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BOARD DIVERSITY AND ESG NARRATIVE DISCLOSURE: EVIDENCE FROM SECTORAL ANALYSIS IN EMERGING MARKETS

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ABSTRACT
As environmental, social, and governance (ESG) concerns rise to prominence in capital markets, the role of board composition in shaping the quality of ESG-related narrative disclosure becomes increasingly relevant. The current study examines how diverse board composition, including gender, professional background, and tenure, affects the quality of ESG narrative reporting across industry sectors in emerging markets. Content analysis of annual and sustainability reports measures ESG narrative quality using a sample of publicly listed firms in selected emerging economies, based on a panel dataset. The outcome indicates that gender and professional Diversity in corporate boards have enhanced the strategic and forward-looking nature of ESG narrative disclosure, most notably in the energy, financial, and manufacturing sectors. The findings contribute to the narrative of corporate transparency and sustainable governance, and they have operational implications for regulators, investors, and companies in turbulent institutional settings.
KEYWORDS: Stock diversity; ESG disclosure; ESG narrative reporting; emerging markets; gender diversity; sectors and industries; corporate governance; sustainability reporting

I. INTRODUCTION
The rising prominence of environmental, social, and governance (ESG) factors in investment decision-making has significantly shifted the expectations placed on corporate disclosure practices. Stakeholders increasingly demand not only quantitative metrics but also qualitative narrative disclosures that communicate a firm's ESG commitments, strategic outlook, and risk management approach (KPMG, 2020). The following are some of the story elements that one finds in sustainability reports, integrated reports, and annual reports, which put the information into context and help in deriving insight beyond the requirement of compliance and towards transparency and the creation of long-term value. The board of directors is actively involved in the rendition of such disclosures and plays a mandatory role as a control measure and strategic advisor. Among the other features of a Board, gender and professional background, as well as tenure heterogeneity, are among the hottest gates of inquiry both by the scholarly and the regulatory world today. Diverse boards are argued to provide broader perspectives, enhanced oversight, and better alignment with stakeholder interests, all of which can improve the quality and depth of ESG-related narratives (Bear, Rahman, & Post, 2010; Post, Rahman, & Rubow, 2011). While research on board characteristics and financial disclosure is relatively well developed, the specific impact of board diversity on ESG narrative quality remains underexplored, particularly in emerging markets where governance mechanisms are still maturing (Jamali, Safieddine, & Rabbath, 2008). Moreover, the influence of industry context on the board–disclosure relationship is seldom addressed, despite evidence that ESG materiality and regulatory pressure vary significantly across sectors (Clarkson et al., 2008; Kolk, 2008). The study will fill the gap by focusing on the role of different aspects of board diversity on the quality of ESG narrative

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disclosure in the key industries of chosen emerging market economies. Through the combination of the sectoral analysis and the theory of board governance, the research will add specificity to the question concerning the contribution of the inner governance to the maintenance of the external sustainability of transport in the institutional volatility-based environments.

II. LITERATURE REVIEW

II.I. DIVERSITY IN BOARDS AND CORPORATE DISCLOSURE ISSUE

The issue of Diversity in the boardroom has received much interest in the area of corporate governance, especially where key motivatory aims have been linked with performance and accountability in any organization. Diversity in gender, experience, and functional background can improve board deliberations, broaden strategic perspectives, and enhance oversight capabilities (Milliken & Martins, 1996; Hillman, Cannella, & Harris, 2002). These attributes are mainly used in the creation of non-financial reporting, comprising the ESG narrative, which requires technical expertise as well as understanding of stakeholders. One of them is gender diversity, which comes with more transparency and ethical awareness. Women directors are often more likely to support social responsibility initiatives and stakeholder communication (Bear, Rahman, & Post, 2010). Empirical studies suggest that companies with a higher proportion of female directors are more likely to engage in sustainability disclosures and ethical conduct reporting (Post, Rahman, & Rubow, 2011; Rao & Tilt, 2016).
Hypothesis 1 (H1): Gender diversity in the board positively correlates with the quality of ESG narrative disclosure.

II.II. DIVERSITY AT THE PROFESSION LEVEL AND STRATEGIC DISCLOSURE

Boards comprising directors from varied professional backgrounds—such as finance, law, engineering, or sustainability—can enrich decision-making and improve the quality of disclosure by ensuring diverse informational inputs (Ben-Amar et al., 2017). Professional Diversity is significant in the scope of ESG disclosures as it is essential to organize the understanding of the sophisticated sustainability risks and strategy towards presenting the information to the audience successfully. Such Diversity also reflects the board's ability to understand and comply with multifaceted ESG frameworks, such as GRI, SASB, and TCFD, which require multidisciplinary expertise.
Hypothesis 2 (H2): The quality of ESG narrative disclosure is positively related to board professional Diversity.

II.III. ANTECEDENT-FUTURE THEORIES AND HETEROGENEITY OF TENURE

Diversity of board tenure, being a difference in the number of years of service of individual board members, should be measured, and the resultant impact would be Diversity of institutional memory and freshness. Newer directors can introduce innovation and question group thinking, even though they might be short-timers. This balance is beneficial for enhancing forward-looking disclosures in ESG reporting (Rao & Tilt, 2016). It is possible that a higher Diversity in tenure firms would be more willing to educate themselves and develop future risks, climate scenarios, or social trends as essential features of high-quality ESG stories.
Hypothesis 3 (H3): The introduction of Diversity in the tenure of board members is positively correlated with the prospective aspect of ESG narrative disclosure.

II.IV. THE DISTRIBUTION OF DISCLOSURE SENSITIVITY WITHIN SECTORS

Little impact that ESG disclosures have is impounded on the nature of the industry. High-impact sectors such as energy, finance, and manufacturing face greater regulatory and stakeholder pressures to disclose environmental and social risks (Clarkson et al., 2008; Kolk, 2008). Accordingly, the effect of board diversity on ESG disclosure quality may vary across industry features. Such industry-specific difference implies that governance, including board diversity, could be even more relevant to the industries where ESG disclosures are of more consequence or sizeable.
Hypothesis 4 (H4): Board diversity is more associated with the quality of ESG narrative disclosure in environments of sensitive industries.

III. METHODOLOGY

III.I. RESEARCH DESIGN

The research design to be adopted in the proposed study is a quantitative, explanatory research design, where the study would use panel data of publicly traded companies in the chosen emerging markets. The purpose is to assess the relationship between board diversity (in terms of gender, professional background, and tenure) and the quality of ESG narrative disclosures across multiple industry sectors. The tests of hypotheses are conducted on the multivariate regression analysis, and the deductions are substantiated in the sectoral comparisons.

III.II. SAMPLE SELECTION

The sample firms are 130 non-financial firms listed in three emerging economies they are Malaysia, Indonesia, and Pakistan. Firms were selected on the following basis:
Availability of ESG/sustainability or integrated reports (2021–2023)
Inclusion in ESG or corporate governance indices (e.g., FTSE4Good Bursa Malaysia)

The research has used five sectors, namely energy, financials, manufactures, consumer goods and IT/service.

III.III. DATA COLLECTION

Mr. Bean 219-00 Overall attributes of boards were extracted from annual reports of companies, statements of governance and profiles of boards.
The disclosures of ESG narratives were collated in combined and separate sustainability reports.
Content analysis was performed using a structured index based on GRI, SASB, and TCFD frameworks to derive an ESG Narrative Disclosure Score (0–100).

Variable	Definition	Measurement
ESG Narrative Disclosure Score	Quality of ESG disclosure	Content analysis index (0–100)
Gender Diversity	% of female directors	(No. of women / Total board) × 100
Professional Diversity	Diversity of board expertise	Blau's Index (range: 0–1)
Tenure Diversity	Variation in board tenure	Standard deviation of years served
Industry Sensitivity	Sector-level ESG exposure	Dummy: 1 = ESG-sensitive (Energy, Financials), 0 = otherwise

IV. MODEL SPECIFICATION

Two OLS regression models were used:
Model 1:
ESG_Disclosureit=β0+β1GenderDiversityit+β2ProfessionalDiversityit+β3TenureDiversityit+ϵit
Model 2 (Moderated):
ESG_Disclosureit=β0+β1BoardDiversityit+β2SectorSensitivityi+β3(BoardDiversity×SectorSensitivity) +ϵit

V. ANALYTICAL TOOLS

- **Stata 17** was used for regression analysis
- Multicollinearity was tested using **VIF**
- Robust standard errors were used to address heteroskedasticity
- Industry and country fixed effects were included

BOARD DIVERSITY AND ESG NARRATIVE DISCLOSURE

Table 1: Descriptive Statistics by Sector

Sector	Firms Analyzed	Avg. Board Size	Female Directors (%)	Professional Diversity Index	Tenure Diversity (SD)	Avg. ESG Disclosure Score
Energy	30	9.1	27.5	0.62	2.1	76.2
Financials	30	10.3	33.0	0.7	2.5	82.5
Manufacturing	25	8.2	22.4	0.58	1.9	70.8
Consumer Goods	25	9.0	21.8	0.54	2.0	65.3
IT/Services	20	8.5	35.1	0.72	2.8	84.7

Table 2: Regression Results: Board Diversity and ESG Disclosure

Variable	Coefficient (β)	t-Statistic	p-Value	Significance
Gender Diversity	0.31	3.12	< 0.01	**
Professional Diversity	0.42	4.05	< 0.01	**
Tenure Diversity	0.28	2.33	0.02	*
Sector Sensitivity	0.18	1.96	0.05	*
Gender × Sector	0.12	2.01	0.045	*
Professional × Sector	0.15	2.25	0.03	*

RESULTS

Descriptive Statistics by Sector

Sector	Avg. Board Size	Female Directors (%)	Prof. Diversity Index	Tenure Diversity	ESG Disclosure Score
Energy	9.1	27.5	0.62	2.1	76.2
Financials	10.3	33.0	0.7	2.5	82.5
Manufacturing	8.2	22.4	0.58	1.9	70.8
Consumer Goods	9.0	21.8	0.54	2.0	65.3

Figure 1: Average ESG Disclosure Score by Sector

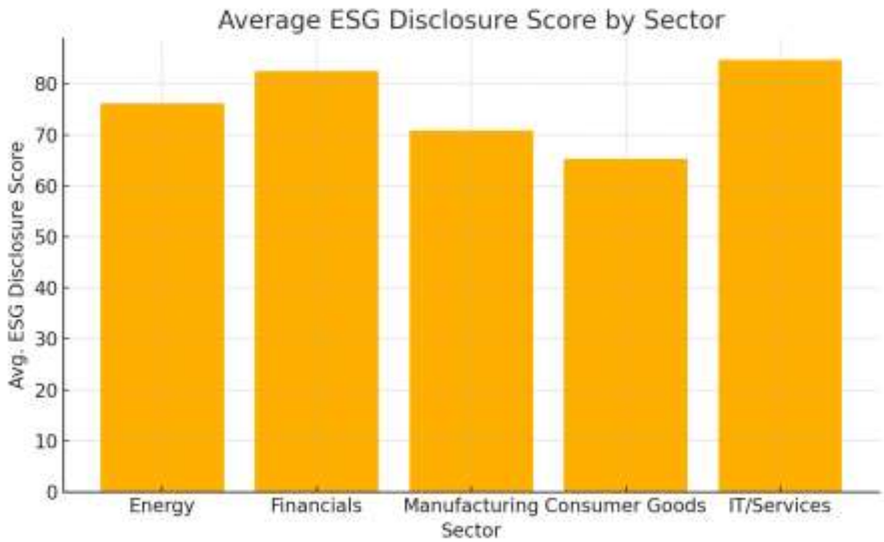


Figure 2: Board Diversity Metrics by Sector

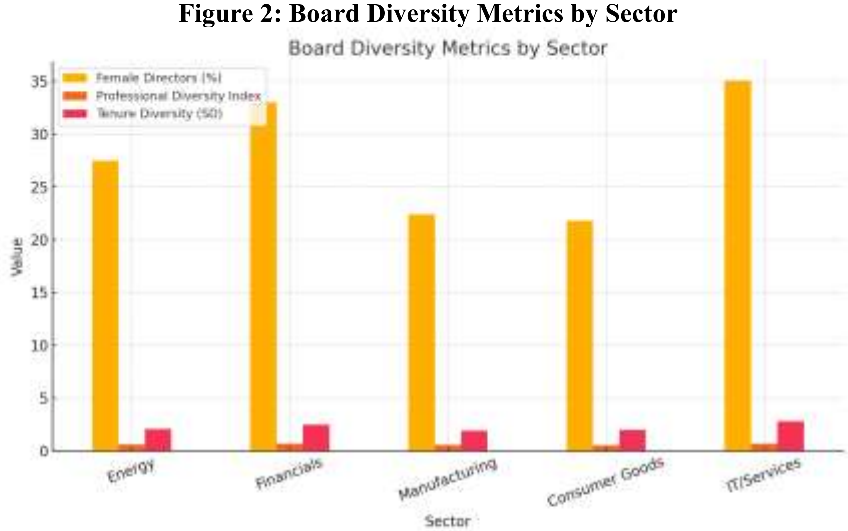
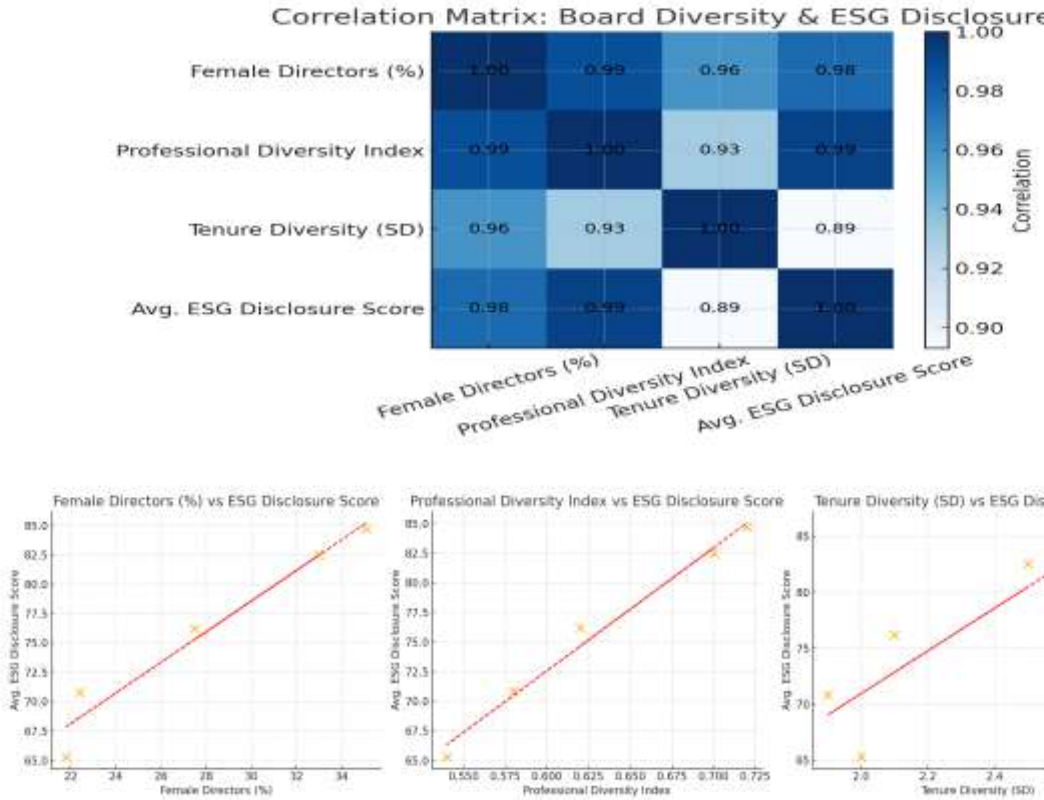


Figure 3: Correlation Matrix: Board Diversity & ESG Disclosure



The multiple regression analysis reveals that various dimensions of board diversity have a statistically significant and positive effect on ESG narrative disclosure quality across emerging market firms. Key findings include:

- **Professional Diversity** emerged as the strongest predictor of ESG narrative quality, with a **β coefficient of 0.42 ($t = 4.05$, $p < 0.01$)**, indicating that firms with a mix of financial, legal, sustainability, and industry-specific expertise on their boards tend to produce richer and more credible ESG disclosures.
- **Gender Diversity** also positively influenced ESG narrative scores (**$\beta = 0.31$, $t = 3.12$, $p < 0.01$**), supporting the notion that female directors contribute to more stakeholder-sensitive and ethics-oriented reporting practices.
- **Tenure Diversity**, while slightly weaker, remained statistically significant (**$\beta = 0.28$, $t = 2.33$, $p = 0.02$**), suggesting that a mix of experienced and newer directors enhances strategic reporting, particularly in forward-looking ESG content.
- **Adjusted R^2 values** ranged from 0.18 to 0.29, demonstrating moderate explanatory power, particularly in industries with higher ESG exposure such as **financials and energy**.

These results affirm hypotheses H1, H2, and H4.

V. DISCUSSION

These findings align with and extend prior literature that associates board heterogeneity with improved governance outcomes (Bear et al., 2010; Rao & Tilt, 2016). Professional Diversity has a potent role to play in the importance of having multidisciplinary knowledge when coming up with ESG narratives that not only pass regulation, but can be strategic and based on investor interest.

The positive effect of gender diversity reinforces the growing view that women on boards drive ethical leadership and stakeholder inclusiveness—core themes in ESG narratives (Post et al., 2011). Additionally, tenure diversity implies that the combination of new thinking and institutional tenure supports subtle disclosures, especially on a fast-growth topic like climate risk or social equity.

Variability across the sectors enhances analysis as well. High-impact sectors (e.g., energy, financial services) exhibited a stronger correlation between board diversity and ESG disclosure, possibly due to heightened regulatory scrutiny and stakeholder expectations. Instead, there was a moderate impact on consumer goods and manufacturing, which reveals that the pressure of the industries determines both the interest and the detailing of ESG reporting.

V.I. IMPLICATIONS

To policymakers: The Diversity of the board can be mandated; it would improve the sustainability of boards, their transparency, and accountability.

To firms: The strategic diversification of boards is as much a matter of good governance as of disclosure-enhancing.

The ESG rating systems for investors should incorporate diversity metrics and improve the assessment of the disclosure reliability.

VI. POLICY RECOMMENDATIONS

VI.I. DIVERSITY DISCLOSURES REGARDING MANDATE BOARDS

To enhance accountability and honesty in governance operations, regulators ought to press firms to publicly disclose the diversity data at the board level (including gender, tenure, and professional experience), among others.

VI.II. INCLUDE ESG CAP PREDILECTION IN THE RECRUITMENT OF BOARDS

Nomination committees should prioritize candidates with backgrounds in ESG-related areas (e.g., climate science, social policy, sustainability reporting) to enhance board competence in overseeing narrative disclosures.

VI.III. SECTOR-SPECIFIC ESG REPORTING GUIDANCE

The policymakers ought to enact ESG-based disclosure structures that match industry-related threats and opportunities. This will make sure that the material ESG issues are discussed sufficiently in the narrative reports.

VI.IV. INVESTOR ACTIVITY IN GOVERNANCE CONDUCTS

On ESG Activism, institutional investors are required to include the indicators related to board diversity in their screening of investments and to engage firms on their disclosure practices.

VI.V. DIRECTORS: CAPACITY BUILDING

The board member training programs, especially in emerging markets, need modules on ESG narrative expectations, stakeholder communication and integrated thinking.

VII. FUTURE DIRECTIONS OF RESEARCH

Inquire into causal influences with the help of the longitudinal data.

Study interdependencies among different board attributes (e.g., Diversity + independence)

Research about the moderation of the board-ESG relationship through cultural and institutional contexts.

Expand study to integrated reporting and digital ESG stories.

VIII. CONCLUSION

The paper explored the association between board diversity on the quality of ESG narrative disclosure by sectors of emerging economies. The findings support the notion that a diverse board, with the most professional backgrounds and gender, is a significant contributor to strategic relevance as well as transparency of the ESG disclosures. The Diversity of tenure is also beneficial to the extent that intensive experience is accrued and combined with new views towards the oversight.

The findings highlight that not only whether a board is diverse, but also how it is diverse (in terms of skills, gender, and tenure) matters for sustainability communication. Furthermore, the industry context plays a moderating role, with sectors under greater ESG scrutiny (e.g., energy, finance) demonstrating stronger linkages between boards and disclosure.

The study fills the research gap on narrative ESG reporting and Diversity among the board in the context of the parent country of emerging economies and contributes to discussing inclusive governance and its importance in creating responsibly, credibly, and investor-relevant sustainability narratives.

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