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Gender Diversity on Boards and Financial Performance in Emerging Markets: The Moderating Role of Directors' Remuneration in Nigeria

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ABSTRACT

Corporate boardrooms are increasingly recognized as strategic platforms where gender diversity can enhance governance and financial outcomes. However, in emerging markets like Nigeria, the impact of board gender diversity on firm performance remains inconclusive, particularly in the absence of supportive governance mechanisms. This study examines the moderating effect of directors' remuneration on the relationship between board gender diversity and the financial performance of listed consumer goods firms in Nigeria. Using panel data from sixteen firms over a ten-year period (2014–2023), this study applies Feasible Generalized Least Squares (FGLS) regression to analyze direct and moderated effects. Board gender diversity is measured through female board representation, female independent directors, and gender-based qualifications, while financial performance is proxied by Return on Assets (ROA). The results show that female board representation and female independent directors alone do not significantly affect financial performance. However, gender qualifications among female directors positively and significantly influence ROA. When moderated by directors' remuneration, both female board representation and gender qualification exhibit a stronger positive effect on performance. In contrast, the interaction between female independent directors and remuneration remains statistically insignificant. The study concludes that gender diversity alone is insufficient to drive financial outcomes unless supported by professional competence and adequate remuneration. It recommends that listed firms prioritize the appointment of qualified women and ensure performance-based compensation to enhance board effectiveness. These findings offer important insights for improving governance practices and policy design in Nigeria's consumer goods sector and similar emerging markets.

Keywords: *Board gender diversity, female independent director, gender qualification, director remuneration, financial performance*

INTRODUCTION

Corporate governance has evolved into a multidimensional construct, with increasing scholarly and regulatory attention directed toward the composition and dynamics of corporate boards. Within this evolving framework, board gender diversity has emerged as a key tenet, rooted in the broader call for inclusivity, transparency, and enhanced organizational performance. The theoretical basis for the inclusion of women on corporate boards draws on resource dependency theory, agency theory, and stakeholder theory, all of which posit that a board enriched with diverse experiences, perspectives, and cognitive styles is more likely to make sound strategic decisions, monitor management effectively, and build legitimacy with stakeholders (Hillman et al., 2007; Carter et al., 2010).

Empirical studies, however, present a fragmented and inconclusive picture. While some researchers assert that gender-diverse boards positively influence firm performance through better oversight and broader strategic thinking (Campbell & Mínguez-Vera, 2008; Credit Suisse, 2016), others find the relationship to be statistically insignificant or even negative, often attributing such inconsistencies to contextual differences, tokenism, or cultural factors (Ahern & Dittmar, 2012; Adams & Ferreira, 2009). This persistent ambiguity suggests that board gender diversity, in isolation, may not be sufficient to generate measurable improvements in financial performance and calls for a deeper exploration of the contingent variables that shape this relationship.

One such variable, directors' remuneration, constitutes a critical yet under-theorized aspect of the governance-performance nexus. Rooted in agency theory, executive and board compensation schemes are designed to align the interests of directors with those of shareholders, mitigate opportunistic behaviour, and incentivize value-enhancing decisions (Jensen & Meckling, 1976; Bebchuk & Fried, 2003). The structure and transparency of remuneration, comprising base salary, performance bonuses, stock options, and other incentive mechanisms, can significantly influence board dynamics, motivation, and independence (Frydman & Jenter, 2010; Murphy, 2013).

Yet, what remains largely unexplored in the extant literature is the interplay between board gender diversity and directors' remuneration, particularly whether and how remuneration moderates the impact of gender-diverse boards on firm financial performance. This is a crucial omission because compensation systems may either empower or constrain the capacity of gender-diverse boards to contribute meaningfully to governance processes. For instance, gender-diverse boards operating within well-structured and merit-based compensation frameworks may experience enhanced cohesion, legitimacy, and performance outcomes. Conversely, poorly designed remuneration structures may reinforce existing biases, marginalize female directors, and dilute the benefits of diversity (Terjesen et al., 2016; Cook & Glass, 2015).

This gap is especially pronounced in emerging economies such as Nigeria, where the corporate governance landscape is characterized by institutional fragility, socio-cultural constraints, and evolving regulatory mechanisms. The consumer goods sector, an important contributor to national GDP, offers a compelling context for investigation, given its visibility, public accountability, and relatively high board turnover. Despite the proliferation of codes and reforms aimed at improving corporate governance, issues of symbolic female representation, opaque remuneration practices, and uneven financial performance persist across the sector.

Against this backdrop, the central problem this study addresses is the limited empirical and theoretical understanding of how directors' remuneration conditions the relationship between board gender diversity and financial performance among listed consumer goods firms in Nigeria. While previous studies have explored the isolated effects of board composition and executive pay, few, if any, have systematically investigated their interactive effects within the context of a developing economy. This omission undermines the development of holistic governance frameworks and policy interventions tailored to emerging markets.

Thus, this study seeks to fill this critical gap by investigating the moderating role of directors' remuneration in the relationship between board gender diversity and financial performance. Specifically, This study will examine whether the level and structure of directors' compensation amplify or weaken the effect of gender-diverse boards on key financial metrics such as profitability, asset efficiency, and market valuation. In doing so, it contributes to the advancement of corporate governance theory by integrating two pivotal yet under connected dimensions, gender and pay, within a single analytical framework.

The study is poised to make significant theoretical, empirical, and practical contributions. It will enrich governance literature by providing evidence from a non-Western context, offer insights for regulators on the synergistic design of diversity and compensation policies, and equip corporate leaders with knowledge to structure their boards for optimal performance in a competitive and evolving economic landscape.

Objectives of the Study

The primary objective of this study is to examine the relationship between board gender diversity and the financial performance of listed consumer goods firms in Nigeria, with specific attention to the moderating role of directors' remuneration. To achieve this overarching aim, This study pursues the following specific objectives:

i. To assess the impact of female board representation on the return on assets of listed consumer goods firms in Nigeria.
ii. To evaluate the effect of female independent directors on the return on assets of listed consumer goods firms in Nigeria.
iii. To investigate the influence of gender-based professional qualifications on the return on assets of listed consumer goods firms in Nigeria.
iv. To examine the interactive effect of board gender diversity and directors' remuneration on the return on assets of listed consumer goods firms in Nigeria.

LITERATURE REVIEW

The conceptual framework of this study integrates critical constructs in corporate governance and firm performance, specifically focusing on board gender diversity, female independent directors, gender-based professional qualifications, directors' remuneration, and financial performance. These elements are central to understanding the dynamics of board effectiveness in Nigeria's consumer goods sector.

Board Gender Diversity

Board gender diversity refers to the inclusion of women on corporate boards and their meaningful participation in decision-making. It enhances the heterogeneity of skills, experiences, and viewpoints, which can improve strategic direction, risk oversight, and stakeholder responsiveness. Scholars such as Adams and Ferreira (2023) link gender-diverse boards to improved monitoring and ethical standards, while Lopez-Cabarcos et al. (2023) argue that the effectiveness of gender diversity depends on retention and engagement, not just representation. Similarly, Mukuta (2011) and Aziekwe and Okegbe (2024) assert that female board members contribute distinct leadership styles and governance approaches, moving beyond token representation. This study board gender diversity is operationalized as the proportion and active engagement of women in board functions, with an emphasis on their potential influence on firm performance.

Female Independent Directors

Independent directors are valued in governance for their objectivity and lack of affiliations with company management. When independence intersects with gender, it introduces a distinctive governance category: female independent directors. These individuals contribute diverse perspectives while upholding impartial oversight. Post and Byron (2015) suggest that independent female directors challenge dominant narratives, promote ethical governance, and better represent stakeholder concerns. Their dual identity, as women and independent actors, positions them as potential agents of change in male-dominated boardrooms. For this study, female independent directors are defined as non-executive female members without management ties, offering unique oversight and governance value.

Gender-Based Professional Qualifications

Beyond numerical diversity, the competence of board members plays a crucial role in governance. Gender-based qualifications refer to the formal education and professional credentials held by women on boards, particularly in areas such as accounting, finance, economics, or law. Connell (2009) notes that qualifications are often shaped by masculine norms, disadvantaging capable women. Harrison and Rainer (2015) highlight that women frequently surpass higher barriers to be perceived as equally competent. Thus, these qualifications not only demonstrate skill but also resilience against institutional bias. This study gender qualification is defined as the sum of educational and professional expertise possessed by female board members, enabling them to contribute strategically and influence financial outcomes.

Directors' Remuneration

Directors' remuneration encompasses financial and non-financial compensation packages offered for board service. It includes salaries, allowances, bonuses, and equity-based incentives. Well-structured remuneration aligns the interests of directors with those of shareholders, incentivizing responsible decision-making and long-term value creation (Frydman & Jenter, 2010; Bebchuk & Fried, 2003). Conversely, poor remuneration structures may weaken board oversight or encourage opportunistic behavior. The role of remuneration as a moderating variable has received limited empirical attention in Nigeria. This study conceptualizes remuneration as a strategic tool that can enhance or constrain the contributions of gender-diverse board members, particularly those who are highly qualified.

Financial Performance

Financial performance represents the firm's ability to generate profits and efficiently use resources. It is a key indicator of organizational success in governance literature. Among performance metrics, Return on Assets (ROA) is widely accepted as a robust proxy because it measures how well a firm converts assets into earnings. According to Deloof (2003) and García-Meca et al. (2015), ROA offers insight into operational efficiency and profitability, especially relevant for asset-intensive sectors like manufacturing. Unlike market-based indicators, ROA relies on internal financial data, making it more objective and reliable in emerging markets like Nigeria. This study ROA is used to assess how board gender diversity, qualifications, and remuneration interact to influence firm-level financial outcomes.

Empirical Review

Aziekwe and Okegbe (2024) investigated the effects of board nationality (BND), gender (BGD), and age diversity (BAD) on the financial performance (CROI) of listed consumer goods firms in Nigeria over the 2013-2022 period. The results showed that nationality diversity had a negative but insignificant effect on performance, while gender diversity had a positive but non-significant effect. Age diversity, however, had a positive and significant impact on performance. The study suggests that nationality diversity can lead to challenges in communication and cultural alignment, affecting performance. To mitigate this, firms should carefully manage board composition, provide cross-cultural training, and foster inclusive leadership practices. This study offers a more comprehensive view of diversity, emphasizing that age diversity may be more beneficial for financial performance than gender or nationality diversity, which require more careful management.

In This study by Elnahass, et al. (2024), the authors examine the role of women directors' representation and attributes on bank risk across 12 developing countries with dual banking systems. The study explores various leadership and monitoring attributes of women, including their independence, educational qualifications, and financial expertise, as well as demographic factors like foreign representation. The results indicate that women directors generally help reduce bank risk, irrespective of the bank type. Notably, foreign female directors and those with financial expertise are linked to higher bank risk, while independent women directors seem to have a protective effect. Furthermore, highly educated women directors, particularly those with postgraduate degrees in accounting and finance, are associated with lower bank risk.

Mustapha et al. (2024) examined how board gender diversity impacts corporate performance in Nigeria's consumer goods sector from 2012 to 2021. Their findings indicate a positive and significant relationship between the presence of female directors and corporate performance. The study aligns with resource dependency theory, highlighting that diverse boards provide valuable perspectives. They recommend that firms with no or few female directors should increase their representation to improve performance. However, This study only focuses on gender diversity, neglecting other important forms like age, nationality, and experience, which could offer a more holistic understanding of diversity's impact. Broader definitions of diversity could lead to more comprehensive insights, addressing the complex factors that affect corporate performance in the evolving business landscape.

Matthew et al. (2023) explored the impact of gender diversity on the financial performance of fast-moving consumer goods and industrial goods firms in Nigeria, using the asset efficiency ratio as the performance measure. Their findings showed a negative and statistically significant relationship between gender diversity on the board and financial performance. This result suggests that gender diversity, in this context, may not lead to better financial outcomes, contradicting the common belief in its positive impact. The study recommends a well-diversified board but warns that gender diversity might not always have a universally positive effect, depending on the sector. This highlights the need for firms to assess whether gender diversity aligns with their specific strategic goals, especially in sectors like FMCG, where other factors may play a more prominent role in performance.

Kabir et al. (2023) explore the relationship between board gender diversity and firm performance, considering the influence of cultural factors across 19 European countries from 2010 to 2020. The study utilizes time-invariant or individual fixed-effect models to analyze the data. The findings reveal that high power distance and masculinity in cultures undermine the positive impact of gender-diverse boards on firm performance. Specifically, This study shows that gender-diverse boards have a statistically significant negative impact on return on assets (ROA) and return on equity (ROE) when moderated by the power distance index.

Pandey et al. (2023) explore the relationship between board gender diversity and firm financial performance using the complexity theory framework and qualitative comparative analysis (QCA). The study challenges previous research that examined board gender diversity in isolation, showing that its impact on performance cannot be fully understood without considering other board and firm characteristics. The sample consists of 204 non-financial firms listed on the Bombay Stock Exchange (BSE). The findings reveal that board gender diversity alone does not consistently affect financial performance. Instead, its impact depends on how it interacts with other factors, such as board composition and firm-specific characteristics.

Saha (2023) investigates the impact of female directors on firms' financial performance, focusing on the roles they are empowered to perform within boards. The study uses a panel dataset of the top 100 listed Indian firms over a period of 5 years, employing appropriate panel data models for empirical analysis. For robustness, This study also uses a two-stage least square (2SLS) model with instrumental variables. The findings reveal a significantly positive impact of the total percentage of female directors on firms' financial performance. However, when the analysis is disaggregated, it shows that independent female directors have a significant positive effect on performance, while female executive directors show no such impact. The study also finds that firms with a higher proportion of independent female directors outperform those with more female executive directors.

Simionescu et al. (2021) examine the impact of board gender diversity on accounting and market-based performance using a sample of Standard & Poor's 500 companies in the information technology sector over a 12-year period. The study uses the pooled ordinary least squares (OLS) method for initial analysis and further estimates fixed effects and random-effects models through panel data. The findings indicate that women on corporate boards have a positive influence on firm performance, particularly on price-to-earnings (P/E) ratio. However, the percentage of female executives does not significantly impact return on assets (ROA)

Theoretical Framework

This study is grounded in Gender Role Theory, which explains how socially constructed gender norms shape behavior, expectations, and decision-making styles in organizational contexts. According to Eagly (1987) and Eagly and Carli (2003), individuals internalize gender-specific roles influenced by cultural and psychological conditioning, which in turn affect how men and women function within professional settings, including corporate boards. In governance, women are often associated with communal traits like empathy, ethical sensitivity, and collaboration, while men are linked to agentic traits such as assertiveness and competitiveness (Eagly & Johnson, 1990). These differences contribute complementary perspectives to boardroom deliberations. Thus, gender diversity is not merely about representation but about enriching board dynamics and strategic insight, particularly in consumer-focused sectors (Terjesen, Sealy, & Singh, 2009).

Female independent directors bring both gendered insights and the structural independence needed to promote accountability (Post & Byron, 2015). Additionally, gender qualifications, such as academic or professional expertise in finance or economics, enhance credibility and influence, helping overcome stereotypes and enabling meaningful participation (Francoeur, Labelle, & Sinclair-Desgagné, 2008). Directors' remuneration further moderates this relationship. Equitable, performance-based compensation can motivate female directors, amplify their contributions, and align incentives with governance goals (Bebchuk & Fried, 2003), while poorly structured pay may limit their impact (Adams & Ferreira, 2009).

Therefore, Gender Role Theory offers a strong lens for understanding how gendered behaviours interact with board structure and incentives to influence firm performance. This study uses the theory to examine how female board presence, independence, and qualifications affect financial performance, proxied by Return on Assets, and how this relationship is moderated by directors' remuneration in Nigerian consumer goods firms.

METHODOLOGY

This study adopts an ex-post facto research design, which is appropriate for examining the historical relationships between variables where the researcher does not manipulate the independent variables but observes them as they occur naturally. The design is particularly suited for quantitative analysis of secondary data derived from historical events and firm-specific disclosures (Kothari, 2004). The study relies exclusively on secondary data, extracted from the annual reports and financial statements of listed consumer goods firms in Nigeria. The use of secondary data is justified by the nature of This study, which is rooted in quantitative methodology and requires objective, archival, and longitudinal data to ensure reliability and generalizability of findings.

The population of this study comprises twenty-one (21) consumer goods firms listed on the floor of the Nigerian Exchange Group (NGX) as of 31st December 2023. These firms span a ten-year period from 2014 to 2023. Due to issues such as incomplete data, delisting, or inconsistency in reporting, a judgmental sampling technique was employed to select sixteen (16) firms that met the criteria of consistent availability of annual reports over this study period. This purposive approach enhances the robustness of panel data analysis by ensuring data continuity and quality.

The study employed panel regression analysis using Stata 13 software to examine the relationship between board gender diversity and financial performance, as well as the moderating effect of directors' remuneration. Panel data methodology is chosen to control for individual heterogeneity, improve estimation efficiency, and capture both cross-sectional and time-series variations. In line with the objectives of this study, the functional relationship between board gender attributes and financial performance (proxied by Return on Assets) is specified, with directors' remuneration introduced as a moderating variable. The model draws from and adapts the frameworks of Samuel and Obaya (2022).
Baseline Functional Model:

DPS = f (BOS, BME, BIN, BOD, LTOA)

Where: DPS = Dividend per Share, BOS = Board Size, BME = Board Meetings, BIN = Board Independence, BOD = Board Diversity, and LTOA = Log of Total Assets (control variable).

The model is modified by specifying Return on Assets as a function of gender-related board attributes:

ROA = f (BFG, FID, GQN)

The econometric model is specified as:

$ROA_{it} = \beta_0 + \beta_1 BFG_{it} + \beta_2 FID_{it} + \beta_3 GQN_{it} + \beta_4 FSZ_{it} + \varepsilon_{it}$ ………… (1)

To capture the moderating effect of directors' remuneration, interaction terms are included:

$ROA_{it} = \beta_0 + \beta_1 BFG_{it} + \beta_2 FID_{it} + \beta_3 GQN_{it} + \beta_4 DRN_{it} + \beta_5 BFGDRN_{it} + \beta_6 FIDDRN_{it} + \beta_7 GQNDRN_{it} + \beta_8 FSZ_{it} + \varepsilon_{it}$ ………… (2)

Where: ROA = return on assets, BOS = board female gender, FID = female independent directors, GQN = gender qualifications, DRN= directors' remuneration (the moderating variable), FMZ = firm size (control variable), i = represents the firm, t = represent the time/year, and e = the error term.

RESULTS AND DISCUSSION

Table 1:
Variable, Measurement, and Source

Variable	Measurement	Source
Return on Assets (ROA)	Profit Before Interest and Tax (PBIT) ÷ Total Assets.	Samuel & Obaya (2022)
Board Gender Diversity	Number of Female Directors ÷ Total Number of Board Members.	Adams & Ferreira (2009); Terjesen et al. (2016)
Female Independent Directors	Number of Independent Female Directors ÷ Total Board Members.	Terjesen et al. (2016); Dang, Bender & Scotto (2020)
Gender Qualification	Number of Female Directors with Accounting, Economics, or Business Admin. degrees ÷ Total Board Members.	Adapted from Adebola & Adesanmi (n.d.)

Variable	Measurement	Source
Directors' Remuneration	Total annual directors' remuneration disclosed in the financial statements (₦).	Samuel & Obaya (2022); Frydman & Jenter (2010)

Source: Researcher's tabulation (2025)

Table 2:
Descriptive Statistics

Variables	No obs	Mean	Std. Dev.	Min	Max
ROA	160	0.090	0.100	-0.113	0.373
BFG	160	10.46	2.13	6	15
FID	160	0.186	0.149	0	0.462
QGN	160	0.230	0.140	0	0.571
DRN	160	354361.3	535503.7	1135	3070000

Source: STATA Output

Table 2 presents the descriptive statistics for This study variables from 2014 to 2023. The average Return on Assets (ROA) is 8.7%, with a standard deviation of 10.3%, ranging from -16.78% to 42.59%, indicating variability in firm performance. Board female gender (BFG) averages 19.2%, ranging from 0% to 57.1%, reflecting moderate diversity in board composition.

Female independent directors (FID) account for an average of 9.1%, with a standard deviation of 9.3% and a range from 0% to 42.86%, suggesting significant variation in gender-based independence across firms. Gender qualification (GQN) averages 6.3%, with an 8.2% standard deviation and values between 0% and 23.1%, highlighting disparities in the presence of professionally qualified female directors.

Directors' remuneration (DRN) shows a wide distribution, with an average of ₦354,361.30, a standard deviation of ₦535,503.70, and a range from ₦1,135 to ₦3,070,000, indicating substantial pay variation among firms.

Table 3:
Correlation Analysis

Variables	ROA	BFG	FID	GQN	DRN	BFGDRN	FIDDRN	GQNDRN	FSZ
ROA	1.000								
BFG	-0.049	1.000							
FID	-0.049	0.671	1.000						
GQN	0.111	0.229	0.535	1.000					
DRN	0.153	0.231	0.394	0.569	1.000				
BFGDRN	0.201	0.283	0.344	0.434	0.721	1.000			
FIDDRN	-0.153	0.106	0.387	0.102	-0.203	-0.339	1.000		
GQNDRN	0.048	-0.268	-0.516	-0.903	-0.537	-0.435	-0.167	1.000	
FSZ	0.256	0.063	0.291	0.491	0.250	0.325	-0.002	-0.364	1.000

Source: STATA Output

The correlation matrix in table 3 reveals relationships between ROA (Return on Assets) and various independent variables. All the independent variables have weak relationship with ROA of the listed consumer goods firms in Nigeria Among the independent variables themselves, table 3 showed that strong correlation exist as GQNDRN and GQN has the highest coefficient of -0.903 which is above the threshold of +- 0.80. However, this strong correlation is as a result of the interaction of the two variables. However, the VIF in table 4 shows that multicollinearity is not an issue, as all value are less than 10.

Table 4:

Diagnostics Tests

Tests	Direct X^2	Model P>V	Moderated X^2	Regression P>V
Jacque bera test for normality	18.55	0.000	20.03	0.000
Breusch- Pagan or cook – Weisberg to test	0.60	0.439	0.81	0.369
Wooldridge Test for Auto correlation	21.529	0.000	21.212	0.000
Breusch and Pagan Langrangian test	30.18	0.000	45.47	0.000

Source: STATA Output

Table 4 presents diagnostic tests for the regression models. The Jarque-Bera test indicates that residuals are not normally distributed in both the direct (X^2 = 18.55, p = 0.000) and moderated models (X^2 = 20.03, p = 0.000). The Breusch-Pagan test shows no evidence of heteroskedasticity in either model, with p-values of 0.439 (direct) and 0.369 (moderated), confirming homoskedasticity. The Wooldridge test reveals significant first-order autocorrelation in both models (X^2 = 21.529 and 21.201, p = 0.000). The Breusch-Pagan Lagrangian Multiplier test confirms the presence of panel effects in both the direct (X^2 = 30.18, p = 0.000) and moderated models (X^2 = 45.47, p = 0.000), supporting the use of panel regression methods over pooled OLS.
Given the presence of autocorrelation and non-normality, This study employed the Feasible Generalized Least Squares (FGLS) regression technique, which provides more reliable and robust estimates under such conditions.

Table 5:
Multicollinearity Test

Variables	DIRECT VIF	MODEL 1/VIF	MODERATED VIF	MODEL 1/VIF
BFG	1.87	0.534	2.14	0.468
FID	2.27	0.440	3.62	0.276
GQN	1.71	0.585	7.48	0.134
DRN	1.90	0.526	2.64	0.378
BFGDRN			2.72	0.368
FIDDRN			1.93	0.518
GQNDRN			6.31	0.158
FSZ	1.33	0.750	1.50	0.669
Mean VIF	1.82		3.54	

Source: STATA Output

The multicollinearity test evaluates the correlation among explanatory variables in both the direct and moderated models using the Variance Inflation Factor (VIF). As per Gujarati (2004), VIF values above

10 or tolerance below 0.10 indicate potential multicollinearity issues. In the direct model, VIFs range from 1.33 to 2.27 (mean VIF = 1.82), with FID having the highest value and firm size the lowest. Since all values are well below the threshold, there is no evidence of problematic multicollinearity, ensuring the model's reliability. In the moderated model, VIFs range from 1.50 to 7.48 (mean VIF = 3.54). GQN (7.48) and its interaction term GQN*DRN (6.31) show the highest values, as expected in models with interaction terms. However, all VIFs remain below 10 and tolerances above 0.10, indicating acceptable levels of multicollinearity.

Overall, both models demonstrate that multicollinearity is not severe enough to compromise the validity of the regression estimates, supporting the robustness of the findings on board gender diversity, director remuneration, and financial performance.

Table 6:
Feasible Generalised Least Squares Regression Results

	Direct	**Model**			**Moderated**	**Model**		
Variables	**Coeff**	**STD Error**	**Z-stat**	**P>Z**	**Coeff**	**STD Error**	**Z-stat**	**P>Z**
BFG	0.007	0.082	0.08	0.936	0.570	0.748	0.76	0.445
FID	-0.108	0.122	-0.88	0.378	-0.981	0.480	-2.04	0.041
GQN	0.033	0.012	2.69	0.007	0.243	0.064	3.79	0.000
DRN	0.016	0.006	2.57	0.010	0.005	0.007	0.71	0.480
BFGDRN					0.065	0.033	1.97	0.049
FIDDRN					0.082	0.082	1.00	0.316
GQNDRN					0.168	0.037	4.58	0.000
FSZ	0.018	0.004	3.84	0.000	0.010	0.005	2.03	0.042
Constant	-3.838	1.263	-3.04	0.002	-0.362	0.140	-2.59	0.010
Wald-STAT	25.43			0.000	44.13			0.000
OBS/FIRMS	160/10							

Source: STATA Output

The Feasible Generalized Least Squares (FGLS) regression results in Table 6 provide insight into the direct and moderated effects of board gender attributes on the financial performance of listed consumer goods firms in Nigeria. Two models were estimated: a direct effects model assessing the influence of board female gender (BFG), female independent directors (FID), gender qualification (GQN), and directors' remuneration (DRN) on return on assets (ROA); and a moderated model including interaction terms to assess the role of DRN as a moderator.

In the direct model, the Wald chi-square (25.43, $p = 0.000$) confirms that the explanatory variables collectively affect performance. Individually, BFG ($\beta = 0.007$, $p = 0.936$) and FID ($\beta = -0.108$, $p = 0.378$) show no significant effects on ROA. However, GQN ($\beta = 0.033$, $p = 0.007$) and DRN ($\beta = 0.016$, $p = 0.010$) both have positive, statistically significant impacts, suggesting that professionally qualified female directors and well-structured remuneration improve performance.

The moderated model improves explanatory power (Wald chi-square = 44.13, p = 0.000). While BFG remains insignificant (β = 0.570, p = 0.445), its interaction with DRN (BFGDRN) is significant and positive (β = 0.065, p = 0.049), indicating that remuneration enhances the value of female board presence. FID becomes significantly negative (β = -0.981, p = 0.041), and its interaction with DRN remains insignificant. GQN maintains a strong positive effect (β = 0.243, p = 0.000), and its interaction with DRN (GQNDRN) is also highly significant (β = 0.168, p = 0.000), reinforcing the importance of both qualifications and incentives. Firm size is positive and significant in both models. Overall, the results suggest that gender diversity alone has limited impact unless paired with professional qualifications and appropriate remuneration structures.

Discussion of Findings

The discussion of the findings on the individual variables is as follows:

Board Female Gender and Financial Performance

The results of this study reveal that board female gender does not have a statistically significant effect on the financial performance of listed consumer goods firms in Nigeria. This suggests that the presence of women on the board, in itself, does not influence financial outcomes directly within the sampled firms. Several explanations can be offered. One plausible reason is that female representation on the boards of these firms is still quite minimal, thereby limiting their ability to influence boardroom decisions or corporate strategies that affect financial performance. Another possibility is that existing female board members may occupy non-executive or less influential positions, reducing their capacity to shape firm-level outcomes.

This finding, although statistically insignificant, has a positive coefficient, which theoretically aligns with agency theory, which suggests that gender diversity may enhance board independence, promote varied perspectives, and strengthen monitoring roles. However, in practice, the influence of female directors may be constrained by entrenched corporate cultures, gender biases, or the tokenistic inclusion of women without corresponding power or responsibility.

Empirical studies that agree with this finding include Simionescu et al. (2021), who found no significant relationship between board gender diversity and firm performance, arguing that gender inclusivity without influence or leadership responsibilities fails to drive financial outcomes. Aziekwe and Okegbe (2024) also reported that board gender diversity in Nigeria has no significant influence on firm profitability, citing structural and cultural limitations. Pandey et al. (2023) further noted that board gender diversity in isolation does not drive performance but must be considered alongside board effectiveness and contextual governance mechanisms.

Conversely, this finding is at odds with Kabir et al. (2023), who found that gender-diverse boards negatively impact return on assets (ROA), suggesting that gender diversity may introduce conflicting viewpoints or inefficiencies. It also contradicts the findings of Mustapha et al. (2024), who concluded that firms with more female directors experience improved corporate performance, especially when women hold influential or executive roles on the board. This divergence in findings underscores that the impact of gender diversity is highly context-specific and influenced by institutional, cultural, and governance factors.

Female Independent Directors and Financial Performance

The study also finds that the presence of female independent directors does not have a statistically significant effect on the financial performance of listed consumer goods firms in Nigeria. Although independent directors are generally considered beneficial for corporate governance due to their objectivity and reduced conflict of interest, their gender composition in this context does not appear to alter firm-level financial outcomes.

One explanation could be that independent female directors may not be sufficiently empowered to influence decisions or may lack the strategic involvement needed to impact financial performance. Additionally, board independence in Nigeria may be more symbolic than functional, and independence alone, whether male or female, may not translate into active participation in strategic oversight or performance enhancement.

This result stands in contrast to findings by Saha (2023), who documented a significant positive relationship between independent female directors and firm financial performance. In that study, independent women were seen as critical agents of change, contributing fresh perspectives and stronger oversight, especially in male-dominated industries. The contradiction could be due to differences in regulatory enforcement, board dynamics, and levels of female participation across countries and sectors.

This divergence indicates the need for deeper investigation into how independent female directors are selected, their board roles, and the extent of their engagement with strategic governance issues. It also suggests that institutional frameworks and board cultures may mediate the effectiveness of gender-diverse independent directors in emerging markets like Nigeria.

Gender Qualification and Financial Performance

Unlike the other gender-related board variables, the qualification of female board members (gender qualification) is found to have a statistically significant positive impact on the financial performance of listed consumer goods firms. This result highlights the critical role of educational and professional competence among female board members in driving firm performance. It reinforces the argument that while gender inclusion is important, the quality and expertise of those appointed to the board is what truly drives firm success.

The finding affirms the human capital theory, which posits that individuals with higher educational and professional qualifications are better equipped to make strategic decisions, provide oversight, and contribute meaningfully to organizational outcomes. Highly qualified women on boards may possess specialized skills, industry knowledge, and financial acumen that enable them to actively engage in boardroom deliberations and influence firm policies.

This result aligns with the findings of Elnahass et al. (2024), who observed that women directors with advanced qualifications were associated with lower risk and better governance outcomes in banks. It suggests that firms that appoint women based not only on gender diversity but also on academic and professional merit benefit more from their contributions.

This evidence emphasizes that tokenism in gender diversity, appointing women simply to meet quotas or public expectations, may not yield meaningful results unless these women also possess the credentials and capabilities necessary to impact firm strategy and governance.

Board Gender and Financial Performance Moderated by Director Remuneration

The study reveals that director remuneration significantly moderates the relationship between board female gender and financial performance. Specifically, when female directors are adequately remunerated, their contribution to firm performance becomes more significant. This supports the argument that financial incentives are critical in unlocking the potential of female board members. Higher remuneration may attract more competent female directors, increase their motivation, and reflect greater recognition of their roles, which in turn enhances their performance and influence in boardroom decision-making.

This finding agrees with the argument of Pandey et al. (2023), who maintained that the effectiveness of gender diversity depends largely on complementary governance mechanisms such as remuneration, board independence, and organizational culture. It also resonates with the work of Edmans et al. (2022), who found that firms that link director remuneration to long-term firm value tend to achieve better financial outcomes. Thus, when board gender diversity is accompanied by adequate compensation structures, its impact on firm performance is amplified.

However, the moderating effect of remuneration on female independent directors is not statistically significant. This suggests that higher pay does not significantly enhance the influence of independent female directors on firm performance. One possible interpretation is that independent directors, regardless of gender, may not be deeply involved in strategic operations or financial planning and therefore do not contribute directly to firm profitability, even when well-compensated. This could reflect a limitation in the actual role and authority granted to independent directors in the corporate governance structures of Nigerian firms.

Female Independent Directors and Director Remuneration

The moderating effect of directors' remuneration on the relationship between female independent directors (FID) and financial performance (ROA) was found to be statistically insignificant. This implies that even when female independent directors receive adequate financial incentives, it does not significantly enhance their impact on firm profitability. A likely explanation is that independent directors, particularly in the Nigerian corporate environment, often function in a limited or advisory capacity, with minimal involvement in the firm's operational or strategic decisions.

Furthermore, the insignificance of this interaction term may point to structural limitations inherent in board configurations, where independent directors, regardless of remuneration, may lack the authority or influence required to shape key performance outcomes. This is consistent with findings by Saha (2023), who notes that while independent female directors possess potential for effective governance, their contributions are only impactful when supported by real strategic involvement and institutional empowerment.

The result suggests that monetary incentives alone are not enough to elevate the effectiveness of female independent directors. To unlock their full potential, firms must ensure that these directors are not only fairly compensated but also provided with clearly defined roles, access to critical information, and the ability to influence boardroom deliberations meaningfully. Without such enabling structures, the promise of diversity and independence in governance may remain largely symbolic.

Gender Qualification and Financial Performance Moderated by Director Remuneration

The interaction between gender qualification and director remuneration shows a strong positive and statistically significant impact on financial performance. This underscores the compounded value of expertise and appropriate financial incentives. When highly qualified female directors are adequately remunerated, they are more likely to exert meaningful influence, remain committed to their roles, and help firms make better-informed decisions, ultimately leading to improved financial results.

This result provides strong support for a strategic approach to board diversity, where appointments are based not only on representation but also on merit and incentivization. It is consistent with the view of Pandey et al. (2023) that diversity should be viewed through a multidimensional lens involving education, remuneration, and board dynamics. It also aligns with the findings of Edmans et al. (2022), who reported that aligning remuneration with board competence and long-term firm goals leads to superior shareholder outcomes.

CONCLUSION

This study examined the relationship between board gender diversity and the financial performance of listed consumer goods firms in Nigeria, focusing on the moderating role of directors' remuneration over a ten-year period (2014–2023). Return on assets (ROA) was used as the performance proxy, and fixed effect panel regression accounted for firm-specific heterogeneity.

The findings show that board female gender and female independent directors do not significantly influence financial performance. This suggests that representation alone is insufficient to improve profitability. In contrast, gender qualification, reflected in the educational and professional competence of female directors, has a positive and statistically significant effect on ROA. Moreover, director remuneration strengthens the positive effect of both board female gender and gender qualification on financial performance. However, no significant moderating effect was observed between remuneration and female independent directors.

These results indicate that gender diversity must be complemented by expertise and appropriate incentives to drive firm performance. The effectiveness of diversity hinges not only on representation but also on the empowerment, capacity, and motivation of female board members.

Recommendations

Firms should prioritize appointing qualified female directors—those with strong academic and professional credentials in finance, governance, or related disciplines. Gender qualification, rather than representation alone, enhances firm performance.

To optimize board effectiveness, qualified women should be empowered through leadership positions, such as heading committees or overseeing risk and strategy. This approach promotes inclusive and merit-based governance.

Given the moderating role of remuneration, firms should adopt performance-linked compensation frameworks that reward competence and responsibility. Fair and transparent remuneration encourages accountability, commitment, and value-driven governance.

Regulatory bodies such as the SEC and Nigerian Exchange Group (NGX) should strengthen corporate governance codes to emphasize both gender inclusion and professional competence. Policies should promote not just diversity quotas but also qualification benchmarks and measurable board contributions.

Finally, institutional mechanisms should be established to support a pipeline of board-ready women. Collaboration among universities, industry associations, and governance institutes is essential to provide training in finance, strategy, and leadership, equipping women for impactful board roles.

By implementing these recommendations, Nigerian firms can better leverage gender diversity to enhance governance and achieve sustainable financial performance.

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