

Corporate Governance, ESG Disclosure and Firm Value: Evidence from Listed Non-Financial Firms on the Nigerian Exchange Group

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Abstract: The study examines the relationship between corporate governance and ESG disclosure on firm value in 30 non-financial organizations listed on the Nigerian Exchange Group (NGX) from 2015 to 2024. The study was conducted in response to the on-going debate in the ESG-firm value relationship, as well as the absence of studies that combine the concepts of governance, ESG, and firm value in the diverse non-financial sector in Nigeria. This study employed an ex-post facto quantitative study design with a panel data approach, in which the study employed the following measures for corporate governance: board size, independence, gender diversity, and the effectiveness of the audit committee, while ESG disclosure was measured using a customized weighted index based on the GRI, with Tobin's Q as a proxy for firm value, with the three hypotheses grounded in the agency, stakeholder, and legitimacy theories. The main estimator employs Driscoll-Kraay standard errors that address the problems of heteroskedasticity, autocorrelation, and cross-sectional dependence. Prais-Winsten panel-corrected standard errors reinforce the findings. The findings show that ESG disclosure does not contribute significantly to the enhancement of the premium of the firm's value. On the other hand, the effectiveness of the audit committee is the strongest positive driver of governance. More important, the effectiveness of the audit committee is significant in the enhancement of the ESG-firm value relationship. This implies that good governance has to be in place for ESG disclosure to make an impact. On the other hand, board size is always significant and negative for firm value with all estimators. The study offers fresh intersectoral and long-term research for the ESG literature in Nigeria and offers useful recommendations for the SEC Nigeria, the NGX, and the FRCN.

Keywords: Corporate governance; ESG disclosure; Firm value; Tobin's Q; Nigerian Exchange Group

Introduction

Do Environmental, Social and Governance (ESG) disclosures create value, or are they elaborate legitimization performances with minimal market consequences? At no time has the question been more urgent than now. Around the world, more than USD 35 trillion in assets is currently managed under ESG-integration mandates (Global Sustainable Investment Alliance, 2023). Despite this, the empirical literature is deeply splintered regarding whether such disclosures yield meaningful valuation premiums, especially in a complex institutional setting such as Nigeria's.

Being a major economy with more capitalised equity in Africa; Nigeria offers an intriguing domain to test the governance–ESG–value nexus. Nigerian Code of Corporate Governance (NCCG) 2018, Sustainability Reporting Guidelines (2022) of the Securities and Exchange Commission and the NGX Sustainability Disclosure Framework have strongly recommended cumulatively institutionalising board-level accountability standards, formalising ESG disclosure expectations, and progressively embedding non-financial reporting within listing obligations. Indeed, the country has witnessed substantive regulatory changes. However, the gap between regulatory ambition and institutional reality makes Nigeria both an ideal and under-explored context for a rigorous empirical investigation.

The structural architecture that directs firms and holds them accountable is referred to as corporate governance. It encompasses the board size, board independence, board gender diversity, and audit committee effectiveness (Shittu & Che-Ahmad, 2024; Akinwumi & Onmonya, 2025). Disclosure about ESG refers to either voluntary or mandatory reporting of a company's activities as regards environmental (e.g., emissions, resource consumption), social (e.g., welfare of employees, community involvement), and governance (e.g., transparency on the board, anti-corruption) (Ajape et al., 2025; Karmańska & Łazarowicz, 2024). Firm value, the primary dependent construct, is captured by Tobin's Q, the ratio of market capitalisation to total assets, which holds both current performance and the capital market expectations of future value creation (Yahaya, 2026a).

The field of empirical studies is hotly contested. Adebayo et al. (2025) and Yeye & Egbunike (2023) report positive ESG–value relationships among Nigerian manufacturing and consumer goods firms. Nevertheless, Terkuma and Aga (2024), Abujaja and Ukpong (2022), and Dagunduro et al. (2024) report insignificant or sector-based effects. They argue that the weakening is due to poor quality of disclosures, thin capital markets, and investor scepticism. These inconsistencies are not just an academic issue: they suggest that the value relevance of ESG disclosure is conditional on contextual factors, including the governance architecture within which disclosures are produced, that most studies have failed to model explicitly.

This omission is the main motivation behind this study. According to Bello & Abdullahi (2024) and Zyznarska-Dworczak (2023), firms with independent boards that are diverse and effective at oversight are more likely to produce credible and comprehensive ESG

disclosures. Thus, reducing information asymmetry attracts sustainability-oriented investors. A failure to consider this moderation pathway will cause omitted variable bias and the misattribution of value effects to disclosure alone. In addition, existing Nigerian studies are focused on manufacturing, oil and gas, and consumer goods sectors. Most panels, however, end before 2023, before the full effects of post-pandemic ESG mainstreaming, even before the 2022 regulatory reforms, could be observed (Hussaini et al., 2024; Halimatu & Sunday, 2026).

This research, undertaken from 2015 to 2024, fills these gaps as the inquiry has three objectives: (i) to ascertain the effect of corporate governance mechanisms on firm value, (ii) to measure the effect of ESG disclosure on firm value, and (iii) to examine whether corporate governance moderates the ESG-firm value nexus. The hypotheses involved undergo testing via panel regression with robust standard errors after Hausman specification and cross-section dependence tests.

2. Literature Review

2.1 Conceptual Review

Corporate governance is the set of systems, principles and processes by which a company is governed in order to align the interests of people involved in the business with those of the stakeholders (Shittu & Che-Ahmad, 2024; Brauweiler et al., 2019). It has been reported that the total number of directors on the board can improve monitoring effectiveness, though; it can also drive up coordination costs beyond an optimal point (Akinwumi & Onmonya, 2025). Board independence (the proportion of non-executive directors) also constrains managerial entrenchment, and is the most consistent governance predictor of firm value in the literature (Ibeabuchi-Ani et al., 2025). The involvement of women in boards (female director ratio) helps stakeholders' sensitivity in terms of better quality disclosure (Aigienohuwa & Imonitie, 2025). The quality of communication regarding financial and non-financial information is informed by organisational audit committee effectiveness (Dzik-Walczak & Ociepa (2025). ESG disclosures are a reference to reporting on environmental performance, social conduct and best governance practices. Incidentally, disclosure is largely voluntary in Nigeria, though there are increasing formal expectations as the NGX Sustainability Framework and FRCN guidelines stipulate. The quality of compliance to disclosure regulations, however, varies with great implications for its value relevance (Nnadi & Yahaya, 2024; Ezejiofor & Ufot, 2025).

Firm value is measured by Tobin's Q, which is the market capitalisation plus total debt over total assets. This approach incorporates both book values and market expectations of future rents. This forward-looking approach is reported to be theoretically superior to accounting-based approaches in measuring the potential premium that ESG and governance quality may provide (Yahaya, 2026a; Emeka-Nwokeji & Osisima, 2019).

2.2 Theoretical Framework

The Agency, Stakeholder, and Legitimacy theories drive this study. The Agency theory was developed by Jensen & Meckling in 1976. It submits that disclosure related to ESG acts as a monitoring mechanism which helps in reducing the information asymmetry that exists between shareholders and managers. It further reduces the agency cost as well as the costs of capital of the firm. According to Shittu and Che-Ahmad (2024) and Yahaya (2026b), governance mechanisms such as board independence and audit oversight help cut down on corporate misconduct.

Stakeholder Theory, developed by Freeman (1984), contends that accountability should not only be to shareholders. This is reflected in the push for ESG disclosure, which allows firms to manage their legitimacy with employees, the community and regulators, and thereby lower stakeholder-related risk premiums and enhance market value (Ajape et al., 2025; Bukari et al., 2024).

Legitimacy Theory suggests that the firm would make disclosure of ESG information to signal that their operations are in alignment with norms to secure their social licence in a low-trust environment (Halimatu & Sunday, 2026). These theories predict that the level of governance quality conditions credibility and hence value relevance of ESG disclosures.

2.3 Empirical Review

Empirical studies document positive ESG–value association. Igbinovia and Agbadua (2023) established that ESG reporting improves Tobin’s Q of a manufacturing firm and provides firm-specific advantage self-gratifying the level of effect. According to the findings of Yeye and Egbunike (2023), ESG disclosure and market value are positively related, and profitability plays a positive moderating role. Adebayo et al. (2025) and Ajape et al. (2025) obtained similar positive effects for firms that produce consumer goods and multi-sector NGX firms. According to Bukari et al (2024), the link between governance and value is strengthened by ESG performance in developing economies. Similarly, Meier et al (2024), show that European firms are resilient during external shocks if they are ESG-compliant. This discovery is increasingly relevant for the Nigerian markets since Covid.

Wijayanto & Supanto (2025) submits that “firms that adhere to ESG principles tend to exhibit superior governance, heightened environmental awareness, and a commitment to sustainable growth”. However, Terkuma and Aga (2024) reveal that ESG disclosures have no considerable effect on manufacturing firm value, with attenuation attributed to boilerplate disclosures. Abuaja and Ukpong (2022) explain that the thin market conditions and absence of assurance in the oil and gas sector are the reasons for the limited value relevance of sustainability reporting. This is why Alhassan et al. (2025), submit that individual components of ESG have different effects at the market level, indicating that the aggregation of the indices may obscure component-level heterogeneity.

The evidence for governance value is consistent as Shittu and Che-Ahmad (2024) and Agha and Ashogbon (2025) report that equity value is enhanced significantly by board independence and audit quality in Nigerian firms. To Akinwumi & Onmonya (2025), board size and board independence positively impact the firm's Tobin's Q while Olurotimi and Idowu (2025) observed that governance quality increases the valuations of consumer goods firms significantly. The study by Karmańska and Łazarowicz (2024) affirms that the quality of sustainability reporting is underpinned by a strong governance mechanism, thereby supporting the theoretical argument that governance is a prerequisite for credible ESG disclosure. According to Szczepankiewicz et al. (2024), the "comply or explain" governance principles shape the reliability of disclosures, which relates directly to the NCCG 2018.

Meanwhile, the governance-ESG interaction channel is still under-researched. According to Bello & Abdullahi (2024), governance mechanisms moderate the sustainability-value relationship of Nigerian manufacturing firms. As shown by Hussaini et al. (2024), ownership concentration moderates the ESG-value nexus. Bukari et al. (2024) confirm bidirectional conditioning effects between governance and ESG in developing nations. Kipruto (2025) proves in Kenya that enhanced governance solidifies the ESG-value pathway via reduced information asymmetry and strengthened disclosure credibility.

Available researches in Nigeria have focused mainly on the manufacturing sector (Terkuma & Aga, 2024), the oil and gas industry (Ibrahim & Tahir, 2024), and the consumer goods sector (Adebayo et al., 2025), with little inter-industry research (Eze & Nwoha, 2024). From a methodological standpoint, the research has employed a variety of approaches ranging from pooled OLS and fixed-effects regression analysis to Generalised Least Squares and Driscoll-Kraay robust estimation (Yahaya, 2026a). ESG measurement has also varied from the use of Bloomberg data to the development (Nnadi & Yahaya, 2024).

Four identified gaps are filled by this study. First, there is a lack of a Nigerian study that incorporates individual corporate governance mechanisms, ESG disclosure, and their interaction in a single panel model for non-financial multi-sector firms. Second, the majority of the existing panels terminate before 2023, failing to account for the 2022 NGX sustainability guidelines. Third, there is a lack of representation of the non-financial sector. Fourth, there is insufficient research on the governance moderation approach.

3. Methodology

This research used a quantitative panel data design. The longitudinal structure of 30 firms from 2015 to 2024 produced 300 firm-year observations which offered adequate power for panel regression analysis. The population involved all non-financial firms listed on NGX as at 31 December 2024. Financial firms were excluded because of the different nature of their regulated leverage structures. Thirty firms were purposively

chosen for: continuous listing in the stock market throughout 2015–2024; availability of at least partial ESG disclosures in annual reports or sustainability reports; and complete financial data across the panel. Data was obtained from annual reports, sustainability reports, and the NGX official database and DataStream for market and financial data, as well as from the governance disclosure filings of FRCN. All data sources are publicly available with no ethical risk regarding human subjects or confidentiality.

Firm value was measured by Tobin's Q (market capitalisation + total debt) / total assets. Four board-level indicators were used namely, Board Size (BSIZE); Board Independence (BIND); Board Gender Diversity (BGDIV); and Audit Committee Effectiveness (ACEFF). The ESG Disclosure Index (ESGI) was self-constructed using a weighting GRI-based checklist, which is coded dichotomously (1 = disclosed, 0 = not disclosed) for the sub-index for environmental, social and governance reveals the composite score, which is gauged on a scale of 0–1. This approach is suitable since there are no third-party ESG ratings for the majority of NGX firms.

3.5 Model Specification

The models for the study are drafted to capture the objectives of the study. The model one captures the direct effect of ESG disclosure on firm value, which is presented in equation 1:

$$FV_{it} = \beta_0 + \beta_1 ESGI_{it} + \beta_2 FSIZE_{it} + \beta_3 LEV_{it} + \beta_4 FAGE_{it} + \varepsilon_{it} \quad (1)$$

The model two captures the effect of corporate governance indicators on firm value, which is presented in equation 2:

$$FV_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BGDIV_{it} + \beta_4 ACEFF_{it} + \beta_5 (ESGI \times BIND)_{it} + \beta_6 (ESGI \times BGDIV)_{it} + \beta_7 (ESGI \times BSIZE)_{it} + \beta_8 (ESGI \times ACEFF)_{it} + \beta_9 FSIZE_{it} + \beta_{10} LEV_{it} + \beta_{11} FAGE_{it} + \varepsilon_{it} \quad (2)$$

The model three presented in equation 3 captures the moderation between ESG disclosure and corporate governance indicators on firm value:

$$FV_{it} = \beta_0 + \beta_1 ESGI_{it} + \beta_2 BSIZE_{it} + \beta_3 BIND_{it} + \beta_4 BGDIV_{it} + \beta_5 ACEFF_{it} + \beta_6 (ESGI \times BIND)_{it} + \beta_7 (ESGI \times BGDIV)_{it} + \beta_8 (ESGI \times BSIZE)_{it} + \beta_9 (ESGI \times ACEFF)_{it} + \beta_{10} FSIZE_{it} + \beta_{11} LEV_{it} + \beta_{12} FAGE_{it} + \varepsilon_{it} \quad (3)$$

Where FV_{it} = Tobin's Q for firm i in period t . ε = the error term.

The study used Hausman specification test and four diagnostic tests were performed. These were multicollinearity, heteroskedasticity, autocorrelation and the Pesaran CD test Estimation and Interpretability of Coefficients in an Econometric Model.

4. Results

4.1 Descriptive Statistics

Table 1: Descriptive Statistics (N = 297–300)

Variable	Obs	Mean	Std. Dev.	Min	Max
FV (Tobin's Q)	297	3.346	8.601	-6.18	103.90
ESGI	297	0.564	0.167	0.146	1.000
BSIZE	297	9.535	2.541	4	17

BGDIV	297	15.453	11.882	0.00	50.00
BIND	297	68.850	12.708	38.46	100.00
ACEFF	297	53.746	19.430	25.00	120.00
LEV	297	60.866	25.932	13.70	196.97
FSIZE	297	7.451	0.869	5.61	9.38
FAGE	300	31.600	13.312	5	59

Tobin's Q has a 3.346 mean, indicating the sampled corporations traded above book value at the stock market on average. The market's wide standard deviation (8.601) and range (-6.18 to 103.90) show that there is a huge variation between different firms on how the market values them. The negative minimum captures periods during which some of the firms in our sample have serious financial distress. The average ESG disclosure score of 0.564 indicates that firms in the moderate compliance category disclosed almost 56% of the ESG items that were assessed for consistency with the voluntary-dominant reporting environment on the NGX, where extensive ESG disclosure is the exception rather than the norm (Nnadi & Yahaya, 2024; Ezejiofor & Ufot, 2025). The average board independence was 68.85 percent, fulfilling the NCCG 2018 requirement for a majority non-executives. The average presence of women on the corporate boards of companies in Nigeria was 15.45. The 60.87% average leverage ratio shows high exposure to financial risk across the panel, whereas a mean firm age of 31.6 years denotes well-established listings. The average log of total assets held by firms is 7.451 which depict moderate asset bases.

Diagnostic Test Results

Table 2: Pre-Estimation Diagnostic Tests

Test	Model 1	Model 2	Model 3
Mean VIF	1.11	1.20	1.23
Modified Wald χ^2	516,177.57***	110,206.88***	81,370.37***
Wooldridge F	93.349***	142.494***	152.388***
Pesaran CD	7.258***	2.707***	3.678***
Hausman χ^2	6.51 (p=0.164)	8.11 (p=0.323)	7.70 (p=0.464)

*** $p < 0.01$

The results of multicollinearity test regarding VIF shows the values of 1.11, 1.20 and 1.23 for Model 1, Model 2 and Model 3 respectively. All are lower than the threshold value of 10 (Hair et al., 2019). Thus, multicollinearity is not a concern. The Modified Wald test rejects homoskedasticity at the 1% significance level for all models indicating groupwise heteroskedasticity in the panel. The Wooldridge test also rejects the null of no first-order autocorrelation in all three models ($p < 0.0001$), consistent with the persistence of firm-level financial and governance data over time. The Pesaran CD test indicates that cross-sectional dependence is present and significant ($p < 0.01$) as one would expect from the fact that all firms are listed on the same exchange and thus exposed to common macroeconomic and regulatory shocks. The Hausman test does not reject the null

hypothesis of no systematic difference between FE and RE coefficients across all three models ($p = 0.164, 0.323, 0.464$), indicating that the Random Effects estimator is consistent and efficient. Given the joint presence of heteroskedasticity, autocorrelation and cross-sectional dependence, the Driscoll-Kraay (DK) estimator is the main estimator since it produces standard errors that are robust to all three violations concurrently. As a robustness check, we use the Prais-Winsten PCSE estimator with common AR(1) correction.

4.3 Random Effects GLS Results

Table 3: Random Effects GLS Estimation Models 1, 2, and 3 (*Dependent Variable: Tobin's Q*)

Variable	Model 1	Model 2	Model 3
ESGI	1.257		2.469
BSIZE		-0.546**	-0.566**
BGDIV		-0.077*	-0.079*
BIND		-0.020	-0.024
ACEFF		0.026	0.025
ESGI×BSIZE			-1.310**
ESGI×BGDIV			-0.185*
ESGI×BIND			-0.049
ESGI×ACEFF			0.062
LEV	0.108***	0.098***	0.099***
FSIZE	0.992	1.838	1.693
FAGE	-0.027	-0.006	-0.014
Constant	-10.532	-9.812	-9.357
R ² (overall)	0.029	0.056	0.057
Wald χ^2	19.23***	28.50***	29.19***
Rho	0.419	0.433	0.445

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

In Model 1, the RE estimator reveals that ESGI is positive but entirely insignificant as a determinant of firm value, as measured by Tobin's Q ($\beta = 1.257, p = 0.701$). Leverage is the only other significant determinant ($\beta = 0.108, p < 0.001$), indicating that firms with higher leverage, and hence more capital market visible, tend to command a premium in terms of firm value. For Model 2, board size is a statistically significant negative determinant of firm value ($\beta = -0.546, p = 0.033$), supporting the proposition that large boards create inefficiencies in firm coordination, hence adversely affecting firm value (Akinwumi & Onmonya, 2025). Board gender diversity is marginally insignificant as a negative determinant of firm value ($\beta = -0.077, p = 0.085$), while board independence and audit committee effectiveness are insignificant according to the RE estimator. Leverage is again a highly positive and significant determinant of firm value ($\beta = 0.098, p < 0.001$). For model 3, which is the full moderation model, the interaction effect

between ESGI and BSIZE is negative and significant ($\beta = -1.310$, $p = 0.033$), which indicates that larger boards have a weaker relationship between ESG and firm value, a finding that suggests that large and unwieldy boards in Nigeria have ceremonial governance in place (Agha & Ashogbon, 2025). The interaction effect between ESGI and BGDIV is marginally negative ($\beta = -0.185$, $p = 0.085$), and although the interaction effect between ESGI and ACEFF is positive and in line with theory, it does not reach significance under the RE model ($\beta = 0.062$, $p = 0.264$). The rho values in all models range from 0.419 to 0.445, which suggests that between 42% and 45% of the variance in our data is explained by unobserved firm-specific effects and therefore justifies our decision to use a panel model instead of a pooled OLS.

4.4 Driscoll-Kraay Estimation (Primary Results)

Table 4: Driscoll-Kraay Estimation Models 1, 2, and 3 (Dependent Variable: Tobin's Q; Robust to heteroskedasticity, autocorrelation, and cross-sectional dependence)

Variable	Model 1 (DK-RE)	Model 2 (DK-FE)	Model 3 (DK-FE)
ESGI	1.257		2.668*
BSIZE		-0.503	-0.528
BGDIV		-0.079*	-0.080*
BIND		0.025	0.020
ACEFF		0.033**	0.033**
ESGI×BSIZE			-1.207
ESGI×BGDIV			-0.189*
ESGI×BIND			0.059
ESGI×ACEFF			0.080**
LEV	0.108**	0.142**	0.141**
FSIZE	0.992	2.323	2.335
FAGE	-0.027	-0.272***	-0.293***
Constant	-10.532*	-11.446	-11.799
R ² (within)	0.081	0.113	0.115
Wald/F stat	80.83***	64.78***	95.61***

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

DK results serve as the basis for hypothesis testing as the primary estimator. In Model 1, the coefficient of ESGI is still insignificant ($\beta = 1.257$, $p = 0.327$), confirming the non-existence of the direct ESG-Value Premium. This result is consistent with Terkuma and Aga (2024) and Abujaja and Ukpung (2022), who attribute the non-result to boilerplate disclosure and investor scepticism in the thin capital markets of Nigeria. From the perspective of legitimacy theory, in which the relevance of ESG disclosure is symbolic rather than real, the expected non-appearance of the market legitimization premium is not surprising (Zyznarska-Dworczak, 2022). Leverage is the only significant predictor in Model 1 ($\beta = 0.108$, $p = 0.019$).

In Model 2, the coefficient for audit committee effectiveness is positive and significant ($\beta = 0.033$; $p = 0.030$), making it the strongest governance factor for firm value in the study. Firms with more effective and qualified audit committees are perceived by the market as more effective and thus signal higher levels of corporate governance and oversight. This result is consistent with agency theory and the findings of Dzik-Walczak and Ociepa (2025) and Karmańska and Łazarowicz (2024). On the other hand, the coefficient for board gender diversity is negative but approaches significance ($\beta = -0.079$; $p = 0.064$), suggesting that the presence of women board members in Nigeria may not yet contribute positively and meaningfully to the enhancement of firm value.. Both board size and board independence are statistically insignificant in DK's estimation. This could imply the ceremonial role of these corporate governance practices in the context of Nigeria (Agha and Ashogbon, 2025). Firm age has a significant negative impact on firm value ($\beta = -0.272$; $p = 0.008$), implying that older firms are perceived as less valuable due to lower growth prospects.

For Model 3, the main contribution of the current study, the ESGI*ACEFF interaction term is positive and significant ($\beta = 0.080$, $p = 0.030$), thus strongly validating H₃ via the audit committee channel. Theoretically, this result is important as it validates the hypothesis that the market value effect of ESG disclosure is augmented by the effectiveness of the audit committee, hence the increased credibility and informativeness of ESG disclosure (Bello & Abdullahi, 2024; Bukari et al., 2024). The ESGI coefficient is stronger in terms of marginal significance ($\beta = 2.668$, $p = 0.097$) after the inclusion of the explicit governance mechanisms, thus validating the hypothesis that the value relevance of ESG disclosure is conditional upon, as opposed to intrinsic to, firm governance quality. The ESGI*BGDIV term is marginally negative ($\beta = -0.189$, $p = 0.064$), while the ESGI*BSIZE and ESGI*BIND terms are still insignificant. The firm age variable maintains its negative significance ($\beta = -0.293$, $p = 0.002$) as does the leverage variable ($\beta = 0.141$, $p = 0.020$).

4.5 PCSE Robustness Check

Table 5: Prais-Winsten PCSE Estimation Models 1, 2, and 3 (Dependent Variable: Tobin's Q; Correlated panels, common AR(1) autocorrelation)

Variable	Model 1	Model 2	Model 3
ESGI	-0.381		-0.723
BSIZE		-0.969***	-0.961***
BGDIV		-0.056	-0.056
BIND		0.014	0.014
ACEFF		0.035	0.035
ESGI×BSIZE			-2.326***
ESGI×BGDIV			-0.134
ESGI×BIND			0.033
ESGI×ACEFF			0.084
LEV	0.088	0.073	0.072

FSIZE	1.306	2.285*	2.347*
FAGE	0.027	0.033	0.035
Constant	-12.239	-12.016	-12.194
R ²	0.030	0.073	0.073
Wald χ^2	4.63	18.18**	24.03***
rho (AR ₁)	0.744	0.771	0.760

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

The robustness findings of the PCSE are mostly consistent with the findings of the primary DK estimator. The extremely high AR(1) autocorrelation coefficients ($\rho = 0.744 - 0.771$) validate the high temporal persistence in the data and thus validate the use of the autocorrelation robust estimators. In Model 1, the findings for ESGI are once again not significant ($\beta = -0.381$, $p = 0.920$), validating the findings of all the previous estimators and validating the previous conclusion that there is no ESG value effect. In Model 2, the findings for BSIZE are extremely strong and significant ($\beta = -0.969$, $p = 0.005$), the strongest governance effect of all the estimators. This finding strongly validates the previous conclusion that large boards destroy firm value in Nigeria (Akinwumi & Onmonya, 2025; Agha & Ashogbon, 2025). ACEFF is positive and approaches significance ($\beta = 0.035$, $p = 0.103$), consistent with the findings of the DK estimator. In Model 3, the findings for the interaction term ESGI * BSIZE are extremely strong and significant ($\beta = -2.326$, $p = 0.005$), validating the findings of the RE estimator and validating the previous conclusion that large boards reduce the ESG – firm value relationship. Similarly, ESG×ACEFF remains positive ($\beta = 0.084$, $p = 0.103$) and is consistent with the main result of DK, though diminished to marginal insignificant levels, which is likely due to the high serial correlation absorbed by the AR(1) correction. FSIZE is found to be marginally significant in Models 2 and 3 ($p = 0.098$), indicating that larger firms benefit from reputational premiums related to size (Nadiyasu & Samuel, 2025). Overall, the results of the PCSE regression confirm the robustness of the main results, especially the negative board size effect, as well as the moderating role of governance in the ESG-value relationship.

5. Discussion

The findings of this study provide the reader with three important takeaways. The first is that ESG disclosure does not result in a statistically significant impact on firm value in Nigeria. Regardless of the estimator used in the study, the ESGI coefficient is always positive but never reaches the standard significance level. This finding contrasts with the positive ESG-value relationship established by Igbinoia and Agbadua (2023) and Adebayo et al. (2025), but it is consistent with the findings by Terkuma and Aga (2024) and Abujaja and Ukpogon (2022). These studies argue that the problem lies with the voluntary and unaudited nature of ESG disclosures in Nigeria. From a legitimacy theory perspective, the implication is that when people perceive ESG disclosures as window-dressing and not substance, as argued by Zyznarska-Dworczak (2022), they simply do

not bother with what the ESG report claims. And with the average disclosure score resting at a moderate level of 0.564, it's evident that Nigerian firms are yet to attain an acceptable level of disclosure where the market acknowledges such practices with higher levels of firm value.

Secondly, out of all the corporate governance practices included in the study's tests, the effectiveness of the audit committee stood out as the strongest determinant of firm value. This factor's positive and significant result with the primary DK estimator ($\beta = 0.033$, $p = 0.030$) is consistent with agency theory's prediction that effective and knowledgeable audit committees are in charge of controlling managers, information gaps, and communicating effective corporate governance practices with the market (Karmańska & Łazarowicz, 2024; Dzik-Walczak & Ociepa, 2025). On the other hand, the size of the board is consistently negatively influencing value in all cases, especially in the PCSE model where $\beta = -0.969$ and $p = 0.005$. This indicates that large boards in Nigeria are likely to be bogged down in coordination problems and are merely ceremonial in nature (Agha & Ashogbon, 2025; Akinwumi & Onmonya, 2025). The independence of, and the presence of women in, the boardroom have no significant impact, which may be due to the implementation thereof in the context of Nigeria's institutional framework.

Thirdly, corporate governance influences the relationship between ESG and firm value, and this is particularly true for audit committee efficacy. The significant and positive interaction term between ESGI and ACEFF in the DK model (β beta = 0.080), ($p = 0.030$), and this pattern holding in the PCSE model as well, indicates that ESG disclosures are not important in and of themselves for firm value. Rather, it is the system of corporate governance that gives these disclosures importance in the market's eyes. This finding aligns with what Bello & Abdullahi (2024) and Bukari et al. (2024) have previously found and extend the Nigerian literature by specifically identifying audit committee efficacy as what gives ESG actual market weight. On the other hand, the negative interaction term between ESGI and BSIZE supports our notion that it's not necessarily the size but the quality of governance that determines whether or not ESG disclosures will end up benefiting shareholders.

6. Conclusion

This study investigated how corporate governance, ESG disclosure, and firm value interact with one another, using data from 30 non-financial firms listed on the NGX between 2015 and 2024. The study's main method is Driscoll-Kraay estimation, which handles heteroskedasticity, autocorrelation, and cross-section dependence, with Prais-Winsten PCSE tests providing robustness checks. This study contributes three main findings.

First, ESG disclosure, by itself, is not statistically significant to firm valuation for non-financial firms in Nigeria. Second, audit committee effectiveness is found to have the strongest impact on increasing firm value, while board size is found to have a significant

negative impact on firm value. Third, and most importantly, effective audit committees have a highly significant impact on increasing the valuation impact of ESG disclosure. In other words, corporate governance quality is not just a plus, but a requirement, if ESG disclosure is to have any material impact on firm value in Nigeria's capital market.

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