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# Audit Committee Attributes and Earnings Management of Listed Oil and Gas Companies in Nigeria.

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Abstract

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*This study examined the effect of audit committee attributes on earnings management within 10 listed oil and gas firms in Nigeria from 2008-2024. Utilizing ex-post facto and quantitative research design and a census sampling technique, the study analysed secondary data extracted from annual reports. Audit committee attributes were proxied by size, independence, diligence, financial expertise and gender diversity, while earnings management was measured using discretionary accruals. Data were analysed using descriptive statistics, correlation matrix and a regression analysis. Findings revealed that audit committee size has negative and insignificant effect on discretionary accruals; audit committee independence has positive and significant effect on discretionary accruals; audit committee diligence has positive but insignificant effect on discretionary accruals; audit committee financial expertise has negative but significant effect on discretionary accrual; while audit committee gender has positive but insignificant effect on discretionary accruals. The study concluded that effective audit committee oversight is not merely a function of structural compliance with corporate governance codes, but rather of the substantive capacity, competence, and independence of committee members. The study confirms that audit committee financial expertise significantly curbs earnings manipulation, while others like independence (in form only), meeting frequency and gender diversity might be insufficient or even counterproductive if not meaningfully implemented. The study, therefore, recommended that there should be deeper reform of governance practices, one that prioritizes substantive competence, genuine independence, and meaningful participation in audit committee activities.*

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## 1 INTRODUCTION

In the Nigerian corporate landscape, earnings management has been a critical issue affecting the credibility and reliability of financial reporting. Earnings management remains a significant concern in the field of financial reporting and corporate governance, particularly in sectors such as oil and gas, where firms operate in complex regulatory environments and often face high financial scrutiny. Earnings management is the manipulation of financial information by company managers to achieve predetermined financial results or to influence stakeholders' perceptions. It involves the intentional creation of financial statements by management to achieve desired outcomes, such as meeting profit targets or influencing investor perception (Abubakar et al., 2021). When earnings management is prevalent, investors lose faith in the accuracy and significance of the company's disclosed financial statements (Izevbekhai et al., 2023).

The practice of earnings management might involve the use of accounting discretion to either overstate or understate earnings, thereby compromising the quality and transparency of financial statements, and eroding the credibility of financial reporting (Odia & Ogiedu, 2013); encouraging poor corporate governance and accountability (Adegbite, 2012); creating investor mistrust and capital market inefficiencies (Enekwe et al., 2020); posing regulatory and legal risks (Ibrahim & Mansor, 2021); slowing macroeconomic growth (Okolie, 2014); and inhibiting sustainable development (Nmehielle, 2020). Consequently, earnings management has resulted in the collapse of prominent corporations, such as Enron, WorldCom in the United States of America, and Transmile in Malaysia (Abubakar et al. 2021). Similarly, in Nigeria, cases of corporate scandals in 2017 involving earnings management include companies such as Oando Oil Plc and Arik Arline (Edirin & Peter, 2022; Olowokudejo & Oladimeji, 2019).

In response to the aforementioned threats posed by earnings management, corporate governance mechanisms in Nigeria were overhauled in 2018 by the Financial Reporting Council of Nigeria (FRC, 2020) with the issuance of the Nigerian Corporate Governance Code (NCCG) to safeguard the integrity of financial reporting. This used critical aspects of audit committee attributes such as audit committee size, audit committee independence, audit committee diligence, audit committee financial expertise and audit committee gender diversity to proxy the effect of audit committee attributes on earnings management of listed oil and gas companies in Nigeria.

Despite the establishment of monitoring committees, the Nigerian corporate landscape has been marred by significant financial scandals involving entities such as Cadbury Plc, Intercontinental Bank, Oceanic Bank and Oando Plc (2018). These failures have severally eroded shareholder confidence in the integrity of financial reporting. Consequently, researchers Mardessi (2022) and Almarayeh et al. (2022) found that higher audit committee independence significantly constrains earnings management. Saleh and Mansour (2024) argue that more independent members enhance the efficiency of the supervisory role. Similarly, Raimo et al. (2021) and Sobhan et al. (2024) argue that larger committees provide a greater pool of ideas and skills, improving oversight. These studies have sought to determine whether audit committees effectively curb earnings management, yet the existing literature remains deeply fragmented. The necessity for this study arises from four critical gaps in the current body of knowledge.

Inconclusive findings as global empirical evidence is contradictory. While some studies (Beasley & Selterio, 2001) suggest a positive relationship between audit committee characteristics and earnings management, others report negative associations (Yang & Krishman, 2005; Lin et al., 2006) or no relationship at all (Nelson & Jamil, 2012). This study seeks to provide clarity within the Nigerian context.

Outdated data and regulatory changes as previous Nigerian studies (Hassan, 2012; Fodio et al., 2013) focused on data from year 2005 to 2010. These findings may no longer be relevant following the introduction of the 2011 SEC Code of Corporate Governance. However, this study period covers year 2008 to 2024. Furthermore, many of these utilize short timeframes that limit the ability to generalise their results. Also, methodological limitations, while many researchers rely on the 1995 Modified Jones Model, after study adopts the more contemporary and robust performance adjusted model (Hussaini & Gugong, 2015) to ensure more accurate measurements of earnings management.

By addressing these empirical, temporal, sectoral and methodological gaps, this research on audit committee attributes and earnings management of listed oil and gas companies in Nigeria provided a definite analysis to fill these gaps that exist in extant literatures.

The broad objective of this study is to examine the effect of audit committee attributes on earnings management of listed oil and gas companies in Nigeria. Specifically, this study ascertains the effect of audit committee size, audit committee independence, audit committee diligence, audit committee expertise and audit committee gender diversity on the nexus between audit committee attributes and earnings management of listed oil and gas companies in Nigeria. The remainder of this paper included literature review, methodology, results, discussions, conclusion and recommendations.

## 2 LITERATURE REVIEW

### *2.1 Audit Committee Size and Earnings Management*

Ayalew (2024) evaluated the effect of audit committee size (ACS) on the earnings management of 17 insurance businesses in Ethiopia for an eight-year period from 2015 to 2022. Abnormal production costs, abnormal discretionary expenditures, and abnormal operating cash flow were used to measure earnings management. The generalized moment model (GMM) was employed for analysis of data. According to the result, ACS has positive and significant effect on the sampled insurance companies' earnings management during the study period.

Kaoje et al. (2023) assessed the effect of audit committee size (ACSIZ) on the earnings management of 150 listed firms in Nigeria for the period of six years from 2014 to 2019. The dependent variable of the study was discretionary accruals (DACC). Firm size (FSIZ) was used as control variable. The Generalized Least Square (GLS) estimator was used in estimating the parameters. The results revealed that ACSIZ has negative but significant effect on earnings management of the firms studied. The study concluded that larger audit committee members are more effective in monitoring the activities of management, and they have strong internal control systems and governance mechanisms which allow them to access high quality services from large audit firms. This has gone a long way in reducing earnings management established by managers and made them better at maintaining the financial reporting process. Consistent with the previous pattern of previous empirical outcomes, the present study adopts the following hypothesis because this could go a long way in reducing earnings management established by managers and made them better at maintaining the financial reporting process.

***$H_{01}$:*** *Audit committee size has no significant effect on earnings management of listed oil and gas companies in Nigeria.*

### *2.2 Audit Committee Independence and Earnings Management*

Ayalew (2024) examined the effect of audit committee independence (ACI) on the earnings management of 17 insurance businesses in Ethiopia for an eight-year period from 2015 to 2022. Abnormal production costs, abnormal discretionary expenditures, and abnormal operating cash flow were used to measure earnings management. The GMM was employed for analysis of data. According to the result, ACI has positive and significant effect on the sampled insurance companies' earnings management during the study period.

Kaoje et al. (2023) explored the effect of audit committee independence (ACIND) on the earnings management of 150 listed firms in Nigeria for the period of six years from 2014 to 2019. DACC was employed as the measure of earnings management, while firm size (FSIZ) was used as control variable. The GLS estimator was used for analysis of data. The result revealed that ACIND has positive and significant effect on DACC. The study concluded that audit committee independence might not guarantee that managers would not manipulate earnings. The study, therefore, recommended that policy makers should provide a clearly spelt-out policy on the composition of audit committees to enable audit committee members perform their functions effectively. Consistent with the previous pattern of previous empirical outcomes, the present study adopts the following hypothesis because this could go a long way in reducing earnings management established by managers and made them better at maintaining the financial reporting process.

***$H_{02}$:*** *Audit committee independence has no significant effect on earnings management of listed oil and gas companies in Nigeria.*

### *2.3 Audit Committee Diligence and Earnings Management*

Ayalew (2024) explored the effect of audit committee meeting on the earnings management of 17 insurance businesses in Ethiopia for an eight-year period from 2015 to 2022. Abnormal production costs, abnormal discretionary expenditures, and abnormal operating cash flow were used to measure earnings management. The GMM was employed for analysis of data. According to the result, audit committee meeting has positive and significant effect on the sampled insurance companies' earnings management during the study period.

Kaoje et al. (2023) examined the effect of audit committee meetings (ACMTN) on earnings management of 150 listed firms in Nigeria for the period of six years from 2014 to 2019. The dependent variable of the study was discretionary accruals (DACC), while firm size (FSIZ) was used as control variable. The GLS estimator was used for analysis of data. The results revealed that ACMTN has positive and significant effect on earnings management. The study concluded that audit committee meetings held more than four times do not result in more effective monitoring of earnings management. The study, therefore, recommended that policy makers should provide a clear spelt-out policy at audit committee meetings to enable audit committee members perform their functions effectively. Consistent with the previous pattern of previous empirical outcomes, the present study adopts the following hypothesis because this could go a long way in reducing earnings management established by managers and made them better at maintaining the financial reporting process.

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***H₀₃:*** *Audit committee diligence has no significant effect on earnings management of listed oil and gas companies in Nigeria.*

### *2.4 Audit Committee Financial Expertise and Earnings Management*

Ayalew (2024) evaluated the effect of audit committee financial expertise (ACE) on the earnings management of 17 insurance businesses in Ethiopia for an eight- year period from 2015 to 2022. Abnormal production costs, abnormal discretionary expenditures, and abnormal operating cash flow were used to measure earnings management. The GMM was employed for analysis of data. According to the result, ACE has positive and significant effect on the sampled insurance companies' earnings management during the study period.

Kaoje et al. (2023) investigated the effect of audit committee financial expertise ACFEP on the earnings management of 150 listed firms in Nigeria for the period of six years from 2014 to 2019. The dependent variable of the study was DACC, while FSIZ was used as control variable. The GLS estimator was used to analyze data for the study. The results revealed that ACFEP have negative but significant effect on earnings management of the studied firms. The study concluded that audit committee members with financial knowledge are better in detecting earnings management thereby reducing the likelihood of aggressive earnings management by managers. Consistent with the previous pattern of previous empirical outcomes, the present study adopts the following hypothesis because this could go a long way in reducing earnings management established by managers and made them better at maintaining the financial reporting process.

***$H_{04}$:*** *Audit committee financial expertise has no significant effect on earnings management of listed oil and gas companies in Nigeria.*

### *2.5 Audit Committee Gender Diversity and Earnings Management*

Heidi et al. (2022) carried out a study to investigate how audit committee gender affects earnings management in Egypt using a sample of 80 non-financial Egyptian companies listed on the Egyptian Stock Exchange for eight financial years from 2012 to 2019. Discretionary accruals were used as proxy for earnings management. Firm size, Big-4 audit firms, block holder ownership, managerial ownership and leverage were used as control variables. Fixed effect regression was used to analyze the data of the study. The results showed there was positive but insignificant effect of audit committee's gender and Big4 on earnings management. The study concluded that the right number of members on an audit committee enables individuals to apply their expertise to the benefit of stakeholders.

Masmoudi and Makni (2020) explored the effect of audit committee gender diversity (ACFEMALE) on the real earnings management of 80 Dutch non-financial companies listed on the Amsterdam Stock Exchange during the period of eight years between 2010 and 2017. Discretionary expenditure (ADISX), abnormal production cost (APROD), and abnormal operating cash flow (ACFO) were used to measure earnings management. OLS was used as method of data analysis. The results revealed that ACFEMALE has negative and insignificant effect on both ADISX and APROD, while it has negative but significant effects on ACFO. Consistent with the previous pattern of previous empirical outcomes, the present study adopts the following hypothesis because this could go a long way in reducing earnings management established by managers and made them better at maintaining the financial reporting process.

***$H_{05}$:*** *Audit committee gender diversity has no significant effect on earnings management of listed oil and gas companies in Nigeria.*

### *2.6 Agency Theory and Theoretical Framework*

Agency theory pioneered by Jensen and Meckling (1976), posits that a conflict of interest inherently exists between principals (shareholders) and agents (management). In the capital-intensive oil and gas industry, managers may have incentives to manipulate earnings (earnings management) to meet performance targets, secure bonuses or hide inefficiencies. The audit committee acts as a monitoring mechanism designed to reduce agency costs by aligning the interest of managers with those of shareholders. Agency theory suggests that independent directors are more likely to challenge management's accounting choices because they are not beholden to the chief executive officer (CEO), thereby reducing opportunistic earnings management. Similarly, larger committees and frequent meetings are considered as indicators of active monitoring, theoretically leaving less room for managers to engage in discretionary accruals without detection.

The agency theory tends to solve the problem of information asymmetry between the principal (shareholders) and the agents (the management). The principal provides the resources and employs the agent (management) to oversee the affairs and utilization of these resources for better outcome. However, the goals of both parties are usually different. The principal aims at maximizing his return, while the agent usually focuses on his self-interest through compensation and bonuses. This leads to the problem of information asymmetry as the agent usually has more information about the company than the shareholders, thereby using it to its own advantage. The management has opportunistic behaviour of manipulating the profit stated in the financial statement by reporting better financial results, thereby leading to good compensation and bonuses. This might result to the problem of moral hazard and adverse selection. Agency theory recognizes that in a large corporation with widely dispersed ownership, small board size does not have the capacity and resources to monitor the managers but adequate board size with experienced members (Jensen & Meckling, 1976).

Agency theory provides a robust framework for examining audit committee effectiveness in the Nigerian oil and gas sector by addressing the inherent conflicts of interest between shareholders and management. Given the high degree of information asymmetry and operational complexity in the extractive industry, the audit committee serves as a critical monitoring mechanism designed to curb agency costs and curb opportunistic earnings management. Attributes such as independence, financial expertise and diligence are theorized to enhance oversight, ensuring that managers provide transparent financial reports rather than manipulating discretionary accruals to meet personal or corporate targets. By applying this theory, the research evaluates whether these governance structures effectively protect investor interests within the specific regulatory and institutional environment of the Nigerian Exchange (NGX).

## 3 RESEARCH METHODOLOGY

This study adopted ex-post facto and quantitative research designs, which are suitable for exploring cause-and-effect relationships using data that have occurred or naturally taken place by looking back at past events or conditions to identify possible causes or correlations data without manipulating any variables. The focus is to assess the extent to which specific audit committee attributes affect earnings management in Nigerian oil and gas companies. This design is chosen because it is appropriate for analysing publicly available financial and governance data over time (Uwuigbe et al., 2022; Musa et al., 2020).

This study adapted the Modified Jones Model presented below with changes that align with previous research to test the effect of audit committee attributes on earnings management of listed oil and gas companies in Nigeria (Dechow et al 1995).

$DISAC_{it} = a_0 + a_1ACOMSZ_{it} + a_2ACOMIND_{it} + a_3ACOMDILit + a_4ACOMFEit + a_5ACOMGD + a_6ADQLTYit + \mu$

Where:

DISAC = Discretionary Accruals as proxy for Earnings Management

$DISAC_{it} = TACit/Ait\text{-}1 - \alpha 1t\ [1/Ait\text{-}1] + \alpha 2i\ [(ΧREV - ΧREC)/\ Ait\text{-}1] + \alpha 3i\ [PPEit/\ Ait\text{-}1]$

*Variables and Measurements*

**Table :1 Definition and Description of Variables**

| Variable | Variable type | Label/ Symbol | Measurement/Source | Apriori expectation |
|---|---|---|---|---|
| Earnings Management | Dependent | DISAC | Discretionary accruals (Hussaini & Gugong, 2015) | Positive |
| Audit Committee Size | Independent | ACOMSZ | The number of audit committee members in each firm (Yousef et al., 2015). | Negative |
| Audit Committee Independence | Independent | ACOMIND | The number of non- executive directors in audit committee divided by total number of audit committee members of the sampled firms (Yousef et al., 2015). | Negative |
| Audit committee diligence | Independent | ACOMDIL | The regularity of audit committee meetings as defined by the number of times meetings were held by the audit committee of the sampled firms (Yousef et al., 2015). | Negative |
| Audit Committee Expertise | Independent | ACOMFE | Proportion of audit committee members with accounting and financial expertise to audit committee size (Orbunde et al., 2021) | Negative |
| Audit Committee Gender Diversity | Independent | ACOMGD | Proportion of audit committee members who are women to the audit committee size (Ayalew, 2024) | |
| Audit Quality | Control | ADQLTY | Dummy variable of 1 where a firm is audited by a Big-4 audit firm in year t, otherwise 0 (Ibadin, 2015) | Negative |

**Source:** Author's compilation (2024)

## 4 RESULTS AND DISCUSSION

To verify whether there was evidence of multicollinearity, we used the Variance Inflation Factor (VIF). A VIF above 10 indicates that multicollinearity is harmful (Gujarati and Porter, 2009). The outcome shows that 1.81 is the maximum VIF and 1.28 is the lowest VIF, both of which are less than 10, indicating the absence of multicollinearity.

Table 2: Descriptive Statistics

| Variable | Observation | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| DISAC | 170 | 0.2476 | 0.4380 | 0.0048 | 2.6864 |
| ACOMSZ | 170 | 5.1471 | 1.0301 | 2 | 7 |
| ACOMIND | 170 | 0.4358 | 0.1438 | 0.1667 | 1 |
| ACOMDIL | 170 | 3.9941 | 1.3167 | 1 | 9 |
| ACOMFE | 170 | 0.1937 | 0.2386 | 0 | 1 |
| ACOMGD | 170 | 0.1383 | 0.1501 | 0 | 0.50 |
| ADQLTY | 170 | 0.6529 | 0.4774 | 0 | 1 |

**Source:** STATA 14 output

From the results in Table 2, DISAC has a mean value of 0.2476 with a standard deviation of 0.4380. This means that the studied oil and gas companies recorded approximately 25% manipulations in their published financial statements, and these manipulations varied widely among the companies as indicated by the standard deviation of approximately 44%. The result indicates that, on average, firms in the sample engage in earnings management at a moderate level.

The minimum value of 0.48% was recorded by Conoil Plc in 2011, while the maximum value of 268.64% was recorded by Rak Unity Plc also in 2011. The minimum and maximum values suggest a considerable variation in the degree of discretionary accruals across the firms, with some exhibiting minimal earnings management and others demonstrating substantially high levels.

ACOMSZ has a mean of 5.1471 and standard deviation of 1.0301, implying that, on the average, every audit committee in the studied companies had five members, and this number increased or decreased by one member as revealed by the standard deviation. The minimum number of audit committee size was 2, and this was recorded by Seplat Petroleum Plc from 2008-2013. The maximum size of seven members was recorded by at least one of the studied companies. However, the provision of CAMA 2020 provides for a maximum audit size of five members which is in tandem with good corporate governance practices.

ACOMIND has a mean of 0.4358 and a standard deviation of 0.1438, implying that on the average approximately 44% of members of the audit committee in the studied companies were non-executive or independent directors. This number did not vary much across the sampled companies as shown in the low standard deviation of 14.4%. The average of 44% is slightly above the statutory 40% ratio of audit committee independence as stipulated by S. 404(3) of CAMA 2020. The minimum value of 16.67% was recorded by Conoil Plc from 2009-2011 and 2013-2014. Seplat Petroleum Plc recorded the maximum value of 100% also from 2008-2013, indicating that both members of the audit committee for the six years running were non-executive or independent directors.

For ACOMDIL, a mean value of 3.9941 and standard deviation of 1.3167 was recorded, showing that on the average, the statutory audit committees of the studied companies held approximately four meetings during the study period, and this number of meetings increased or decreased by one meeting as shown by the standard deviation. The number of meetings aligns with the prescribed minimum of four meetings for the audit committee as well as other board committees as enshrined in Section 11.4.5 of the NCCG (2018). Rak Unity held the least number of meetings from 2008-2014 and 2016, while Oando Plc recorded the highest number of audit committee meetings of nine, and that was in 2017.

ACOMFE has a mean 0.1937 and standard deviation of 0.2386, suggesting that on the average 19% of the audit committee members in the studied companies were financial experts, but there was wide variation of 23.86%. The minimum value of 0 showed that at least one of the companies' audit committees did not have any financial expert, while the maximum value of 1, indicating that all the audit committee members were financial experts, was recorded by Seplat Petroleum Plc from 2018-2013.

ACOMGD has a mean of 0.1383, which implies that women make up on average approximately 14% of the composition of the statutory audit committees of the studied firms. This suggests that gender diversity is quite low, reflecting the underrepresentation of women in audit oversight roles. This proportion of women members does not align with the requirement of Section 2 of the NCCG (2018), which stipulates that there should be an appropriate balance of gender in board and committee appointments. The standard deviation of 15.01% shows wide variation in the women membership across the studied firms. The minimum value of '0' indicates that some of the firms did not even appoint any woman to serve on their statutory audit committees, while the maximum value of 0.50 shows that half of the statutory audit committee members were women, and this was recorded by Rak Unity Plc in 2018 and 2019, and Seplat Petroleum Plc in 2013.

Finally, ADQLTY, which is a binary variable indicating whether a firm is audited by a Big 4 firm, has a mean value of 0.6529 with a standard deviation of 0.4774. This demonstrated that 65% of the sampled companies were audited by the Big-4 audit firms, while 35% of the sampled companies were audited by the non-Big-4 audit firms, reflecting a relatively high level of audit quality within the sample. This result showed that, there is higher participation of big-4 audit firms in the audit of the listed oil and gas firms in Nigeria than the non-big-4 audit firms. Overall, the descriptive statistics highlight significant variations in audit committee characteristics and earnings management across the sampled firms, with implications for the effectiveness of corporate governance mechanisms in curbing opportunistic financial reporting.

Table 3: Correlation Matrix of the Variables

| | DISAC | ACOMSZ | ACOMIND | ACOMDIL | ACOMFE | ACOMGD | ADQLTY |
|---|---|---|---|---|---|---|---|
| DISAC | 1 | | | | | | |
| ACOMSZ | -0.1519* | 1 | | | | | |
| **Sig.** | (0.0480) | | | | | | |
| ACOMIND | 0.1486* | -0.5328* | 1 | | | | |
| **Sig.** | (0.0530) | (0.0000) | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ACOMDIL | -0.0592 | 0.3017* | 0.0156 | 1 | | | |
| **Sig.** | (0.4432) | (0.0001) | (0.8397) | | | | |
| ACOMFE | 0.0928 | -0.3256* | 0.5137* | 0.1240 | 1 | | |
| **Sig.** | (0.2285) | (0.0000) | (0.0000) | (0.1071) | | | |
| ACOMGD | 0.2567* | -0.2298* | 0.4595* | -0.1232 | 0.4303* | 1 | |
| **Sig.** | (0.0007) | (0.0026) | (0.0000) | (0.1094) | (0.0000) | | |
| ADQLTY | 0.2471* | -0.0400 | 0.0529 | -0.1915 | 0.4120* | 0.3049 | 1 |
| **Sig.** | (0.0012) | (0.6046) | (0.4936) | (0..0124) | (0.0000) | (0.0001) | |

**Source**: STATA 14 Output

Table 3 shows that the relationship between ACOMSZ is negative but significant as shown in the coefficient and p-value of -0.1519 and 0.0480 respectively. The negative relationship indicates that both variables move in the opposite direction. The relationship is, however, weak. This suggests that larger audit committees are associated with lower levels of earnings management, implying that committee size might enhance oversight effectiveness. The relationship between ACOMIND and DISAC is positive and significant from the coefficient and p-value of 0.1486 and 0.0530 respectively. The positive relationship implies that, ACOMIND and DISAC move in the same direction. While this indicates a weak association considering the low coefficient, the direction suggests that increased independence might be associated with higher earnings management.

The relationship between ACOMDIL and DISAC is negative and insignificant with the coefficient and p-value of 0.0592 and 0.4432 respectively. This shows that ACOMDIL and DISAC move in opposite direction, but the relationship is very weak considering the low coefficient. This implies that there is a meaningful linear relationship between the frequency of meetings and earnings management. ACOMFE and DISAC exhibit a positive but insignificant relationship with a coefficient of 0.0928 and p-value of 0.2285. This demonstrates that ACOMFE and DISAC move in the same direction, but the relationship is also very weak. This result is somewhat surprising, suggesting that financial expertise might not necessarily constrain earnings management and might, in some contexts, even enable more sophisticated manipulation.

ACOMGD has a positive and significant relationship with DISAC with coefficient of 0.2567 and significance value of 0.0007. This shows that ACOMGD and DISAC move in the same direction, but the relationship is very weak, indicating that gender diversity alone might not strongly influence earnings management practices. For ADQLTY and DISAC, the relationship is positive and significant with a coefficient of 0.3096 and p-value of 0.0001. This indicates that ADQLTY and DISAC move in the same direction, but the relationship is weak. The result suggests that firms audited by Big 4 auditors tend to exhibit higher levels of discretionary accruals. This might imply that the presence of Big 4 auditors does not necessarily reduce earnings management, or that such firms engage in more complex accruals due to size or reporting incentives.

The correlation analysis reveals that all the audit committee features except ACOMDIL are significantly associated with discretionary accruals. Surprisingly, ADQLTY is positively associated with earnings management, contrary to the expected deterrent role of Big 4 auditors. Furthermore, the significant relationships among committee attributes (size, independence, expertise and gender diversity) suggest complementary governance mechanisms. None of the correlation coefficient is up to 0.8, thereby giving early signal to the existence of harmless multicollinearity among the independent variables.

Table 4: Regression Result

| **Variables** | **OLS** | | |
|---|---|---|---|
| | **Coef.** | **T** | **P>\|t\|** |
| Constants | 0.0272 | 3.12 | 0.002 |
| ACOMSZ | -0.0014 | -1.10 | 0.271 |
| ACOMIND | 0.0293 | 2.95 | 0.004 |
| ACOMDIL | 0.0013 | 1.47 | 0.145 |
| ACOMFE | -0.0129 | -2.25 | 0.026 |

| | | | |
|---|---|---|---|
| ACOMGD | 0.0029 | 0.35 | 0.729 |
| ADQLTY | 0.0113 | 4.51 | 0.000 |
| $R^2$<br>F-Stat Prob>chi$^2$ Hettest | 0.5115<br>6.5000<br>0.0000<br>0.3578 | | |

**Source:** STATA 14 Output

In Table 4, the value of $R^2$, which is often regarded as the coefficient of multiple determinations, is 0.5115 which implies that 51.15% variation in DISAC could jointly be explained by ACOMSZ, ACOMIND, ACOMDIL, ACOMFE, ACOMGD and ADQLTY,
while the remaining 49.08% could be attributed to other factors outside the scope of the model. From Table 4.4 it is seen that the F-statistics, which is used to test the hypothesis that a proposed regression model fits the data well, is 6.39 at 1% level of significance. This proves that the model is fit and the explanatory variables are properly selected, combined and used, and at least one of the independent variables significantly explains variations in the dependent variable. The intercept is positive and significant, which suggests that when all explanatory variables are zero, the baseline value of DISAC is 2.72%.

ACOMSZ has a coefficient value of -0.0014, implying that ACOMSZ has negative effect on DISAC, and an increase in ACOMSZ by 1% would lead to a decrease in DISAC by 0.14% in the studied oil and gas firms. This means that the higher the number of members of the audit committee, the lower the DISAC. Hence, larger ACOMSZ is associated with a reduction in the DISAC. ACOMIND has a coefficient value of 0.0293, which connotes that ACOMIND positively affects DISAC, and that a rise in ACOMIND by 1% would lead to a rise in DISAC by approximately 3% in the studied oil and gas companies in Nigeria. This connotes that the higher the number of non-executive or independent directors on the audit committee, the higher the DISAC. Higher ACOMIND is associated with an increase in DISAC.

ACOMDIL has a coefficient value of 0.0013, which indicates that ACOMDIL has positive effect on DISAC, and that a leap in ACOMDIL by 1% would lead to a leap in DISAC by 0.13%. This implies that the higher the number of meetings of the audit committee, the higher the DISAC. ACOMFE has a coefficient value of -0.0129, meaning that ACOMFE negatively affects DISAC, and an increase in ACOMFE by 1% would lead to a decrease in DISAC by approximately 1.3%. This connotes that the higher the number of audit committee members who are financially literate, the lower the DISAC.

ACOMGD has a coefficient value of 0.0029, meaning that ACOMGD positively affects DISAC, and an increase in ACOMGD by 1% would lead to a decrease in DISAC by 0.29%. This connotes that the higher the number of female audit committee members, the higher the DISAC. For the control variable, ADQLTY has a coefficient of 0.0113, suggesting that ADQLTY positively affects DISAC, and a rise in ADQLTY by 1% would lead to a rise in DISAC by 1.13%. This implies that when a company is audited by any of the Big-4 audit firms, earnings management could increase.

## 5 CONCLUSIONAND RECOMMENDATION

This study examined audit committee attributes and earnings management of listed oil and gas companies in Nigeria. Based on the analysis conducted on the data obtained, the following conclusions were drawn:

Firstly, audit committee size is found to have a negative and statistically insignificant effect on earnings management. Larger committees appear to be more effective at reducing discretionary accruals, likely due to the diversity of skills, increased scrutiny, and distributed workload they bring to the oversight process. This supports the notion that increased committee size, when properly managed, enhances governance effectiveness in complex and high-risk sectors such as oil and gas.

Secondly, the study reveals positive and significant effect of audit committee independence on earnings management, a result that challenges the traditional expectations of agency theory. This might reflect the realities in Nigeria where "independent" directors are sometimes affiliated with management or politically connected, rendering them ineffective in fulfilling their oversight roles. It underscores the critical difference between structural independence and substantive independence, and the need for better enforcement of board autonomy.

Thirdly, audit committee meeting frequency, which is expected to enhance governance, shows a positive but insignificant effect on earnings management. This counterintuitive result indicates that merely increasing the number of meetings does not improve oversight quality. Rather, it might point to shallow compliance with governance codes, meetings lacking in substance, or even instances where frequent meetings serve managerial interests in rationalizing earnings manipulations. This emphasizes the need to shift focus from the quantity of governance mechanisms to their functional quality.

Fourthly, the result on audit committee financial expertise reveals a negative but statistically significant effect on earnings management. This finding validates agency and resource dependence theories, highlighting those members with accounting, auditing, or financial backgrounds significantly strengthen the audit committee's oversight function. In a sector prone to financial denseness and high regulatory demands, financial expertise equips committee members to detect and prevent manipulative accounting practices effectively.

Lastly, the study finds that audit committee gender diversity has a positive but statistically insignificant effect on earnings management. This suggests that although the presence of women on audit committees is often associated with improved governance in theory, in practice, especially in the Nigerian oil and gas sector, such diversity might be largely symbolic. Without adequate representation, professional expertise, or influence in decision-making, gender-diverse audit committees might have limited effectiveness in curbing earnings management.

Taken together, the findings of this study point to the reality that effective audit committee oversight is not merely a function of structural compliance with corporate governance codes, but rather of the substantive capacity, competence, and independence of committee members. The study confirms that certain governance attributes, such as financial expertise significantly curb earnings manipulation, while others like independence (in form only). meeting frequency and gender diversity might be insufficient or even counterproductive if not meaningfully implemented.

These findings have strong implications for corporate boards, regulators, and investors in Nigeria. They call for a deeper reform of governance practices, one that prioritizes substantive competence, genuine independence, and meaningful participation in audit committee activities. Regulatory bodies, such as the FRC, the NGX, and the SEC must enforce not only the letter but also the spirit of corporate governance. Future policies should emphasize capacity-building, behavioural assessments of independence, and disclosures on the quality, not just frequency, of audit committee activities.

Based on the findings and conclusion of the study, the study recommends the following:

i. Companies should not consider expanding the audit committee beyond the statutory requirement but ensure that it includes a diverse blend of skills, perspectives, and experiences. Oversight authorities should also evaluate the functionality of the committee, ensuring that increased size leads to better division of responsibilities and stronger monitoring capacity.

ii. Regulatory agencies like FRC, SEC and NGX should go beyond formal independence definitions and assess real autonomy, ethical disposition, and behavioural independence. Companies must screen for potential conflicts of interest, political affiliations, or informal ties with management when appointing independent directors.

iii. Companies should ensure that audit committee meetings are well-structured, purposeful, and result-oriented, with clear agendas focused on critical accounting and internal control issues. Periodic training should be provided to enhance the engagement and competence of committee members during meetings.

iv. Companies should focus on the functional competence of audit committee members, not just their independence or diversity. Companies should also prioritize members with auditing experience, IFRS knowledge, and understanding of sector-specific accounting issues.

v. Efforts should be made to empower female audit committee members through capacity building, technical training, and inclusion in strategic oversight roles. Regulators might also consider setting benchmarks for minimum female representation to encourage gender diversity and long-term inclusion.

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