

Audit Committee Characteristics and Financial Reporting Quality of Selected Firms in Nigeria

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Abstract: *This paper performs an empirical investigation on the effect of audit committee characteristics on financial reporting quality of selected oil and gas companies listed on the floor of Nigeria Exchange Group for a period of ten years spanning 2011 to 2020 adopting ex-post facto and longitudinal research design. For the purpose of this paper, the study conducted a comprehensive analysis of data based on audit committee characteristics represented by audit committee size, audit committee busyness, audit committee gender diversity and audit committee independence, while our dependent variable financial reporting quality was captured using timeliness of financial report. Secondary data extracted from annual report and accounts of 10 oil and gas firms was subjected to some preliminary data tests such as descriptive analysis, correlation analysis and variance inflation factor and was analyzed using panel multiple regression technique taking cognizance of non homogeneity of firms data, hence the use of hausman effect tests. Result of Hausman specification test suggests that the random panel Least Square (RPLS) regression result was most appropriate for the dataset. The panel regression result indicates that audit committee size has positive but insignificant effect on financial reporting quality. Again audit committee busyness, audit committee gender diversity and audit committee independence has negative and insignificant effect on financial reporting quality of oil and gas firms in Nigeria. Given a negative effect of audit committee independence and gender, regulatory bodies should increase the independence of audit committee members in order to have adequate members who can monitor financial reporting process and also encourage more male participation in order to improve financial reporting quality of companies.*

Keywords: Financial reporting quality, audit committee busyness, independence, gender and size

Introduction

Financial reporting's reliability has been called into question since the turn of the last decade, when companies continued to go bankrupt shortly after releasing their appetizing, pretty profit and loss statements. Corporate governance procedures like the audit committee had to be revised because of the need to strengthen regulations and standards. Due to high-profile accounting scandals, such as those at Enron (2001), Worldcom (2002), and Cadbury Nigeria PLC (2007), the need for an audit committee has been apparent on a global scale. Due to the fact that the Big 4 (Deloitte, Ernst & Young, KPMG, and Price waterhouse Coopers) of the auditing practice were involved in the scandals, it is necessary to conduct a more thorough examination of the situation of financial reporting. The lack of a competent audit committee may have contributed to these crises. Because of this, regulators and other stakeholders expressed a great deal of concern about the possible causes of subpar monetary reportage. Audit committees need to be well-structured in order to prevent a loss of confidence in the capital market. Regulators have implemented a number of measures to safeguard the integrity of financial reporting, including an audit committee. Therefore, the importance of the audit committee's function in ensuring that financial reporting is accurate cannot be overstated.

In Nigeria without exception, financial reporting quality has been an issue for academic discuss with numerous postulations as what are the appropriate mix of audit committee members that are likely to help in ensuring financial reporting quality. To guaranty this, the FRC of Nigeria (2019) recommends that audit committee should be appropriately sized with respect to skill set, cognate experience, competency, gender diversity and devotion of sufficient time to assure that the corporate objectives are not vitiated. Doing these will ensure that agency conflict is minimized to the barest minimum and at the same time attract capable hands on the board committees with requisite skill set in consonance with the resource dependence theory (Pugliese, Minichilli & Zattoni, 2014). Similarly, Alqatamin (2018) is of the view that appropriate size, devotion of adequate time and gender diversity of audit committee will enhance reporting quality of a firm's financial information.

There are droughts of research on effect of audit characteristics on financial reporting quality. As the studies that tried to look at audit committee centered it on its effect with performance (Orjinta & Ikueze, 2018) while leaving financial reporting quality unattended to. Even the few existing ones were characterized with inconsistent results and contradictions and therefore found mixed results. To mention a few of them are: studies of Baxter and Cotter (2009), Davidson, Godwin-Stewart, and Kent (2005), and Abbott, Parker, and Peters (2004) whose results were mixed. On the other hand Kabiru and Usman (2021), Kantudu and Samaila (2015), found negative result between audit financial expertise and financial reporting quality while Syofyan, Septiari, Dwita, Rahmi and Ntim (2021) found no evidence to support the effect of audit committee expertise and Felo, Krishnamurthy and Solieri (2003) found no relationship between audit committee independence and financial reporting quality.

Thus, it is clear from the foregoing findings that the existing literature has prompted more research to support the direction of the relationship between audit committee features and the quality of financial reporting. Some previous research results have shown contradictions in the variables that affect financial reporting quality in some countries, so this study used these variables as predictors of financial reporting quality in Nigeria and expanded the scope of research by examining all quoted oil and gas firms because little is known about study in Nigeria that has studied oil and gas firms. As far as we know, no earlier research in Nigeria has studied the impact of audit committee workload and gender diversity on the quality of financial reporting. This makes this study unique. Many studies have focused on just two to four years of data, and this hasn't produced a satisfactory answer. It's possible that by conducting this investigation over a longer period of time, we could gain more accurate results. This is the gap that we hope to fill with our research. Consequently, this study seeks to examine the effect of audit committee characteristics on financial reporting quality that emanates from listed oil and gas firms in Nigeria. It is against this backdrop that this study seeks specifically to:

- i. Examine the effect of audit committee size on financial reporting quality of firms in Nigeria.
- ii. Ascertain the effect of audit committee busyness on financial reporting quality of firms in Nigeria.
- iii. Investigate the effect of audit committee gender diversity on financial reporting quality of firms in Nigeria.
- iv. Establish the effect of audit committee independence on financial reporting quality of firms in Nigeria.

Review of Empirical Literatures and Theoretical framework

Audit committee size and Financial Reporting Quality

In accounting, the size of an audit committee is defined as the total number of individuals who serve as members of the audit committee for a given period of time. A sufficient number of people should be included on the audit committee in order to successfully carry out and coordinate the massive obligations assigned to them. Firms having a large number of members on an audit committee are more likely to provide audit reports on time, according to research by Mohd Naimi and colleagues (2010). Nigerian food and beverage companies were studied by Umobong and Ibanichuka (2017), who looked at the impact of audit committee qualities on financial reporting quality between 2011 and 2015. Audit committee size was found to have a negative and minor impact on financial reporting quality in the selected companies. A similar study by Aderemi, Osarumwense et al. (2016) investigated the audit committee attribute and financial reporting quality of Nigerian listed companies and found that the audit committee size negatively and insignificantly affected the financial reporting quality of the sampled firms. Similarly. The study by Madawaki and Amran (2014), in contrast to the previous findings, shows a positive and negligible association between the size of the audit committee and the quality of financial reporting. The findings of Ojeka, Iyoha, and Asaolu (2015) show that the size of the audit committee has a considerable detrimental impact on financial reporting. Studies on the impact of audit committee size on financial reporting quality have yielded conflicting results, as evidenced by the literature review presented above. As a result, this study does not wish to predict any sign for audit committee size, rather we hypothesized that *there is a significant effect between audit committee size and financial reporting quality (Hypothesis 1)*

Audit Committee Busyness and Financial Reporting Quality

The number of concurrent directorships held by audit committee members is a good indicator of the committee's workload (Jubb, 2000). Multiple directorships, say Emmanuel, Ayorinde, and Babajide (2014), can have both beneficial and bad effects on the process of financial reporting monitoring and control. They go on to say that having many directorships at the same time helps directors gain more experience. According to the FRC of Nigeria's (2019) advice that board committee positions be filled by people who have sufficient financial literacy, members of the audit committee, which is a specialized committee, are expected to meet this standard by serving on many boards at the same time. A good place for students to start is by learning the skills that are required to produce high-quality financial reports. However, they are expected to devote sufficient time to the monitoring of account and audit personnel, especially as it relates to the creation of financial reports. Extraneous commitments can lead to conflicting interests, which can lead to poor financial reporting. As evidence, he and Rong (2014) report finding an adverse correlation between the quality of financial reporting and the amount of time spent by audit committee members. Additionally, Tanyi and Smith (2015) and Mendez, Pathan

and Garcia (2015) both claim that the quality of a company's financial reports suffers when members of the audit committee serve on the boards of many companies at the same time. Emmanuel et al., (2014) examine the link between audit committee multiple directorships and Nigeria's financial reporting quality while contributing to the subject topic. Financial reporting quality improves when the audit committee comprises more than one director, in accordance with the principle of resource reliance. There appears to be a lack of research on this topic in Nigeria, particularly in the oil and gas sector, according to the findings of this section. Thus, it is imperative to hypothesize that there is *relationship between audit committee busyness and financial reporting quality*

Audit committee Gender Diversity and Financial Reporting Quality

Traditionally, audit committees have only included male members, excluding women from participation. The administration of corporate enterprises is not exempt from the human need for variety, which affects all we do on a daily basis. Women's participation in business strategic decision-making is therefore encouraged by a number of corporate governance laws around the world. The inclusion of women on the committee results in a more diverse group of female members. Diversity in the gender composition of the audit committee reflects the heterogeneity of the workforce's personal qualities (Robbins & DeCenzo, 2005). There are a variety of personal characteristics and physical distinctions in board members that make the audit committee more diverse, which is why it is able to offer a greater choice of answers to problems. Specifically, it's a measure of how many women make up the board of directors for various corporations. That women play a vital role in ensuring legal compliance and the integrity of financial reporting is worth noting (Kastlunger, Dressler, Kirchner, Mittone & Voracek, 2010). Women on audit committees, according to Anthony (2018), help organizations run more smoothly. However, most empirical studies on the relationship between women on audit committees are equivocal. Sun, Liu, and Lan (2011) study the effect of female directors on the effectiveness of audit committees in limiting profits management. According to the findings, the proportion of women on audit committees has no effect on the quality of financial reporting. According to a 2012 study by Salleh, Hashim, and Mohamad, Malaysian audit committee boards with female directors have higher accrual quality. A strong and unfavorable correlation was established between the diversity of the audit committee and the quality of accruals. A later study, Anthony et al. (2017), found a strong link between the gender diversity of the audit committee and the quality of financial reporting. As a matter of fact, drawing on the above discussion and prior studies' findings, this study does not wish to predict any sign for audit committee gender diversity, instead we hypothesize that *there is a significant relationship between audit committee gender diversity and financial reporting quality (Hypothesis 3)*

Audit committee independence and Financial Reporting Quality

The audit committee members' independence and competence are two of the most crucial characteristics. A minimum of three independent directors is required to ensure that the audit committee members may make decisions that are in the best interests of shareholders and to ensure that the audit committee members can be objective (DeZoort et al., 2002 as cited by Sri and Sylvia, 2016). To maintain their independence, members of the audit committee should have no personal or professional ties to the company. It was found that audit committee independence had no substantial impact on the financial reporting quality of Nigerian DMBs in a study conducted by Kabiru and Usman (2021). There is a positive association between independence of the audit committee and the quality of financial reporting, as demonstrated by Raghunandah et al.; (2001) and Krishnan (2005), as well as Adeyemo et al. (2016); Ozoanigbo, Ofor, and Orjinta, (2018). Audit committee independence has been shown to have a negative and significant impact on financial reporting timeliness, according to Hashim and Abdul Rahaman (2011). However, there are some inconsistencies that existed in the prior literature, for that reason, the current study does not intend to propose any sign for audit committee independence, rather we hypothesize that *there are significant relation between audit committee independence and financial reporting quality (Hypothesis 4)*.

Financial Reporting Quality

Quality financial reporting has been defined in a variety of ways, including the following: Financial reporting quality, for example, is defined as the exact manner in which it shows information about a business activity as it relates to its anticipated cash flows, with the goal of informing shareholders about a company's operations. Financial reporting quality was defined by Tang (2008) as the extent to which financial statements provide us with information about a company's financial status and performance that is fair and authentic. Quality of financial reporting is defined by Jonas and Blaurchet (2000) as providing clear and unambiguous information that is not aimed to mislead investors. It is the opinion of the International Accounting Standards Board (IASB) that financial reporting's goal is to provide investors, lenders, and other creditors with information that is relevant in their function as capital providers. The International Accounting Standard Board specifies that the quality aspects of financial reporting information shall be made available in a timely manner (IASB). It was therefore decided to use timing to evaluate financial reporting quality.

No study was conducted in Nigeria employing oil and gas companies by any one of the aforementioned academics who attempted to investigate the impact of audit committee characteristics on financial reporting quality. This study added two new variables to the list of those previously used by other researchers: the busyness of the audit committee and its gender diversity, which had not been considered by prior researchers before. The study also examined these variables over a longer time period of 10 years, from 2011 to

2020. This study aims to fill a void in the existing literature by addressing this knowledge gap. That's why we're doing this research. Hence this diagram;



Source: Researchers conceptual Framework (2022)

Theoretical Framework

Stewardship Theory

The notion of stewardship is provided as an alternative or complementary theory to the agency theory. A non-economic basis for understanding relationships is provided by stewardship theory, as opposed to agency theory, which emphasizes control and conflict (Sundaramuthy & Lewis, 2003). Instead than looking out for their personal financial interests in the same manner as agency theory says, stewardship theory holds that directors operate as stewards and are willing to act for the greater good of their firm, rather than for themselves. The personal needs of directors are met when they work to achieve corporate goals (Sundaramuthy & Lewis 2003; Kluyers & Tippett, 2011) They are concerned about doing the right thing and honoring their responsibilities as stewards (Stout, 2003). It is suggested by stewardship theory that individuals like board members and audit committee members can be motivated by principles such as fairness, equity, and concern for the well-being of others. Directors often see themselves as stewards of the company's affairs who can be trusted to do an excellent job, and they are so closely tied to the company's goals that these take precedence over their own (Hernandez, 2012; Schillemans & Basuioc, 2015). As professionals, they are expected to put their own interests aside and perform their duties with integrity and diligence, and this should not be viewed as eccentric behavior (Keay, 2017). In contrast to the agency theory, stewardship theory assumes that boards, audit committees and managers are stewards, whose behavior is naturally aligned with their leaders' objectives on appointment (Pastoriza & Arinio, 2008).

Bird’s eye view of selected empirical studies on audit committee characteristics and financial reporting quality

Authors'/ Year	Country/Period	Title/Broad Objective	Variables Used	Methodology	Findings
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Asaad, Mushtaq and Ameer (2021)	Iraq	Audit committee characteristics, regulatory changes and financial reporting quality in Iraq: Some lessons from SOX ACT.	Audit committee size, audit committee meetings, audit committee independence, financial expertise of audit committee and financial reporting quality	Ex-post facto research design	Their data is analyzed with the help of a multiple regression model. Resource dependency theory suggests that the qualities of an audit committee are very resourceful, which enhances financial reporting quality as a result of the expertise, greater abilities, and shared experiences they possess. An audit committee's characteristics and reporting quality in Iraq's non-financial enterprises appear to be influenced by regulatory changes as a direct and intervening factor.
Namakavarani, Daryaei, Askarany and Askary, (2021)	Tehran Stock Exchange (TSE) Iran for 2011–2016,	Audit Committee Characteristics and Quality of Financial Information: The Role of the Internal Information Environment and Political Connections	audit committee characteristics; accounting information quality; internal information environment; political connections	Technique for Order Preference by Similarity to Ideal Solution (TOPSIS)	They found a substantial and favorable association between the audit committee and the quality of financial information in high-level political ties, as well as between financial knowledge and the quality of financial information, and their data support this conclusion. This study's findings suggest that further research into the use of political economy theories is warranted.
Kabiru and Usman (2021)	Nigeria from 2009-2019	Effect of audit committee characteristics on the financial reporting quality of Deposit Money Banks (DMBs) in Nigeria.	Audit committee meeting, audit committee independence, audit committee financial expertise and audit committee female gender	<i>Ex-post facto</i> design	There is a positive and substantial effect on financial reporting quality of Nigerian DMBs on the frequency of their audit committee meetings, and there is a negative and significant effect on financial reporting quality of Nigerian DMBs on the audit committee financial expertise. However, it has been found that audit committee independence has no substantial impact on the financial reporting quality of DMBs in Nigeria.
Dare, Efuntade, Alli-Momoh and Efuntade (2021)	Nigeria, from 2009-2018.	Audit committee characteristics and audit quality: Exploratory and empirical analysis in Nigerian oil sector	Audit committee size, audit committee meeting, audit quality	Expo-facto research design using logistic regression	Audit quality in Nigeria's oil and gas sector was found to be positively influenced by both the size of the audit committee and the number of meetings held by that committee, both of which were found to be statistically significant by logistic regression. In Nigeria, it was found that the audit committee has a statistically significant impact on audit quality. As a result of this, it was proposed that the size of the audit committee should be emphasized and that the meeting modalities of the committee members should be revised to increase audit quality.

Safari , Rezaei and Abdollahi, (2021)	Tehran Stock Exchange (TSE) Iran (2012–2017)	Do audit committee characteristics improve financial reporting quality in emerging markets? Evidence from Iran	Independence and financial expertise with financial reporting quality (FRQ)	Multivariate regression model based on panel data	However, audit committee independence has no meaningful impact on the quality of a company's financial reporting. In other words, an audit committee's FRQ can rise if it has a better level of financial understanding. Alternative FRQ measures, individual analyses of research hypotheses for each year and endogeneity problems have no effect on study outcomes.
Syofyan, Septiari , Dwita, Rahmi and Ntim (2021)	Indonesia 2014-2019	The characteristics of the audit committee affecting timeliness of the audit report in Indonesia	Audit committee size, number of its expertise or competence, and its meeting frequency	<i>Ex-post facto</i> design	According to the findings, the audit report's timeliness is not influenced by the size of the AC or the financial expertise of the auditors. AC effectiveness is found to be dependent on the frequency of communication between its members, as shown by the findings. The AC will be able to communicate more effectively if they meet more frequently.
Sarea, Adel (2020)	Amman Stock Exchange (2008-2009)	The impact of audit committee characteristics on the performance: Evidence from Jordan.	Audit committee size, financial experience, and audit committee independence	Ex-post facto research design	Over the course of the 2008-2009 sample period, 212 financial sector companies were included in the study's 106-company sample. The audit committee has an impact on the company's financial and stock performance, according to the findings. It doesn't have any impact on how fast the computer runs.
Sidiq and Krismiaji (2019)	Indonesian Stock Exchange (2016 and 2017).	Audit committee characteristics and financial performance: Indonesian evidence.	Independence (ACIN), size (ACSIZE), competence (ACCO), and frequency of meetings (ACMT), return on assets (ROA), quality of auditors (BIG4), financial leverage (LEV) and company size (SIZE).	Ex-post facto research design	Audit committee characteristics were examined in relation to financial performance (PERF) of listed manufacturing companies in Indonesia in 2016 and 2017. According to the findings, the audit committee has a beneficial impact on the company's performance in every way. For the study, the quality of audit firms, financial leverage, and company size are all used as three additional controls (SIZE). Financial performance is positively impacted by BIG4 and LEV, whereas SIZE negatively impacts the company's financial performance.

Udisifan and Akeem (2019)	Nigeria (2009-2018)	Audit committee and financial reporting quality: Evidence from listed firms in Nigeria.	Modified Jones model of discretionary accrual was used to measure financial reporting quality while audit committee size, audit committee busyness and audit committee gender diversity was used to proxy audit committee attributes	Ex-post facto research design and the census sampling technique	Sampled firms' financial reports are used to gather secondary data, and multiple regressions are used to analyze it. The findings show that the workload of the audit committee and the size of the audit committee have a considerable positive and negative impact on the quality of financial reporting. Audit committee members should be encouraged to hold directorships in other companies, as this increases their capacity to improve financial reporting quality.
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Source: Researchers' Compilation (2022)

To summarize, none of these research looked at the workload of the audit committee as a factor determining the quality of financial reporting. Because no other study has employed audit committee busyness to evaluate its impact on financial reporting quality except Udisifan and Akeem, we implemented it in our research (2019). There are however some inconclusive findings from these research, which demand for more investigation of the Nigerian situation. Poor measurements, methodological flaws, data collection challenges, and shaky theory formulation could all contribute to the past assessments' inconsistencies. There are now a plethora of studies being done in this field because of this. A strong audit committee with a wide range of audit capabilities can improve a company's financial reporting quality, we argue in this study.

3 Methodology

All mentioned oil and gas companies in Nigeria were studied using an ex-post facto study approach in which existing secondary data on the selected proxies from financial statements of the quoted firms was utilized to describe the effect of audit committee features on reporting quality. A panel multiple regression approach and Eview software were used to analyze the study's data.. The study variables and their measurement are presented in table 1 below:

Operationalization of variables

<i>Variables</i>	<i>Acronyms</i>	<i>Measurement</i>	<i>Prior Researchers</i>
Dependent Variable <i>Financial Reporting Quality captured using Financial Reporting Timeliness</i>	FRQUAL	<i>Estimated using Timeliness of financial report measured as the time interval between the end of the reporting period and the date the financial statements are issued. ie No of days between the financial year ended and the date of auditor's report.</i>	<i>Ozoanigbo, Ofor and Orjinta (2018), Shukeri and Islam, (2012).</i>
Independent Variables <i>Audit Committee Size</i>	ACSZE	<i>Measured as the total number of audit committee members</i>	<i>Orjinta and Ikueze (2018)</i>
<i>Audit Committee Busyness</i>	ACBUSY	<i>Measured as a dichotomous variable 1 if a member of audit committee occupy directorship position in other firms and 0 if otherwise or total number of concurrent directorships holding by audit committee members</i>	<i>Jubb, (2000) Udisifan and Akeem (2019).</i>
<i>Audit Committee Gender Diversity</i>	ACGEND	<i>Proportion/percentage of total number of women in the audit committee.</i>	<i>Ezeh and Orjinta (2021), Qi and Tian, (2012),</i>

<i>Audit Committee Independence</i>	ACIND	<i>Measured as the ratio of independent committee members to the total number of audit committee members</i>	<i>Orjinta and Ikueze (2018)</i>
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Source: Researchers’ Ideology (2022)

The linear relationship between the dependent and independent variables is represented in the panel multiple regression model below:

$$FRQUAL_{it} = \beta_0 + \beta_1 ACSZE_{it} + \beta_2 ACBUSY_{it} + \beta_3 ACGEND_{it} + \beta_4 ACIND_{it} + \epsilon_{it} \dots \dots \dots (1)$$

Where,

FRQUAL_{it} stands for Financial Reporting Quality for firm i in time t,

ACSZE_{it} stands for Audit Committee Size for firm i in time t,

ACBUSY_{it} means Audit Committee Busyness for firm i in time t,

ACGEN_{it} connotes Audit Committee Gender Diversity for firm i in time t,

ACIND_{it} stands for Audit Committee Independence for firm i in time t,

Subscripts *i* denote number of firms, *t* denotes years or time-series dimensions ranging from 2011-2020, ϵ is the error term of the model capturing other unexplanatory variable and $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$, stands for regression model coefficients.

4. ESTIMATION RESULTS AND DISCUSSION OF FINDINGS

An analysis of audit committee characteristics and listed oil and gas company financial reporting quality was conducted during a ten-year period, from 2011 to 2020. Preliminary data tests were performed, such as descriptive statistics, correlations, and an analysis of the variance inflation factor (VIF). The table below shows the descriptive statistics of the selected oil and gas firms that make up our sample.

4.1 Descriptive Statistics Analysis

	FRQUAL	ACSZE	ACBUSY	ACGEN	ACIND
Mean	93.66000	5.550000	0.630000	0.770000	2.520000
Median	84.50000	6.000000	1.000000	1.000000	3.000000
Maximum	291.0000	6.000000	1.000000	2.000000	3.000000
Minimum	36.00000	5.000000	0.000000	0.000000	2.000000
Std. Dev.	39.72716	0.500000	0.485237	0.489382	0.502117
Skewness	2.156548	-0.201008	-0.538520	-0.469758	-0.080064
Kurtosis	9.189950	1.040404	1.290004	2.882624	1.006410
Jarque-Bera Probability	237.1595	16.67347	17.01709	3.735283	16.66684
	0.000000	0.000240	0.000202	0.154488	0.000240
Observations	100	100	100	100	100

Source: Researchers’ summary of descriptive result (2022)

Table 4.1 displays the descriptive statistics for each variable, including the mean, maximum and minimum values, standard deviation, and Jarque-Bera values, which demonstrate whether the data are normally distributed. As a result, we have a better understanding of the ten Nigerian oil and gas companies that were studied during a ten-year period. Describing data’s distributional features and identifying any unexpected observations or patterns of observations were the primary goals of the descriptive statistics used. Thus, the data obtained for the study was first described and summarized using simple descriptive methods. Table 4.1 shows the study’s objectives, and the data in this part reflects that.

Firstly, financial reporting quality which was the dependent variable was measured using timeliness of financial report. Descriptive analysis revealed that the mean value of financial reporting quality which measured average number of days it took the firm to release its annual report is 93 days. This implies that on the average, oil and gas firm’s releases that report within three months interval or about 94 days timely which is a good report of quality assurance. The minimum days of financial reporting quality for the firms is about 36 days. This implies that the lowest level of financial reporting quality exhibited by timeliness of report of the firms has a minimum of 36 days. The maximum number of days is about 291 days. This implies that the maximum level of financial reporting quality of the firms is about 291 days. The standard deviation of financial reporting quality is 39.7, which implies that there is low variability in the level of financial reporting quality by the studied firms.

Similarly, the result showed that on average, oil and gas firms have about 5 persons on the audit committee while a maximum number of the members are 6 persons with minimum of 5 members. Audit committee busyness shows that about 63% of the committee has multiple engagements in more than a board simultaneously. Also, the average of audit committee gender diversity is 77% gender diversified. This implies that on the average, the audit committee members are dominated by approximately 1% of females while the maximum and minimum number of women in the committee is 2 women and 1 woman respectively. Also, the analysis shows

that at least half of the audit committee members are independent while some have maximum of three independent audit committee members with a minimum number of two independent audit committee members.

With the exception of audit committee gender diversity, which was not normally distributed, the JB Probability values of 0.0000 generally show that all variables are normally distributed at a 1% level of significance. It is a better indicator of outliers because it shows that all variables are roughly typical. To put it another way, if there are outliers, they will not tamper with the conclusion and hence can be used to derive generalizations from the data. That's why panel least square estimate is a good idea, too. Hence, any recommendations made to a very large extent would represent the characteristics of the true population of study.

4.2: Pearson Correlation Matrix

Pearson’s correlation matrix was applied to check the degree of association between audit committee characteristics and financial reporting quality of quoted oil and gas firms in Nigeria so as to determine the nature or degree of association i.e. positive or negative correlation. Correlation coefficient measures the direction and degree of association between two or more variables. Therefore, in examining the association among the variables, we employed the Pearson correlation coefficient (correlation matrix) and the result is presented in the table 4.2. below.

Correlation Analysis Result

	FRQUAL	ACSIZE	ACBUSY	ACGEND	ACIND
FRQUAL	1.000000				
ACSIZE	-0.162370	1.000000			
ACBUSY	0.193049	-0.193595	1.000000		
ACGEND	-0.337096	0.150674	-0.276913	1.000000	
ACIND	-0.153594	0.861001	-0.280255	0.121676	1.000000

Source: Researcher’s summary of correlation result (2022) using E-view 10

The above results show that there exists a positive and mild association between financial reporting quality and audit committee busyness while a negative and strong association exists between financial reporting quality and audit committee gender diversity. In the same vein, there exists a negative but mild correlation between financial reporting quality, audit committee size and audit committee independence respectively. It was discovered that another positive and very strong association exists between audit committee independence and audit committee size while a mild but positive association was documented against audit committee size and audit committee gender diversity while a mild and negative association exists between audit committee size and audit committee busyness. There exists a strong but negative association between audit committee busyness and other explanatory variables. The analysis found that no two explanatory variables were perfectly or substantially associated except for audit committee size and gender diversity in the correlation table above. The absence of multi-collinearity in the model used for the research ruled out the possibility of an outlier. It's also a good reason to employ panel regression and the variation inflation factor (VIF).

4.3: Variance Inflation Factor (VIF)

To further check for multi-collinearity problem or to know whether the independent variables used are perfectly correlated, we conducted Variance Inflation Factor (VIF) and its reciprocal or the tolerance level to check for the multi-collinearity problem. The result of the Variance Inflation Factor (VIF) is provided below in table 4.3 below:

Table 4.3. Variance Inflation Factor Result

Variance Inflation Factors
 Date: 03/22/22 Time: 21:35
 Sample: 2011 2020
 Included observations: 100

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	3749.272	110.1220	NA
ACSIZE	255.2780	234.1454	3.190778
ACBUSY	111.5103	2.384959	1.085019
ACGEND	67.80206	2.219585	1.038853
ACIND	225.9868	45.42071	3.269369

Source: Researcher’s summary of VIF result (2022)

Table 4.3 shows that the mean coefficient of the independent variables is less than 10 based on the results of VIF. Due to low variance inflation factor (VIF) values for all variables, multi-collinearity has no significant impact. Because there was no multicollinearity issue with the variables, the regression model could keep all of them. Audit committee size (3.190), audit committee busyness

(1.085), gender diversity (1.038) and finally audit committee independence (1.038) all had variance inflation factors (VIF) of less than 10 in the table (3.269). Because there was no multicollinearity issue with the variables, the regression model could keep all of them. As a result, there are no outliers, and no correlations between any of the variables. Using Jacque Bera (JB) in descriptive analysis to check for the problem of normalcy and multi-collinearity is also supported by this. In addition, our findings support the use of panel least squares estimation. Hence, any recommendations made to a very large extent would represent the characteristics of the true population of study and thus can be used to draw conclusion.

4.4: Regression Results and Discussion of Findings

We used panel regression analysis because the data possessed both time series (2011-2020) and longitudinal data features to investigate the association between the dependent variable (FRQUAL) and the independent variables (ACSZE, ACBUSY, ACGEND, and ACIND) (10 quoted oil and gas firms). In order to examine the impact of non-homogeneity, the study takes into account the fact that the enterprises are not homogeneous. In order to determine which impact to explain, the Hausman effect test has to be used. That is whether fixed effect or random effect is to be used in interpreting the regression result or to ascertain that which is best to be adopted in the study since our data is a panel data with complete information. Below is the summary of the Hausman test result:

Table 4.4.1. Hausman Effect Tests

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.567102	4	0.4677

Source: Researcher's summary of Hausman effect tests result (2022)

The Hausman test result above shows a chi-square statistics value of 3.5671 and probability value 0.4677 which was greater than 5%, this means that there is no homogeneity in the collection of the firms' data. Since the Chi-square (Prob) value is greater than 5%, hence we accept the random effect and interpret its regression while the fixed effect is rejected.

Table 4.4.2 Regression Result

Cross-section random effects test equation:

Dependent Variable: FRQUAL

Method: Panel Least Squares

Date: 03/22/22 Time: 21:34

Sample: 2011 2020

Periods included: 10

Cross-sections included: 10

Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	63.97608	73.29841	0.872817	0.3852
ACSZE	9.422922	18.36439	0.513108	0.6092
ACBUSY	-2.196089	15.36195	-0.142956	0.8867
ACGEND	-14.41208	8.696973	-1.657137	0.1011
ACIND	-4.020819	15.51109	-0.259222	0.7961

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.496578	Mean dependent var	93.66000
Adjusted R-squared	0.390247	S.D. dependent var	39.72716
S.E. of regression	35.74899	Akaike info criterion	10.12010
Sum squared resid	109907.2	Schwarz criterion	10.48482

Log likelihood	-492.0049	Hannan-Quinn criter.	10.26771
F-statistic	2.789192	Durbin-Watson stat	1.943545
Prob(F-statistic)	0.002317		

Source: Researcher's summary of Regression result (2022)

The panel regression analysis of Nigerian oil and gas companies is depicted in the table 4.4 above. Research found that R-squared value was 0.496 (49.6 percent) and R-squared adjusted value was 0.390, as shown in the results above (39 percent). There was a 50% approximation in the R-squared coefficient of determination, indicating that the model could account for 50% of the systematic variations in individual dependent variables over the 10-year period, but that the remaining 50% was stochastic, and thus captured by the stochastic error term. F-statistics of 2.789 and its probability value of 0.0023 demonstrate that the total audit committee characteristics model utilized for the analysis was statistically significant at a 1% level of significance. This supports the validity of the model we employed to conduct the investigation. As previously stated, the Durbin-Watson statistic of 1.943 indicated that there was no self or autocorrelation problem and that the errors were not related to each other.

It was shown that the size of the audit committee had a positive but negligible impact on the quality of financial reporting. This suggests that companies with a large number of audit committee members are more likely to submit timely audit reports. Similar results have been found by Madawaki and Amran (2014). Thus, there is no evidence to refute the null hypothesis, according to which there is no significant relationship between size of the audit committee and quality of financial reporting in Nigerian oil and gas enterprises. Even while audit committee workload had a negative impact on financial reporting quality, the p-value was only 0.8867, making the correlation between the two values inconsequential. As a result, the time commitment of audit committee members in other companies should be minimized in order to allow them to devote more time to improving the quality of financial reporting. This is because when people are overcommitted, their interests are more likely to clash, resulting in the presentation of subpar financial information. According to prior research like He and Rong (2014), Mendez, Pathan and Garcia (2015) and Tanyi and Smith (2015), the quality of financial reporting of firms is diminished when audit committee members serve on boards for two or more companies at the same time, which is consistent with this study.

A negative and negligible link exists between timely financial reporting and gender diversity on audit committees, as seen in table 4. It follows from this that having fewer women on the audit committee has an impact on the timeliness of its reporting. An increase in the number of women on audit committees is expected to have a negative impact on the quality of financial reporting. If the current audit committee is composed in terms of gender, this shows that there is no dispute between the owners and management. As a result, the null hypothesis that gender diversity in audit committees has no impact on financial reporting quality is accepted. It was also discovered through random panel regression that audit committee independence has a negative impact on the quality of financial reporting for Nigeria's listed oil and gas companies, although this effect is statistically insignificant, with a negative coefficient value of -4.0208 percent, as well as t-statistics of -0.259 and a probability of 0.7961. According to Mohamad-Nor et al., there is no correlation between the independence of the audit committee and the timeliness of the financial report (2010).

5: Conclusions and Recommendations

Listed Nigerian oil and gas companies' quality of financial reporting will be examined to see what effect audit committee features have on that quality. Financial reporting quality was shown to be positively but insignificantly influenced by the number of audit committee members in the selected companies, according to the study's findings. Another finding from a study on financial reporting quality is that the busyness of the audit committee has a negative and insignificant impact. These changes could have a significant impact on the number of audit committee members who hold directorships. This is contrary to the assumption of resource dependence theory, which claims that the expertise gained by auditors in concurrent directorships improves the quality of financial reporting. Because of this, it is reasonable to conclude that while audit committee members with multiple directorships gain a wide range of experience, a deep understanding of the company's business, and a thorough understanding of the reporting process; they are less committed to scrutinizing financial reports. Participation by females on audit committees has been linked to worse quality financial reporting. The less female auditors there are, the better the financial reporting will be.

Since the independence of the audit committee does not improve the quality of financial reporting, regulatory authorities should strengthen the independence of audit committee members in order to have enough members who can oversee the financial reporting process. In order to improve the quality of financial reporting, corporations should encourage more men to serve on their audit committees because less women on these committees leads to better financial reporting. Similarly, since reducing the workload of the audit committee improves the quality of financial reporting, members of the committee should not be given more than two directorships to allow them to devote more time to fulfilling their duties without being overwhelmed.