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Board Gender Diversity and Financial Reporting Quality in Nigeria: Moderating Role of Auditor Quality

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Abstract: Arising from renewed interest on studies on gender exemplification on board, coupled with mixed findings noticeable therein, this study contributes to literatures, especially in emerging economies, on relationship between women representation on board and financial reporting quality (proxied with accrual and real earnings management) in Nigeria. Besides, the role of audit quality in moderating the aforementioned connection is also examined. Data were collected from annual reports and audited accounts of 50 quoted non-financial firms that were purposively selected for 7 years (2014-2020). While random effect OLS regression result provides no evidence of nexus between female directors and accruals earnings management, fixed effects OLS regression supports female representation on board, in order to hinder incidence of real earnings manipulation by management. However, this paper could not provide empirical evidence on the moderating role of audit quality, in both cases. Therefore, more women representation on board should be sustained, and improved upon, perhaps, through legislation on quota, to curb managers' opportunistic behavior in undertaking real manipulating of earnings, thereby enhancing quality of financial reporting. Besides, this is another sure way to building women entrepreneurs and innovators.

Keywords: Audit fees; audit quality; board gender diversity; financial reporting quality; leverage; profitability

JEL Codes: M14; L25

1. Introduction

The objective of financial reporting is to provide useful information to users in order to make informed decisions. Among users of financial reports are existing and potential shareholders, creditors, debenture holders, employees and government. The conceptual framework for financial reporting as approved and published by the International Accounting Standard Board (IASB) requests that financial reports prepared by entities be relevant and faithfully represents economic events and actions

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that have occurred during the reporting period. In addition, they must also be comparable, verifiable, timely and understandable. Consequently, financial reporting quality is described as information that is relevant, comparable, verifiable, understandable and timely. The efficiency and effectiveness of capital markets, among others, are dependent upon quality of financial reports (Malo-Alain et al., 2021). Any financial reports that is less than quality is inimical to workings of capital markets, which would ultimately lead to loss of confidence by investors. Based on this premise, attention of scholars has been channeled towards financial reporting quality, alongside their determinants. The renewed interest is consequential upon collapse of entities in the wake of the new century, commencing from Enron and WorldCom (USA) in 2001, Toshiba (Japan) in 2015 to Steinhoff (Global) and Carrillion (UK) in 2018. These scandals cum financial failure have been put at the door step of low financial reporting quality, jointly brought about by management of entities and auditors who have refused to report same in their audit report. These events have shaped and will continue to shape the audit market in particular, and accounting profession, in general. One major measure of financial reporting quality is earnings management. Corporate boards have been responsible for manipulative tendencies of reported earnings.

The board is a major mechanism in any entity's corporate governance landscape. It is the organ that is saddled with the responsibilities of leading the entity, as well as, protecting minority interest. It also provides strategic direction that is geared towards accomplishment of organisational goals and objectives. The attributes of the board, including composition, structure, size, directors' educational attainment, age and expertise (financial and otherwise), have been subject of scholarly works, with each relating to performance, value, among others. Regarding composition and structure are women representation. This is referred to as board diversity. There is growing awareness regarding board gender diversity (Orazalin, 2020). Studies abound on the importance of women board members in corporate governance. According to Hrazdil et al. (2023), fraudulent activities at both Enron and WorldCom were reported by the duo of Sherron Watkins and Cynthia Cooper, respectively. There is a renewed interest, regarding their role in ensuring financial reporting quality, thereby deterring and discouraging manipulative tendencies of management. Existing literature regarding nexus between board gender diversity and financial reporting quality remain unsettled with a strand documenting positive and significant association, while a few others reported findings on the contrary. This study is aimed at contributing to the debate, especially in emerging nations, like Nigeria.

The rest of the paper progresses as follows: section 2 reviews related literatures divided into conceptual, empirical and theoretical; section 3 lays the methodology; section 4 analyses the data and presents results, including discussion of findings, while section 5 presents concluding remarks.

2. Literature Review

2.1. Financial Reporting Quality

Financial reporting is the medium through which management of entities give account of stewardship on resources entrusted by owners. Jonas and Blaurchet (2000) cited in Onatuyeh & Proso (2019) describes financial reporting as complete and explicit information that is not designed to mislead users. Consequently, management prepares annual reports and financial statements, comprising statement of comprehensive income, statement of financial position, statement of changes in equity and statement of cashflow. These are audited by the external auditor that is so appointed, at an Annual General Meeting (AGM). The auditor lends credibility to the accounts, thereby improving on the quality of financial reporting process. In 2010, the International Accounting Standard Board (IASB) approved and released the conceptual framework for financial reporting. It was revised in 2018. Among issues addressed by the framework is quality expected to be possessed by financial reports, in other to pass test of providing useful information for decision making purpose. Other issues are objective of general- purpose, elements of financial statements (alongside their recognition, derecognition, measurement, etc.), presentation, disclosure, capital and capital maintenance.

The framework provides for two (2) fundamental qualitative characteristics, namely relevance and faithful representation; and four (4) enhancing attributes, including comparability, verifiability, timeliness and understability. There are a few proxies of financial reporting quality that have been adopted in accounting and auditing literature. These among others include audit opinion (Soyemi, 2020), accrual quality (Dobija et al., 2022; Orazalin, 2020), IASB qualitative indices (Onatuyeh & Proso, 2019) and earnings management (Attia et al., 2024). Of all these measures, earnings management have received profound usage. Earnings management, otherwise known as window dressing, simply describe management tendencies to manipulate earnings, with a view, to painting the financials of the entity in a manner that is otherwise different from the real position. Until recently, it is known as income smoothing (Attia et al., 2024). Earning management may be attempted via accrual-based approach or real manipulation of earnings. Both are adopted in this study.

2.2. Board Gender Diversity

Board gender diversity connotes act of allowing women representation and participation on boards of directors. It covers all concerted efforts geared at removing any hinderance standing against appointment and/or election of female folks on corporate boards. Studies abound on the role of gender diversity in mitigating the incidence of earnings management across the globe. Besides, women presence and participation in corporate boards have been related to positive outcomes, including board effectiveness, efficient monitoring and advisory roles, increased ethical behavior (Fan et al., 2019), among others. Consequently, countries continue to regulate and enforce women representation in corporate entities, as well as, in public corporations and political circles. The agency and top echelon theories, among others, provide theoretical framework to support board gender diversity in board composition. Anchored on this postulation, the duo studies of García Lara et al. (2017) and Gull et al. (2018) provide empirical support that women representation on the board reduces agency cost, through refining monitoring effectiveness of the financial reporting processes. Similarly, Maglio (2020) also provided documented empirical evidence in this regard. The nexus between board diversity and earnings management is divided along two major strands in the literature. One major constituent comprising of studies are in support of their role in minimizing incidence of earnings management and a few others reporting otherwise, with an abysmally small chunk providing no relationship. However, it important to state that these findings are irrespective of nations.

2.3. Auditor Quality

Audit is the professional examination of financial statements, that is geared towards giving an opinion as to their truthfulness and fairness. It is an assurance venture into seeking audit evidence, through audit tests, by examination of appropriate records and necessary documents, with a view as to stating whether they are adequate in preparing the financial statement, that is fairly presented and that also comply with applicable financial framework. Audit represents agency cost incurred by shareholders in order to reduce apparent or real information asymmetry brought about as a result of separation of owners from management of corporate entities. This confirms an audit as a major external corporate governance mechanism targeted at receiving reasonable (and not absolute) assurance of the financial reporting process. The auditor is expected to display due diligence and skill during the audit engagement.

Audit quality is the twin propensity of an auditor to detect material misstatements and report same in the audit report (DeAngelo, 1981, cited in Soyemi et al., 2023). While the former is referred to as auditor's competency, the latter is known as auditor's independence. The auditor's competency and independence sum up to determine the quality of any audit engagement. In audit literature, there are different proxies for measuring audit qualities. These include audit fees, auditor-type, auditor industry specialization, auditor-choice, earnings restatements, among others. These are outcome-based proxies, and they are largely adopted in most audit studies. Little or no attention have been given to input and process-based measures of audit quality. The audit quality-earnings management nexus appears to be settled in the literature, as there is consensus among most studies on the role of audit quality in reducing earnings management. However, there are sharp divisions in the literature, as to whether this is applicable to both accrual and real earnings management.

2.4. Empirical Review

Miladi and Chouaibi (2021) investigate the moderating role of audit quality on the relationship between women executive directors and earnings management among commercially quoted United States of America (USA) banks, excluding development, cooperative, import-export and investment banks. The study covers ten years from 2009 to 2018 and 790 bank-year observations were used as sample. Using Regression method to analyse the data sourced from DataStream database, their findings reveal a negative and significant relationship between women executive directors and bank earnings management which implies that the presence of women on top management of banks restrains the practices of earnings management. Further, Olowookere, Oyewole & Lamidi (2021) investigate the impact of women on the audit committee on the financial reporting quality of consumer goods firms quoted on the Nigerian Stock Exchange. The study covers eleven years from 2009 to 2019 and 13 firms were purposively selected out of a total population of twenty. Financial reporting quality was proxied by discretionary accruals earnings management. Regression results show that increasing the number of women's representation on the audit committee enhances the quality of financial reporting. However, the control variables of firm size and leverage exhibit an inverse and non-significant relationship with discretionary accruals.

Similarly, Saidu & Aifuwa (2020) examine the influence of board attributes on audit quality of quoted manufacturing firms in Nigeria from 2014 to 2019. Thirty-nine firms were selected from the target population of thirty-nine using a stratified random sampling technique. Audit quality was proxied by big4/non big4 audit firms. Employing the use of binary probit regression method to analyse the data sourced from the annual reports of the sampled firms, the findings reveal that the presence of female directors on the board and representation of independent directors do not affect the quality of audit. Kouaib & Almulhim (2019) explore whether audit index proxied by audit effort, audit tenure and audit independence moderate the relationship between the presence of women on the board and foreign director and earnings management among non-financial European firms listed on the Europe 600 index from 1998 to 2017. Employing moderated regression analysis to analyse the data sourced from DataStream and Thomson Reuters Asset4 databases, findings reveal that the presence of women on the board of European firms mitigates earnings manipulation through discretionary accruals and real earnings management. Hashim, Ahmed and Huey (2019) examine the relationship between board diversity and earnings management among listed non-financial firms in the main market of Bursa Malaysia. A random sampling technique was employed to select 90 companies out of 745 firms listed on the market, which represents 12% of the whole population. Analysing the data sourced from the annual reports of the sampled firms using the multiple regression method, their findings reveal a non-significant relationship between gender diversity and accrual earnings management, which may be due to the low number of women on the board. Furthermore, their finding also reveals audit quality does not moderate the relationship between board gender diversity and earnings management.

Bala, Amran & Shaari (2018) investigate the impact of audit committee characteristics on financial reporting proxied by Cosmetic Accounting, another term for earnings management, and how the relationship is moderated by audit fees among quoted firms in Nigeria. The study covers eight (8) years from 2008 to 2016. Fifty-eight (58) firms were selected out of the total population of 170 firms listed. The pooled logistic regression was adopted to analyse the data sourced from the annual reports of listed firms, findings reveal that female audit committee members and audit fees exhibit a positive and significant relationship with cosmetic accounting. However, leverage has a positive and insignificant relationship with cosmetic accounting. When audit price was introduced as a moderating variable, the findings show that female audit committee members still have a negative and significant relationship at a 1% significance level. This implies that the negative relationship is more noticeable when a firm pays high audit fees. Besides, Bala, Amran & Shaari (2018) used the same data to examine the effect of audit fees on financial reporting quality of firms listed in the Nigerian Stock Exchange. Their findings reveal that audit fees have a negative and significant correlation with financial reporting quality, which implies that an increase in audit fees enhances financial reporting quality. Arun, Almahrog & Aribi (2015) examine the influence of women on the board of firms listed in the UK FTSE 350 index from 2005 to 2011 on earnings management. Data concerning female directorship were sourced from annual reports of selected firms, while those on earnings management were derived from FAME and Thomson One Banker. Pooled Ordinary Least Squares regression analysis reveals that the presence of women directors on the board of firms listed on the UK FTSE 350 index mitigates the levels of earnings management proxied by discretionary accruals and is measured using the Modified Jones model.

2.5. Theoretical Framework

The agency and upper echelon theories are theories upon which this study was rooted. Both are considered excellent theories in explaining earnings management, which is a major challenge associated with clear separation of ownership from management. While owners own the resources, managers have been entrusted with these resources, hence, the expected notion to use them judiciously. Agency theory as proposed by Jensen & Meckling in 1976 suggests a context within which owner-manager relationship may be better understood. The theory indicates a potential conflict of interest between owners (principals) and managers (management), as a result of the latter pursuing their interest, using the resources entrusted, as against seeking to principals' interest. This agency problem is as a result of information asymmetry, where management has more information than owners. Earnings management become an outcome. Consequently, owners need to tame management, towards doing the right thing. This act naturally brings about agency cost, usually borne by owners. In quest towards reducing incidents of earnings management, studies around gender diversity (Zalata et al., 2019; Nguyen et al., 2020; Zalata et al., 2022) have suggested more female representation on board of entities, they are seen as excellent control mechanism.

Also known as the "top management team" theory, upper echelon theory was propounded by Hambrick and Mason in 1984. It is a theory within organisational behavior context, which explains the rationale behind organisational performance and outcomes. Prior to the upper echelon theory, organizational outcomes and performances were benchmarked against deterministic theories, including institutional theory, among others. However, Hambrick & Mason (1984) posited that organizational performance and outcome can be better explained through the background and characteristics of top management team, including chairman, managing director, deputy managing director, general manager, head of divisions, etc. These background and characteristics include unobservable psychological (cognitive base values) and observable attributes (age, educational attainment, financial position, functional pathways, socio-economic origins, etc.). Perhaps, proponents of women representation on board have justified their stands on attributes of women being independent and less lenient of manipulative behavior (Fan et al., 2019; Setiawan et al., 2020), thereby encouraging fairness and accountability in financial reporting.

3. Methodology

3.1. Sample Size and Data

This study adopted an ex post facto research design in undertaking influence of board gender diversity on earnings management, alongside role of audit quality in moderating the relationship. Data were collected from annual reports and audited accounts of 50 quoted non-financial firms that were purposively selected for 7 years (2014-2020). This culminates into 350 firm-year observations. The sample size represents 43% of a total target population of 116 non-financial firms quoted on the Nigeria Exchange Limited (NGX). These firms cut across seven (7) sectors, excluding financial sector, namely consumer goods (11), healthcare (5), technology (4), industrial goods (10), basic materials (4), oil and gas (6) and consumer goods (10).

3.2. Measurement of Variables

a) The Dependent Variable

The dependent variable is financial reporting quality, measured with earnings management. This is further divided into accrual and real earnings management. While the modified Jones model (1995) cited in Soyemi et al. (2020) and Abu et al. (2023) was adopted in measuring accrual earnings management, Roychowdhury (2006) cited in Soyemi et al. (2020) and Abu et al. (2023) was used to measure real earnings management.

b) Independent Variables

The independent variable of interest is board gender diversity, representing the number of women on board of directors. This is as adopted by Kajola et al. (2019).

c) Moderating Variable

Audit quality is the moderating variable. It is unobservable, hence proxied with audit fees. Studies that have adopted audit fees, as proxy for audit fees, include Soyemi (2020), Soyemi (2023), among others.

d) Control Variables

Consistent with extant literature, control variables typically found to have influence earnings management include board attributes including board size (Abu et al., 2023), board independence (Abu et al., 2023), auditor type (Abu et al., 2023), firm size (Soyemi et al., 2020) and leverage (Soyemi et al., 2020).

3.3. Model Specification and Estimation Techniques

The regression model upon which the objective of this study is based is as specified below, commencing with the direct effect of board gender on financial reporting quality (model 1), and then moderating effect of audit quality in the relationship between board gender and financial reporting quality (model 2).

FRQ_{it} = β_0 + β_{1it}BGD + β_{2it}AFES + β_{3it}BSIZ + β_{4it}BIND + β_{5it}ATY + β_{6it}FSIZ + β_{7it}LEV + ξ_{it} - (Model 1)

The moderating effect is reproduced in model 2 thus:

FRQ_{it} = β_0 + β_{1it}BGD + β_{2it}AFES + β_{3it}BGD*AFES + β_{4it}BSIZ + β_{5it}BIND + β_{6it}ATY + β_{7it}FSIZ + β_{8it}LEV + ξ_{it} (Model 2)

Where: FRQ = financial reporting quality, proxied with accrual and real earnings management.

BGD = board gender diversity

AFES = audit fees

BSIZ = board size

BIND = board independent

ATY = auditor type

FSIZ = firm size

LEV = leverage

4. Result and Discussion

This section presents the empirical results from analysis of data. It commences with descriptive statistics and thereafter, results from model estimation.

4.1. Descriptive Statistics

Table 1 presents sample descriptive statistics for all variables in this study. There is absence of earnings management as both measures of accrual and real earnings manipulations display average values of -0.0000 and 0.0000, ranging from -1.0110 to 0.9718 and -0.7843 to 0.9936 respectively.

Impliedly, there appear to be high financial reporting quality among financial statements prepared by selected firms during this period.

On the variable of interest, the average number of female representations on the board is 10. This ranges from a no female representation on the board, to a maximum of 6, with a standard deviation of 1.1900. This translates to a low level of female representation on the board. Currently, there is no legislation as to the minimum number of female directors in Nigeria, hence, this trend may still continue unabated.

Table 1. Descriptive Statistics

Continuous Variables					
	Mean	Min.	Max.	Range	Std. Dev.
AEM	-0.0000	-1.0110	0.9718	1.9828	0.1481
REM	0.0000	-0.7843	0.9936	1.7779	0.1860
BGD	2	0	6	6	1.1900
AFES	₦41,254.37	₦900	₦695,000	₦694100	85713.07
BSIZ	10	4	19	15	2.9420
BIND	5	0	14	14	3.0107
FSIZ	₦111,000,000	₦564,583	₦2,020,000,000	₦2,019,435,417	260,000,000
LEV	0.0328	-0.5440	0.5396	1.0836	0.1091
Binary Variables					
ATYP	Freq.	%		Cum. %	
1	146	41.71		41.71	
0	204	58.29		100.00	
Total	350	100.00			

Source: Authors' Computation (2023)

Audit quality, measured through audit fees have an average value of ₦41,254,370 ranging from ₦900,000 to ₦695,000 with a standard deviation of 85713.07. This has a high variability; therefore, the natural logarithm is taken. On average, there are 10 directors on the board with a minimum of 4 and a maximum of 19 with a standard deviation of 2.9420. Of these total numbers of directors on the board, half are independent on average, ranging from 0 to 14, suggesting equal number of independent/non-executive and executive directors for the sampled firms and periods. The size of firms selected was measured through total assets. The average being ₦111,000,000 ranging from ₦564,583 to ₦2,202,000,000 with a standard deviation of 260,000,000. Similar to audit fees, natural logarithm is also taken to reduce variability noticeable in firm size. The debt-equity mix has an average value of 3% ranging from -54% to +54%, with a standard deviation of 1.091. The auditor type was proxied with the typical BIG4 versus non BIG4 dichotomy. Out of 350 audit engagements, the BIG4 was engaged 146 times (42%), while the non-BIG4 has 204 audit assignments (58%). This marginally reverses the trend of the BIG4 dominance in the audit industry in Nigeria.

4.2. Preliminary Tests of Regression Assumptions

4.2.1. Correlation Matrix and Variance Inflation Factor (VIF)

Ahead of using OLS regression to estimate the model, correlation matrix is computed to indicate relationships among variables. More importantly, it is also to confirm absence of multi collinearity among independent variables. The correlation coefficients are as presented in table 2.

Table 2. Correlation Matrix and Variance Inflation Factor (VIF)

	AEM	REM	BGD	lnAFES	BS	BI	ATYP	lnTA	LEV
AEM	1								
REM	-0.6436	1							
BGD	0.0486	0.0041	1						
lnAFES	-0.0200	-0.0430	0.1356	1					
BS	0.0230	-0.1262	0.3078	0.5487	1				
BI	-0.0165	-0.1439	0.2035	0.4238	0.5822	1			
ATYP	0.0319	0.0622	0.2403	0.5364	0.1870	0.2625	1		
LnTA	0.0180	-0.1452	0.1490	0.0897	0.5440	0.4891	0.4199	1	
LEV	0.3172	0.0474	-0.0428	0.1582	-0.0161	0.0132	0.1840	0.1538	1
VIF			1.19	6.75	2.07	1.69	1.65	5.80	1.06

Source: Authors' Computation (2023)

Board gender diversity displays a positive relationship with both measures of financial reporting quality, that is, accrual (0.0486) and real (0.0041) earnings management. Contrarily, the moderating variable, audit fees display a negative relationship with accrual (-0.0200) and real (-0.0430) earnings management. With the exception of board independence (-0.0165) that is negatively related to accrual earnings management, board size (0.0230), auditor-type (0.0319), firm size (0.0180) and leverage (0.3172) show positive relationship with accrual earnings management. With respect to real earnings management, only auditor-type (0.0622) and leverage (0.0474) are positively associated, while board size (-0.1262), board independent (-0.1439) and firm size (-0.1452) are negatively related. Overall, there is evidence of multicollinearity as none of the correlation coefficients are greater than 0.65. The values of the VIF also lend credence to non-existence of multicollinearity among studied variables, as none of the values are up to 10. The VIF ranges from 6.75 (lnAFES) to 1.06 (LEV).

4.2.2. Heteroskedasticity Test

In statistics, heteroskedasticity occurs if standard deviations of any variable, appears non-consistent, within a specific range of time that they are being monitored. It is homoskedasticity, if otherwise, that is, constant variance. This study tested for homoskedasticity as against unrestricted heteroskedasticity, using the White test. Judging from the result, there were no unrestricted heteroskedasticity (chi2=36.33; p>0.05), as p-value is not statistically significant.

4.3. Regression Results

This section presents regression results from estimating models of the study. First, the regression results for direct effect (Table 3) of board gender diversity on earnings management is presented, and next is that of moderating role of audit quality (Table 4) between board gender diversity and earnings management.

Table 3. Panel Regression Analysis (Direct Effects)

DV: AEM	Fixed Effects	Random Effects	DV: REM	Fixed Effects	Random Effects
BGD	0.0110 (0.95)	0.0058 (0.85)	BGD	-0.0182 (-1.54)*	-0.0067 (-0.66)
lnAFES	-0.1823 (-2.03)**	-0.0788 (-2.21)**	lnAFES	0.1552 (1.69)*	0.1652 (2.60)**
BS	0.0130 (1.69)***	0.0055 (1.49)***	BS	-0.0057 (-0.73)	-0.0056 (-0.93)
BI	-0.0089 (-1.32)	-0.0033 (-1.03)	BI	0.0022 (0.32)	-0.0001 (-0.03)
ATYP	0.0740 (1.80)***	0.0113 (0.58)	ATYP	-0.1238 (-2.95)**	-0.0427 (-1.32)*
lnTA	0.0032 (0.04)	0.0327 (1.47)***	LnTA	0.0966 (-1.13)	-0.1082 (-2.63)**
LEV	0.5333 (5.24)**	0.4528 (6.38)**	LEV	-0.1055 (-1.02)	-0.0274 (-0.29)
Const.	0.5831	0.0247	Const.	0.2036	0.1856
Adj. R^2	0.1255	0.2539	Adj. R^2	0.0492	0.0581
F-Stat./Wald Chi^2	6.01 (0.00)	47.48 (0.00)	F-Stat./Wald Chi^2	2.17 (0.04)	11.33 (0.1247)
Hausman Test	8.71 (0.2742)		Hausman Test	15.93 (0.0258)	

Significant @ 1%, ** Significant @5% and * Significant @10%*

Source: Authors' Computation (2023)

Judging from the value of the Hausman test result regarding accrual earnings management, the test being statistically non-significant, supports random effects OLS as being an unbiased estimate. Except for audit fees that displays negative and statistically significant influence, thereby exerting positive relationship with financial reporting quality, board size, firm size and leverage exercise positive and statistical impact on accrual earnings management. The variable of interest, that is, board gender diversity, though positive, but statistically non-significant. By implication, quality audit hinders incidence of accrual earnings management, while board size, firm size and leverage contribute to occurrence of accrual earnings management.

On the other hand, fixed effect OLS is the unbiased estimate regarding real earnings management. Women representation on board exert negative and significant influence on incidence of real earnings manipulations. Similarly, auditor-type (another proxy for audit quality) would also detect real earnings manipulations as Big4/non-Big4 has a negative effect on real earnings management, thereby improving financial reporting quality. However, audit fees display positive and significant impact on real earnings manipulations.

Table 4. Panel Regression Analysis (Moderating Effects)

DV: AEM	Fixed	Random	DV: REM	Fixed	Random
BGD	-0.0262 (-0.30)	0.0315 (0.69)	BGD	-0.0376 (-0.42)	-0.0069 (-0.09)
LnAFES	-0.1984 (-2.03)**	-0.0712 (-1.86)*	LnAFES	0.1466 (1.47)*	0.1653 (2.42)**
BGD*lnAFES	0.0087 (0.42)	0.0060 (-0.57)	BGD*lnAFES	0.0045 (0.22)	0.0000 (0.00)
BS	0.0130* (1.70)	0.0053 (1.45)	BS	-0.0057 (-0.72)	-0.0056 (-0.93)
BI	-0.0089 (-1.31)	-0.0030 (-0.92)	BI	0.0022 (0.32)	-0.0001 (-0.02)
ATYP	0.0753 (1.82)*	0.0113 (0.58)	ATYP	-0.1232 (-2.92)**	-0.0425 (-1.34)
LnTA	0.0004 (0.00)	0.0342 (1.52)*	LnTA	0.0981 (-1.14)	-0.1080 (-2.60)**
LEV	0.5366 (5.25)**	0.4508 (6.34)**	LEV	-0.1038 (-1.00)	-0.0283 (-0.30)
Const.	0.6701	-0.0192	Const.	0.2490	0.1847
Adj. R^2	0.1261	0.2629	Adj. R^2	0.0494	0.0565
F-Stat./Wald Chi^2	5.27 (0.000)	47.71 (0.000)	F-Stat./Wald Chi^2	1.90 (0.060)	11.29 (0.1859)
Hausman Test	9.15 (0.3295)		Hausman Test	15.81 (0.0451)	

Significant @ 1%, ** Significant @5% and * Significant @10%*

Source: Authors' Computation (2023)

From table 4, this study failed to provide empirical evidence on the role of audit quality in moderating the association between board gender diversity and financial reporting quality, as interacting variables were positive and non-significant, in both cases accrual and real earnings management. However, audit quality maintains its positive and statistical influence on measures of earnings management.

4.4. Discussion of Findings

No doubt, the findings from this study supported both agency and top echelon theories. Female presence on the board reduces information asymmetric, thereby downplaying any agency conflict that may arise between principal and agent. Further, high ethical and moral standards are guaranteed, in the light of female representation on boards of corporate entities. Consequently, incidence of earnings management is drastically reduced, and excellent financial reports, devoid of any material misstatements is also attained. While findings from this study tallies with extant studies, such as Attia et al. (2024), Akter et al. (2024), Aryani et al. (2024), Miladi & Chouaibi (2021), Kouaib & Almulhim (2019), there were also a few scholarly works in the literature Hili & Affes (2012), Lakhal et al. (2015) and Du et al. (2016) whose findings were contrary to empirical results contained in this paper.

Specifically, Attia et al. (2024) reported a positive and statistically significant effect of board gender diversity on accrual (using Kasznik, Kothari, Raman, and Shahrur models) and real earnings management in Egypt. Similarly, Akter et al. (2024) also documented a negative and statistically significant influence of board gender diversity on real earnings management in three south Asian countries, including Bangladesh, India and Pakistan. While singling out Indonesia, Aryani et al. (2024) found out positive influence of women on board in deterring managers' manipulative behavior, with their educational levels and background, also serving as effective moderators. In addition, Miladi &

Chouaibi (2021) reported negative impact of women presence in top management positions and incidence of earnings and management in USA. Within the European context, Kouaib & Almulhim (2019) also provided empirical evidence to support the role of women on board in decimating both accrual and real earnings management. However, studies of Hili & Affes (2012), Lakhal et al. (2015) reported no relationship between gender diversity and incidence of earnings management in France. This is similar to the study of Du et al. (2016) in China.

Though this paper documents failure of audit quality in moderating the relationship between board gender diversity and financial reporting quality, it displays negative and statistically significant association with both accrual and real earnings management. This confirms external audit quality as an effective control mechanism which may be deployed in checking management's manipulative tendencies. The works of Soyemi et al. (2020), Miladi & Chouaibi (2021), and Aryani, et al. (2024) also reported similar results, while a few studies, such as Firnanti & Pirzada (2019) in Indonesia and Khanh & Nguyen (2018) in Vietnam have documented contrary findings.

5. Conclusion

This paper examines the influence of board gender in mitigating incidence of accrual and real earnings management, using 50 quoted non-financial firms for 7 years from 2014 to 2020, culminating into 350 firm year observations. In addition, the moderating role of audit quality in the association between board gender and earnings management was also evaluated. The findings from this study is indicative of a positive and statistically non-significant influence between accrual earnings management and board diversity while a negative and statistically significant influence between real earnings management and board diversity. In addition, there was no empirical support for the moderating effect of audit quality. Impliedly, this study upheld the notion that women representation on the board is accompanied with high ethical behavior than their male counterpart, thereby checkmating occurrence of real manipulation of earnings. Besides, audit quality is capable of preventing accrual earnings management, but do not moderates the relationship between board gender and earnings management. The findings are largely consistent with prior studies.

This paper makes contribution to the body of literature regarding board gender and earnings management, especially in developing country, like Nigeria. Besides, rather than embarking on sectoral study, this paper uses panel data from quoted non-financial firms, thereby, excluding financial sector firms. Further, findings from this study provide basis for policy formulation regarding women representation in board structure, judging from their conservative disposition.

6. Implications for Future Research and Contributions to Specialised Literature

The findings inherent in this paper has implications for future research and accounting cum auditing literature. The relationship between board gender diversity and the two measures of earnings management differs. While board gender diversity refuses to mitigate the incidence of accrual earnings management, it does prevent the occurrence of real manipulations by management of entities. This is indicative of varying effective determinants of financial reporting quality, that should still be pursued by scholars. This also supports the consensus in extant literatures on easy detection of accrual earnings management, hence entities' movement towards the practice real earnings management. Therefore, this paper suggests more scholarly work on real earnings management., especially, disaggregating it into its main constituents. This is a major contribution to the accounting and auditing literature. However, even if audit quality has failed to display a moderating role between board gender diversity and earnings management, it maintains it's a prominent factor as deterrent to entities' manipulative behavior, thereby eroding quality from financial reporting.

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