive directors, and CEOs. Approximately 71% of respondents indicated they are independent non-executive directors, 10.1% independent executive directors, 10% non-independent executive directors, and 11% non-executive directors. Only 1% of respondents indicated they were CEOs. Regarding company classification, the lowest number of respondents, 1%, are from government-linked investment companies (GLICs), which is understandable as there are only six GLICs in Malaysia (Khalid, 2021). This is followed by government-linked companies (GLCs) at 11% and multinational companies (MNCs) at 13%. Most respondents are from large corporations, generally family-owned or privately held, which stood at 76%.

3.5.2 Reliability analysis

A Cronbach's alpha value equal to or greater than 0.7 is considered reliable (Greco et al., 2018). In Table 3, the reliability coefficients of the measures are summarised by reliability analysis on the independent and dependent variables to ensure the internal consistency of the measurement instruments. The generated scale was reliable, as the Cronbach's alpha value ranged from 0.8 to 0.9.

Table 3: Reliability Analysis: Cronbach's Alpha (*n* = 119) Actual Study Results

Variables	Number of items	Item deleted	Cronbach's alpha
Board composition and characteristic	6	-	0.851
Board deliverables	6	-	0.915
Board cognitive and experiential diversity	6	-	0.897
ESG performances	3	-	0.780

3.5.3 Correlation analysis

Table 4 provides the correlation analysis to determine the degree of strength of the relationship between corporate governance and ESG performance variables. Results showed that all variables have positive and significant relationships, with correlations ranging from $r = 0.719$ to $r = 0.780$. Board deliverables had the strongest correlation ($r = 0.812$), while the weakest correlation was between board composition and characteristic and ESG performances ($r = 0.719$). Additionally, all correlations between independent variables were significant and had positive relationships with each other, with board deliverables having the highest correlation with board cognitive and experiential diversity ($r = 0.876$). The strength of the correlations was below 0.9, indicating no multicollinearity issue between the correlations of all variables.

Table 4: Correlation analysis (*r*)

Variables	Board composition and characteristic	Board deliverables	Board cognitive and experiential diversity	ESG performances
Board composition and characteristic	1.000			
Board deliverables	0.740**	1.000		
Board cognitive and experiential diversity	0.780**	0.876**	1.000	
ESG performances	0.719**	0.812**	0.773**	1.000

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

3.5.4 Multiple regression analysis

All the independent variables (board composition and characteristics, board deliverables, board cognitive and experiential diversity) in Table 5 explain 69.4% of the variance ($R^2 = 0.694$) in ESG performance. This indicates high significance, and a good model fit as the F statistic is 87.06 ($F > 1$), while the p-value (t-test) is $p < 0.001$, less than the critical value ($p < 0.05$). Hence, the regression model is significant, meaning there is a relationship between independent and dependent variables. The difference of 30.6% in the relationship is defined by other independent variables (excluded variables), which are not included in this study and could further strengthen the regression equation.

Table 5: Summary of Relationship between Corporate Governance and ESG Performance

Independents variables (Corporate governance)	**Dependant variable (ESG performance) Standard β coefficients and significance level**
Board composition and characteristic	0.219***
Board deliverables	0.526***
Board cognitive and experiential diversity	0.141
R	0.833
R^2	0.694
Adjusted R2	0.686
F	87.062***

Table 5 indicates that board deliverable has a beta coefficient ($\beta = 0.526$, $p = 0.001$, $p < 0.05$). This concludes that the board deliverable variable makes the most substantial unique contribution to ESG performance, which is the dependent variable when the variance explained by all other variables in the model is controlled for. This is followed by board composition and characteristics ($\beta = 0.219$, $p = 0.010$). The variable board cognitive and experiential diversity ($\beta = 0.141$, $p = 0.230$) made less of a unique contribution to ESG performances as the p value is above a significant level. Therefore, the result depicts that only two variables, board deliverables and board composition and characteristics, make unique and statistically significant contributions to ESG performance.

4. Discussion

4.1 Board composition and characteristic

The present study analyses how the composition and characteristics of the board of a publicly listed company can affect its ESG performance. The study surveyed 119 board members of publicly listed companies and found that the board composition and characteristics were positively associated with the company's ESG performance.

The study analysed five areas within the board's composition and characteristics. Firstly, it found that there was sufficient diversity in nationality, gender, age, and ethnicity, especially for multinational companies and for companies with a significant domestic market. Secondly, it measured the board's performance areas, including the company's requirement to engage a third-party assessment provider. Thirdly, it found that the board members had industry knowledge, including experience, knowledge of the sector, broad public policy direction, and government legislation and processes. Fourthly, it found that the board members had emotional intelligence and persuasive skills to collect and interpret multiple points of view from the board meeting and then deliver them to the CEO cohesively and comprehensively. Lastly, the board members worked diligently to establish a culture that embraces diverse insights and ensures they are shared and incorporated into the decision-making process.

The study has shown insufficient diversity in nationality, gender, age, and ethnicity within the corporate board. However, industry knowledge among the board members was adequate to impact ESG performance. Past studies also show that greater board diversity leads to positive ESG disclosure and sustainability practices (Disli et al., 2022; Kamaludin et al., 2022). Having a suitable board composition and characteristics has always been a requirement of corporate governance to manage business affairs in an orderly fashion. Sustainability practices are just one of the many criteria laid out by investors and stakeholders to push companies forward, and it begins with greater board diversity.

4.2 Board deliverables

This study aimed to investigate if the board deliverables in ESG strategy have played a significant role in the company, in terms of affecting ESG performances. It was found that board deliverables were positively associated with the company's ESG performance.

The present study was designed to determine the effect of the SCORE framework on board deliverables. The SCORE framework outlines the board's responsibility in five key areas to integrate sustainability practices within the company. It starts with enacting ESG purposes within the company, then connecting the purpose to the company strategy and allocating necessary capital. Board members are also encouraged to appoint an executive who solely focuses on delivering and ensuring sustainability practices take shape within the company through its internal processes and controls. The same procedures and controls are tagged with metrics to determine remuneration and promotion for the entire workforce, especially for executives championing ESG integration. Subsequently, board members must integrate ESG performance results in company finances, with disclosure on risk materiality matters. All efforts are published in an integrated annual report incorporating sustainability success stories.

The most important finding is that ESG reporting is closely associated with ESG performance, while the establishment of metrics to determine remuneration, promotion, and capital allocation, as well as to connect the ESG purpose to the company strategy is still perceived as playing a less significant role in terms of impacting ESG performance (Eccles et al., 2020). Sanderson et al. (2021) emphasise that as sustainability efforts gain momentum in society, expectations that companies will play a leading role in sustainability efforts begin to arise. It is essential to note that the corporate board knows how to enable and drive sustainability within the company. Not only does the corporate board ensure that the company has sustainability embedded in its corporate strategy, but KPIs need to be aligned with reporting standards built into remuneration and compensation. The corporate board's fiduciary duty extends beyond good performance on ESG materiality matters, which is essential to investors and the public and critical to the company's staying relevant in a world that is increasingly beset by ESG-related crises. A sustainable company starts with the board (Jan, 2019; Whelan, 2021).

4.3 Board cognitive and experiential diversity

This study explores the significance of a cognitive and experientially diverse board towards ESG performance. The findings suggest that no relationship exists between having a cognitive and experientially diverse board and ESG performance. The study also examined several other areas, starting with board members being well-organised and aware of critical ESG issues during board meetings, and whether board members can articulate and communicate the company's ESG strategic plan. Further examined areas include the board's adequate knowledge of core subjects: legal, regulations, audit, finance, risk, cybersecurity, and strategy within the sustainability area; fair risk material disclosure, confidence and understanding of rules in the emerging regions such as carbon credit, climate risk, internal processes and controls surrounding data collection and carbon emissions; as well as the company's stance towards social issues and corporate political activity.

The study shows that risk material disclosure has the weakest link with ESG performance. On the contrary, it is the most pertinent information needed as evidence that sustainability matters are looked upon earnestly to bridge the relationship with stakeholders (Whelan, 2022). Meanwhile, board discussions on the company's stance on social issues and corporate political activity is strongly linked to ESG performance. Kang et al. (2022) reveal that differences in qualifications and skillsets of corporate boards are vital attributes that affect cognitive diversity. In addition, mental and experiential diversity results in dissenting views that add value to the company. The benefits of having a cognitive and professionally diverse board would not materialise without an egalitarian board culture, which brings back diversity in board composition and characteristics (Creary et al., 2019). The study observes that one standard deviation increase in a broad-based board composition and characteristic measure is associated with a 22% increase in ESG performance. The breadth of an effective board only takes its root from different perspectives, and regular intervention is integrated into the board's work.

5. Implications

The insights gained from this study may assist the effectiveness of corporate governance propositions in achieving sustainability practices. Overall, this study strengthens and affirms that board performance is the main area which stakeholders should pay close attention to in return for sustainability in corporations.

The aperture on ESG performances broadens a growing number of stakeholders seeking sustainability assurance. Today, stakeholders are empowered and savvy, paying close attention to many aspects of board performance, from board quality to effectiveness and composition. This study will prove helpful in expanding our understanding of how to improve the board selection process for the next five years. The results also add to the knowledge of public policy regulators and present board members on the need for board diversity. It enhances performance through board quality, effectiveness, and composition.

On the theoretical front, the findings contribute to the literature by understanding the corporate governance framework and its impact on ESG performance. With increasing institutional investment from the global market, this study can assist in providing a clearer picture of how the board members of a company are performing, by reflecting upon the company's ESG performances.

6. Conclusion, limitation, and future research

This study information can be used to develop targeted interventions aimed at regulatory bodies, policymakers, executive search firms, corporate governance practitioners, and corporate board members, mainly those leading the nomination committee.

Another important practical proposition is that there is a need for corporate board diversity to be well-established. Malaysia has mandated that at least 30% of directors of publicly listed companies must be women (Kaur & Vasu, 2022). Similarly, women's representation in European countries stood at 40%, while several US states established ethnicity or gender-based quotas. Substantial progress was gained from these policies based on a recent study by Peterson and Gardner (2022), which found that women's representation grew from 5% to 40% in the Financial Times Stock Exchange (FTSE), London. Ultimately, a diverse corporate board is essential, despite gaining meaningful progress not only limited to gender or ethnicity but also taking an intersectional approach to diversity and experience and investing in an authentic culture of inclusion.

While investors loom into the ESG performances, corporate board performance evaluation is scrutinised based on cognitive and experience, deliverables, and composition. Several significant changes need to be made in light of heightened demands for evidence of board effectiveness in the selection process. This will strengthen existing efforts to make corporate board performance evaluation more rigorous. In the US, the regulatory body asserts a firm approach from shareholders on corporate boards regarding individual quality and skill sets. Meanwhile, in Brazil, it is being formalised by the regulatory bodies on diversity and board independence. In India, non-executive directors are being made mandatory, while European countries demand improvement in board skills and structure. Listed companies in Germany require two financial experts on their corporate boards, including an explicit code recommendation for the skill profile in sustainability (Fields & O'Kelley, 2023).

Regardless of region, present global economic distress and turbulent markets affect corporate governance. The post-Covid supply chains, the war in Ukraine and inflation have strained and stressed corporate boards and their companies. This study supports sound recommendations for a greater emphasis on board deliverables towards ESG within corporate strategy across geographies. New regulatory requirements in the US, UK and Singapore may become compulsory, such as evolving compensation change linked to ESG issues (Carey et al., 2023).

Apart from governance, an easy revelation on company performances for savvy investors is to look at the company's ESG agenda. Global investors are doubling down on demands for enhanced ESG reporting, mainly from publicly listed companies. The gap on ESG issues continues to expand as stakeholders seek sustainability assurances before investment can occur. Movements such as Say on Climate and yearly Conference of the Parties (COP) meetings among global leaders propel higher demand for ESG-related skills. Meanwhile, the climate agenda in India and Latin America continues to pay attention to the boardrooms. The US is not excluded from ESG performance, and there is already an increased focus on labour rights and human capital issues. Thus, ESG performance cannot be sanctioned from corporate governance requirements (Admans, 2023; Carter et al., 2023).

There is no ESG performance report without a sound and robust board of governance leadership. This study provides details of the board directors' thoughts, their methods in facing daily tasks and challenges, and their operating and collaboration, considering the process of ESG performance adaptation by the companies. Furthermore, the study provides implications for consumers, investors, existing board members, stakeholders, and policymakers. Firstly, today's consumers must be well-advised about the ESG initiatives of listed companies. Consumers can support the company further if the ESG performances reflect potential and positive results. As required by the local capital market authority, the Securities Commission, companies are obligated to disclose their ESG initiatives to the general public.

Furthermore, both retail and individual investors can use corporate governance disclosure results as a benchmark for their investment decisions in the company. The stakeholders, from suppliers to partners within the supply system, can make informed decisions if the company's corporate governance is not ESG-friendly. Thirdly, existing board members can look upon the study to further upgrade their skills and awareness that ESG performance is very much interrelated with board performance. The board members can embrace change in governance, including rethinking recruitment strategies for greater diversity. Finally, policymakers can explore differences in existing regulatory processes and make necessary changes in the corporate governance regulations on the disclosure of ESG performance.

Future research can expand on this study by examining the variables associated with each measurement question, refining corporate board competencies, and exploring the impact of different types of companies on ESG performance. Comparative analysis of multinational corporations and other sectors would provide valuable insights into corporate governance practices. Furthermore, investigating specific board deliverables and their effectiveness, including variations between global and local companies, can deepen our understanding of their influence on ESG performance.

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