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The Influence of Board Attributes and Managerial Ownership on Environmental Disclosures: Evidence from Nigerian Consumer Goods Firms

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Abstract

This study examined the relationship between board attributes, managerial ownership structure, and environmental disclosure among selected consumer goods firms listed on the Nigeria Exchange Group (NGX). A causal research design was adopted. The population comprised twenty-one (21) consumer goods firms listed on the NGX, all of which were used as the sample for the study, covering the period from 2015 to 2023. Board independence and board gender diversity were used as proxies for board attributes, while environmental disclosure served as the dependent variable. The findings revealed that board independence does not have a significant relationship with environmental disclosure. However, board gender diversity has a positive and significant relationship with environmental disclosure ($t = 3.83$, $p = 0.000$). Furthermore, managerial ownership has a negative and significant influence on environmental disclosure ($t = -3.29$, $p = 0.001$). The study concludes that board gender diversity and managerial ownership structure play significant roles in shaping environmental disclosure practices among consumer goods firms in Nigeria. Based on these findings, the study recommends that firms should promote greater gender diversity on corporate boards to enhance environmental disclosure practices. In addition, companies should ensure a balanced managerial ownership structure to minimize managerial dominance and improve transparency in environmental reporting.

Keywords: Board Diversity, Board independence, Environmental Disclosures, Managerial Ownership

JEL Classification: M40, M41, M43

Introduction

Transparency and disclosure play a crucial role in the corporate governance (CGV) framework, aiding stakeholders and managers in decision-making. Firms are increasingly focusing on contemporary issues like board attributes (BDA), ownership structure and environmental disclosure as regards to the ever-changing business landscape. Ioannou and Serafeim (2017) suggest that disclosing environmental activities provides stakeholders with vital information about firms environmental performance, initiatives, and risks. While larger firms carefully report environmental and corporate governance records which also included board traits and ownership structure in their annual reports, smaller businesses often neglect such reporting. Peters et al. (2011) noted that evolving markets tend to exhibit weaker or no measures of board attributes and environmental disclosures. Stakeholders now anticipate firms to adopt responsible and sustainable business practices, and many countries have enacted laws to support corporate governance (CGV) disclosures. For instance, Nigeria relies on the Company and Allied Matters Act (2004) and codes issued by the Securities and Exchange Commission, the US employs the Sarbanes-Oxley Act of 2002, and the United Kingdom follows voluntary guidelines. Meeting these expectations involves emphasizing on corporate governance features and disclosing environmental information. Environmental concerns, driven by factors like climate change, pollution, greenhouse gas emissions, and global warming resulting from activities such as oil extraction, gas flaring, mining, agriculture-related practices, and manufacturing, are highlighted by Osemene et al. (2021). Adinehzadeh et al. (2018) stress that the detrimental effects of environmental issues are a noteworthy global concern in both developed and developing nations. Wang et al. (2023) argued that effective firm CGV is crucial for ethical, legal, and efficient business operations, subject to both internal and external monitoring. The current state of board traits, ownership structure and environmental disclosures in accounting literature is marked by an increasing focused on incorporating social, governance and environmental (ESG) elements into financial reporting and decision-making processes. Adinehzadeh et al. (2018) suggested that firms with robust and effective board and managerial ownership structure which are all CGV component will implement environmentally friendly strategies.

Ardillah and Chandra (2021) highlighted that environmental disclosure practices also diverge between firms adhering to relevant laws and regulations and those that do not. Despite being a rapidly growing economy with abundant natural resources in Southeast Asia, Malaysia grapples with conflicts between environmental protection and economic growth, as noted by (Adinehzadeh et al., 2018). In Nigeria, many manufacturing firms tend to selectively disclose environmental information that favors their interests, according to (Yahaya et al., 2022). Ardillah and Chandra (2021) observed that certain Indonesian firms still encounter challenges in environmental management despite government measures. Regarding environmental pollution, Melo et al. (2016) identified Germany, Russia, Japan, the USA, and Saudi Arabia among the top

10 countries with the highest CO2 emissions, whereas Nigeria ranks 149th out of 184 countries assessed for environmental pollution (Global Carbon Atlas, 2021). This ranking underscores the necessity for heightened global attention to sustainable development, the enforcement of environmental protection laws, and the promotion of environmentally friendly and sensitive practices among firms, as advocated by (Yilmaz & Can 2020). Mardiana and Wuryani (2019) support this notion, emphasizing that firms should prioritize addressing the adverse impacts of their operational activities by intensifying environmental protection efforts.

Furthermore, Dirman (2019) asserts that ensuring corporate sustainability and effective corporate governance hinges on firms giving due consideration to environmental and social dimensions. According to Yahaya et al. (2022), there are two avenues for overseeing CGV: internal mechanisms (such as board diversity, independence, meeting frequency, and composition) and external mechanisms (like ownership structure and market mechanisms). Enhanced board independence and diversity foster transparency and high-quality reporting on environmental matters. A larger number of independent directors on the board increases the probability of firms disclosing accurate facts about their environmental status. Moreover, having qualified and experienced board members, especially those knowledgeable about environmental issues, enhances the quality of environmental disclosure. Furthermore, managers, being well-informed about the organisation's affairs and the environmental challenges it faces, are motivated to maintain the company's reputation and prevent noteworthy losses, particularly when they have ownership stakes. Thus, managerial ownership encourages responsible disclosure of environmental costs that align with the interests of both managers and other shareholders.

This study delves into the connection between board attributes, managerial ownership structure and environmental disclosure (EVD) within Nigeria's consumer goods firms. The focus is on the consumer goods manufacturing sector among the seven sectors in the Nigerian economy, given its substantial impact on the environment due to production activities. Despite Nigeria's favorable climate and abundant natural resources, manufacturing operations noteworthy contribute to adverse effects on the climate and natural resources, particularly through the emission of CO2 into the atmosphere (Uwuigbe & Jimoh, 2012). Various researchers, such as Adinehzadeh et al. (2018), Chakraborty and Dey (2023), Fitriasari (2023), Johnson (2020), Trireksani and Djajadikerta (2016) and Putri (2020), have explored the effect of CGV on environmental disclosure (EVD) focusing on board attributes and ownership structure. Nevertheless, most of these studies were conducted in Indonesia, Bangladesh, and South Africa. Notably, there is a scarcity of research on the combine effect of board attributes and managerial ownership structure on EVD in Nigeria. Previous studies in Nigeria such as the studies of Bokime & Eno, 2023; Ekundayo et al., 2021; Yahaya et al., 2022 has primarily concentrated on assessing the impact of internal CGV mechanisms on environmental reporting. More so, this study goes beyond by addressing this gap and specifically investigates the impact of internal mechanisms, represented by board

independence (BIN) and gender diversity (BDV), and external mechanisms, represented by managerial ownership (MOW), on environmental disclosure (EVD). In essence, this research contributes to the existing theoretical literature and extends its impact to empirical studies within this research domain. The outcome of this study offers valuable insights to top management as regards the association between BIN, BDV, MOW and EVD. The primary objective is to explore the connection between board attributes, ownership structure and the environmental disclosure practices of consumer goods manufacturing firms in Nigeria.

Literature review

Board attributes and managerial ownership structure

Corporate governance involves providing leadership, guidance, and oversight to ensure organizational objectives are achieved (Osemene et al., 2021; Ogunmakin et al., 2020). Internal governance mechanisms such as board independence and board diversity influence board effectiveness and reporting practices. Board independence refers to the presence of a significant number of directors who are not part of management, and such independence is associated with higher voluntary disclosure practices (Monks & Minow, 2011; Agyemang et al., 2020). Board diversity involves the inclusion of individuals with different backgrounds, experiences, and demographics, including gender and professional diversity. Managerial ownership represents the proportion of company shares held by managers, helping to align managerial interests with those of shareholders (Ardillah & Chandra, 2021).

Environmental disclosure (EVD)

Environmental disclosure, also known as green reporting, involves communicating a firm's environmental activities and impacts over a specific period through accounting and reporting practices (Batra, 2013). It serves as a monitoring mechanism to protect stakeholder and shareholder interests (Cormier et al., 2003) and helps reduce agency problems by limiting managerial opportunistic behavior (Olagunju et al., 2023). Environmental disclosure can be mandatory, voluntary, or involuntary. The Green Reporting Index was one of the early global frameworks developed to measure environmental disclosure practices (Epstein, 2014).

Board attributes, managerial ownership structure and environmental disclosures

Board attributes and managerial ownership play important roles in shaping corporate practices, including environmental disclosure. The composition and effectiveness of the board influence the quality of environmental reporting (Adams & McNicholas, 2007). Board independence enhances transparency, as independent directors are less influenced by internal management biases and help provide objective evaluation of environmental risks and opportunities (Daily, Dalton & Cannella, 2003; Habash, 2016).

Board diversity, including differences in age, gender, ethnicity, and professional background, is also expected to improve environmental awareness and disclosure because diverse boards are more responsive to stakeholder and public environmental expectations (Hassan et al., 2020; Zou et al., 2019). Similarly, managerial ownership can influence environmental reporting, as managers with ownership stakes are more likely to focus on long-term sustainability and transparency (Ardillah, 2021; Shiu & Yang, 2017). Several studies have examined the relationship between board independence, board diversity, managerial ownership, and environmental disclosure (Amorelli & García-Sánchez, 2020; Ben-Amar et al., 2017; Bokime & Eno, 2023; Oleh et al., 2022; Yahaya et al., 2022; Zhang, 2012).

Theoretical review

This study is anchored on Legitimacy Theory, introduced by Dowling and Pfeffer (1975). The theory suggests that firms must align their operations with societal values and norms to maintain social acceptance. Environmental disclosure helps firms fulfill their social responsibilities, improve reputation, and strengthen stakeholder relationships (Ardillah & Chandra, 2021). From a legitimacy perspective, independent directors are expected to promote greater environmental disclosure by exerting pressure on management to improve transparency (Ibrahim & Angelidis, 1995; Kilincarslan et al., 2020). Similarly, board gender diversity may encourage higher voluntary environmental disclosure as firms respond to societal expectations (Tasnim & Khan, 2022). Overall, board attributes and managerial ownership influence how firms align with social and environmental expectations.

Empirical review

Chakraborty and Dey (2023) examined the influence of corporate governance variables (CGV) on voluntary environmental disclosure (EVD) in Bangladeshi firms using data from 250 firms listed on the Dhaka Stock Exchange from 2015 to 2019. Using ordinary least squares and univariate analysis, the study found that board independence (BIN) and board diversity (BDV) have positive and significant effects on EVD.

Osemene et al. (2021) studied selected African countries, including Nigeria, Kenya, South Africa, and Egypt, using content analysis and panel regression. The results showed that board committees, board independence, board diversity, and ownership structure positively and significantly influence environmental disclosure.

Ekundayo et al. (2021) found that board size positively influences EVD, while board independence, board diversity, and managerial ownership negatively affect environmental disclosure. Similarly, Abazu and Okoye (2021) reported that board size, board meetings, board independence, and board diversity have positive and significant relationships with environmental disclosure.

The reviewed literature shows mixed findings on the relationship between corporate governance mechanisms and environmental disclosure. While some studies report that board diversity positively enhances environmental reporting, others present insignificant or negative relationships. Similarly,

evidence on managerial ownership and female board representation remains inconsistent across different contexts. However, most studies suggest that effective corporate governance structures can improve environmental accountability. Overall, the literature indicates the need for further empirical investigation, particularly in developing economies such as Nigeria, to provide more conclusive evidence on the relationship between board attributes, ownership structure and the environmental disclosure practices.

Methodology

This study investigated the nexus between board attributes, managerial ownership structure and environmental disclosures among quoted consumer goods (CG) firms, utilizing a causal research design. The study focuses on consumer goods firms because the sector is environmentally sensitive, highly visible to consumers, and subject to strong stakeholder and reputational pressures. Their operations involve significant resource use, waste generation, and packaging activities, making environmental disclosure particularly relevant. In addition, consumer goods firms listed on the Nigerian Exchange Group tend to have more structured governance and accessible reporting frameworks. Concentrating on a single industry also reduces cross-sector variations and strengthens the internal validity of the study. This study focused on a population of 21 CG firms listed on the Nigeria Exchange Group, with all the firms selected as the sample size using census sampling techniques. The research period spanned from 2015 to 2023. Since the study adopted a census approach covering all 21 listed consumer goods firms on the Nigerian Exchange Group, the dataset constitutes the entire population of interest rather than a sample. As a result, sampling error is eliminated and the estimated parameters describe the actual characteristics of the sector for the period 2015–2023.

Therefore, statistical tests are used to evaluate the robustness and consistency of relationships within the observed firm-year data, not to generalize from a sample to that same population. The conclusions are thus internally valid for the sector examined.

The independent variables are managerial ownership structure and board attributes measured using board independence (BIN) and board gender diversity (BDV), while environmental disclosure (the dependent variable) was gauged through the environmental disclosure index. Control variables included firm size (FSZ) and firm age (FA). The study utilized random effect, descriptive statistics and correlation analysis as data estimation techniques. Diagnostics test were also conducted in the study.

Table 1 Measurement of Variables

S/N	VARIABLES	MEASUREMENTS	SOURCE
		Dependent Variable	
1.	Environmental Disclosures	A score of 1 is allotted if a firm divulges EVD item and 0 score is allotted if they do not.	Okewale (2017)
		Independent Variables	
2.	Board Independence	Ratio of non-executive directors in the board.	Ong and Djajadikarta (2017)
3.	Board Gender Diversity	Proportion of female directors on the board.	Horton et al., (2012)
4.	Managerial Ownership	Proportion of firm shares held by managers.	Mgbame & Onoyase (2015)
		Control Variables	
5.	Firm Size	The natural log of Total Assets at the end of the year.	Olagunju et al. (2021), Olagunju et al. (2023)
6.	Firm Age	The no of years of a firm listing.	Ofoegbu, Odoemelam & Okafor (2018)

Model specification

The model specification of Yahaya et al. (2022), Odoemelam & Okafor (2018) was adopted and modified in this research work. The practical model of the study is:

EVD Model

$$EVD = f(BIN, BDV, MOW, FSZ, FA) \quad (1)$$

$$EVD_{it} = \beta_0 + \beta_1 BIN_{it} + \beta_2 BDV_{it} + \beta_3 MOW + \beta_4 FSZ_{it} + \beta_5 FA_{it} + ui + \varepsilon it \quad (2)$$

Where:

EVD = Environmental Disclosures
BIN= Board Independence
BDV = Board Diversity
MOW= Managerial Ownership
FSZ= Firm Size
FA = Firm Age
$\beta_0 = Constant\ Parameter$
$\beta_0 - \beta_5$ = Regression coefficient of Independent and control variables
$\mu_{it} = Error\ terms$ Random firm-specific effect
ε_{it}= Idiosyncratic error

Results and discussion of findings

Table 2 Presents the descriptive statistics

Stats	EVD	BIN	BDV	MOW	FSZ	FA
Mean	0.578	69.330	14.247	7.070	8.862	42.091
Median	1	71.43	14.286	0.514	8.732	44.5
Max	1	93.33	50	85.29	11.987	75
Min	0	0	0	0	6.098	4
Stan. Dv.	0.496	15.908	11.217	14.345	1.862	18.912
Skewness	-0.316	-1.353	0.248	3.155	0.171	-0.369
N	189	189	189	189	189	189

Source: Authors' Computation, (2026)

Table 2 presents the statistical summary results for environmental disclosures which revealed that, EVD, BIN, BDV, and MOW, have mean values of -0.578, 69.330, 14.247, and 7.070 percent, respectively. The control variables, FSZ and FA, have mean values of 8.862 and 42.091 percent, respectively. The max. and min. values for environmental disclosures are (1, 0), while BIN, BDV, MOW have maximum and minimum values of (93.33, 50, 85.29), (0,0,0), respectively. Similarly, firm size and firm age exhibit min. and max. values of (11.987, 6.098) and (75, 4) respectively. With the exemption of EVD, BIN and FA, all the variables in the research work displayed positive skewness demonstrating that their dispersals were skewed to the right side. Although EVD is bounded between 0 and 1, its distribution is only slightly left-skewed (skewness = -0.316), making the linear random effects model a reasonable approximation.

Correlation matrix

Table 3 Presents the estimated matrix of correlations

VAR	EVD	BIN	BDV	MOW	FS	FA	VIF	1/VIF
EVD	1.0000							
BIN	-0.0034	1.0000					1.08	0.929
BDV	0.2451	-0.2207	1.0000				1.08	0.929
MOW	-0.1584	0.0904	-0.044	1.0000			1.16	0.865
FSZ	-0.0359	-0.1116	-0.0326	-0.2299	1.0000		1.19	0.841
FA	-0.1725	-0.1825	0.1044	-0.3226	0.3883	1.0000	1.33	0.929

Source: Author's Computation, (2026)

The results indicate that EVD is negatively associated with BIN (correlation coefficient: -0.0034), while it shows a positive correlation with board diversity (correlation coefficient: 0.2451). Additionally, there's a weak direct association between EVD and MOW (correlation coefficient: -0.1584), and a weak negative association between EVD and FSZ (correlation coefficient: -0.0359)

in the listed Nigeria manufacturing firms. Furthermore, EVD has a negative yet feeble connection with FA (coeff. = -0.1725). The multicollinearity test revealed that none of the variables, including the highest VIF (1.33 for FA), approach the threshold of 10, suggesting absence of multicollinearity.

Table 4 Diagnostic Test

	Type	P-values	Comments
F-Tests	F-Tests	0.0001	Panel Regression is Preferable.
Hausman Test (4.374)	Hausman Test	0.626	Random Effect is preferred
Heteroscedasticity	Breusch-pagan (1.541)	0.163	Non-existence of heteroscedasticity

Source: Author's Computation, (2026)

The Hausman test confirms that the random effect (RE) model is consistent (p-value = 0.626), allowing us to estimate time-invariant variable firm age. Although EVD is bounded between 0 and 1, its distribution is only slightly left-skewed in table 2 (skewness = -0.316). Therefore, the RE model is a reasonable approximation.

Hypothesis testing

H_0: No connection exists between board attributes, managerial ownership and environmental disclosures of quoted Nigeria consumer goods firms.

Table 5 Hypothesis Test result (Random Effect Regression Results)

Variables	Coefficient	Std. Error	t-statistics	Prob.
C	0.387	0.279	1.38	0.168
BIN	0.003	0.002	1.13	0.259
BDV	0.013	0.0035	3.83	0.000
MOW	-0.009	0.0028	- 3.29	0.001
FSZ	0.023	0.0219	1.07	0.286
FA	-0.0079	0.0023	-3.45	0.001

Source: Author's Computation, 2026

The outcome of the RE indicates that, at the 0.05 significance level, BIN lack noteworthy impact on environmental disclosures in Nigeria's listed CG firms, given its t-statistics value of (1.13) and coefficient values of (0.003). Conversely, MOW exhibited a negative noteworthy influence on EVD, as evidenced by t-stat.

and coefficient value of (-3.29) and (-0.009) respectively. On the positive side, BDV have a noteworthy influence on EVD, supported by a t-stat. of 3.83 and coefficient value of 0.013. Overall, BDV and MOW are found to have a substantial impact on the EVS of quoted CG firms. Abazu and Okoye (2021), Chakraborty and Dey (2023), and Osemene et al. (2021) aligns with our study, indicating a positive and substantial effect of BDV on EVD. In contrast, Ekundayo et al. (2021) reported a negative and noteworthy impact, while Trireksani and Djajadikerta (2016) find no correlation between BDV and EVD. Ekundayo et al. (2021) and Haladu and Salim's (2016) findings also suggested that MOW negatively and noteworthy affects EVD, contradicting Uwuigbe's (2011) discovery of a positive and noteworthy effect.

However, the positive influence of BIN and FSZ on the EVD of listed CG firms is not statistically noteworthy. This result mirrors the findings of Ndalu et al. (2021), Pareek et al. (2019), and Yahaya et al. (2022), all indicating that BIN lacks a noteworthy influence on EVD. In contrast, Ong and Djajadikarta (2017) challenge this by asserting that BIN favourably and noteworthy influences EVD.

The overall outcome of the study adequately addresses the research objectives by revealing that board attributes proxy with board gender diversity have a significant impact on environmental disclosures. While board attribute proxy with board independence was found to have no significant impact on EVD. Also, managerial ownership was found to have significant impact on EVD.

The control variables FSZ lack noteworthy impact on environmental disclosures in Nigeria's listed CG firms, given its t-statistics values of (1.07) and coefficient values of (0.023) respectively. While FA also used as a control variable exhibited a negative noteworthy influence on EVD, as evidenced by t-stat. and coefficient value of (-3.45) and (-0.0079) respectively.

The results provide several expected benefits for theory, practice, and policy. The findings contribute to corporate governance and sustainability literature by supporting the role of board diversity, managerial ownership structure in enhancing environmental disclosure. For policymakers and regulators, the findings provide guidance on how corporate governance structures can be strengthened to promote better environmental accountability. The study also helps investors and the public better understand how board and ownership characteristics influence environmental disclosure in Nigerian consumer goods firms. Overall, the results provide practical and academic value by improving understanding of sustainability reporting practices.

Discussion of findings

A robust and efficient corporate governance framework within an organisation demonstrates a heightened commitment to social and environmental concerns while ensuring compliance with environmental laws. The panel regression analysis result revealed that BDV (board attributes proxy) and MOW, noteworthy influences the environment, with the exception of BIN (board attributes proxy), which lacks a noteworthy influence on EVD. Given the substantial influence of BDV and MOW on EVD in Nigerian CG firms, it can be concluded that BDV and

MOW have a noteworthy effect on EVD. Adinehzadeh et al. (2018) support this perspective, by emphasizing board attributes and MOW as a crucial monitoring tool facilitating the implementation of strategic environmental policies and decision-making to reduce environmental penalties and noncompliance. This aligns with legitimacy theory, asserting that the effectiveness of an organisation's board traits and MOW correlates with its ability to conform to societal and cultural values.

Furthermore, the board gender diversity, as indicated by a p-value of 0.000, exerts a positive and noteworthy effect on the EVD of quoted Nigeria firm. The diversity among board members extends gender (Amorelli & Garcia-Sanchez, 2020). A board with a larger number of well-educated and experienced members possesses the capacity to seek legal advice and expert opinions to appropriately disclose environmental costs and ensure robust environmental performance. Tashim and Khan (2022) highlighted that board diversity might create pressure on managers to upsurge voluntary EVD. The findings of Abazu & Okoye (2021), Chakraborty and Dey (2023), Glass et al. (2016), Kyaw et al. (2017), and Osemene et al. (2021) align with the outcomes of this study, supporting the notion that board diversity has a positive and noteworthy impact on EVD. In contrast, Ekundayo et al. (2021) revealed a negative and noteworthy impact, while Trireksani and Djajadikerta (2016) find no discernible connection between BDV and EVD.

Moreover, there exists a negative and significant correlation between managerial ownership and environmental disclosures within quoted manufacturing firms in Nigeria. This infers that as managerial share ownership rises, the extent of voluntary EVD by the firm decreases. Ghazali (2007) study supports this, indicating that lower MOW and greater government ownership correlate with higher EVD. Given that disclosing environmental information aids in mitigating agency problems and preventing opportunistic behavior by managers (Olagunju et al., 2023), it is advisable for firms to prioritize a higher percentage of external members on the board over a larger number of managerial members to deter agency problems. This finding is corroborated by Ekundayo et al. (2021); Haladu and Salim (2016), both showing a negative and noteworthy impact. Conversely, Uwuigbe (2011) found, in contrast, that managerial ownership has a positive and noteworthy effect on EVD. As for the control variables, firm age holds noteworthy influence on EVD (p-value: 0.001), while the size of the firm does not exhibit any noteworthy effect on the EVD of the selected quoted Nigeria manufacturing firms (p-value= 0.286).

Conclusion and recommendation

This research work explored the connection between board attributes, managerial ownership and EVD. The outcomes of this study indicate that a robust board attributes and managerial ownership structures enhance voluntary environmental disclosures, mitigating environmental costs that may arise from non-compliance with environmental laws. Additionally, the study revealed that an effective and experienced board facilitates

the proper disclosure of environmental issues. Such a board can exert pressure on the organisation to enhance voluntary disclosures, aligning with societal expectations. Moreover, a lower level of MOW correlates with a higher level of voluntary EVD, as a noteworthy presence of outsiders in the ownership structure helps prevent opportunistic behavior by managers. However, the study also underscores that the independence of the board does not guarantee automatic voluntary disclosures of environmental matters. In conclusion, this research asserts that board attributes and managerial ownership significantly shape the EVD of listed Nigeria CG firms. Based on these findings, the study recommends that firms should promote greater gender diversity on corporate boards to enhance environmental disclosure practices. In addition, companies should ensure a balanced managerial ownership structure to minimize managerial dominance and improve transparency in environmental reporting.

Future research implications

Future research could expand this study by examining other sectors of the Nigerian economy to determine whether the observed relationships hold across industries. Subsequent studies may also incorporate additional corporate governance variables such as board meetings, audit committee characteristics, or ownership concentration to provide a more comprehensive analysis. Future research could further extend the study period or adopt alternative measures of environmental disclosure quality to enhance robustness. Additionally, comparative studies between listed and non-listed firms or between developing and developed economies may provide broader perceptions into environmental reporting practices.

Management implications

The managerial implications of this study are drawn from the statistically significant findings. The results suggest that board diversity (BDV) positively influences environmental disclosure, indicating that management should promote more diverse board compositions to enhance sustainability reporting. In contrast, managerial ownership (MOW) shows negative relationships with environmental disclosure, suggesting that management should carefully balance ownership concentration to ensure stronger environmental reporting commitments. Overall, top management should strengthen corporate governance structures to improve environmental disclosure practices among consumer goods firms in Nigeria.

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