



RESEARCH ARTICLE

THE NEXUS OF AUDIT QUALITY AND FINANCIAL PERFORMANCE OF MANUFACTURING FIRMS IN NIGERIA

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ABSTRACT

The study examined the nexus of audit quality and accounting performance using data from manufacturing firms quoted on the Nigeria Stock Exchange for the period 2012 to 2022. Ex-post facto research design and purposive sampling method was adopted on data sourced from Firms financial statement. Two measures of financial performance; Return on Assets, Net profit margin, and three audit quality variables of audit firm size, audit tenure and audit fees were adopted Hausmann test for selection of model and random-effects panel estimation framework was selected for estimating the relationships and testing hypotheses. The study used Pearson correlation coefficients to examine the required relationships to allow for the non-normality of the variables In this study, the test developed by Levin, Lin and Chu was used to examine the stationarity properties of the variables. This test assumes identical co-integration vectors among the variables. Given that each of the variable in the study is likely to exhibit differences in their emissions, especially as it relates to institutional and outcomes, heterogenous-based results from the Im, Pesaran and Shin and the Augmented Dickey-Fuller tests are carried out in the study. Both the Pedroni and Kao co-integration tests were also carried out. Crosss dependence test and VIF for multicollinearity was conducted on data set. Multipkle Regression method was used for the analysis to establish the nature of relationship. Findings confirm a unidirectional causality from Audit firm size, audit tenure and audit fees to Net profit margin while there is unidirectional causality from audit tenure to Returns on Asset. In terms of relationship Audit firm size and audit fees relate with Net profit margin of manufacturing firms significantly while audit tenure does not significantly affect Net profit margin. Audit firm Size, audit fees and audit tenure each has a significant impact on Return on Assets, although the effects of audit fees and audit tenure is positive, while that of audit firm size is negative. Based on findings we recommend that regulators should formulate policies to control audit fees and tenure of auditors to enhance corporate performance

KEYWORDS

Audit Quality, Return On Assets, Net Profit Margin

1. INTRODUCTION

One of the major accounting concepts is the going concern concept which holds the assumption that a business entity is expected to exist in perpetuity as a going concern. Yet despite this assumption of going concern by preparers of financial statements, a lot of companies are known to file for bankruptcy soon after publication of juicy profits thereby calling to question the truth and fairness of the transactions of a business entity which is purported to be represented in the financial staements. However, most of the distress companies have been examined by auditors who expressed opinion on the financial reports of which investors, creditors and regulators rely on to make decisions. This anomaly has generated a lot of debate on the quality of financial staements and calls to question the intergrity of management, accountants and auditors.

The needs for trustworthy and reliable financial statements are imperative for making sustainable decisions in corporate organizations. The authenticity and reliability of these financial statements is always doubtful and questionable. The agency theory fingers management as the culprit in this malaise. Agency theory postulated by Jensen and Mecklings purports that the self interest of managers motivate earnings management which in turn leads to lack of goal congruence between the purpose of the owners of the business and that of the Manager (Jensen and Mecklings,

1976). To curtail the exceeess of the agents, Jensen and Mecklings suggested the need for monitoring function to be instituted (Jensen and Mecklings, 1976). The idea is cut management to size, achive goal congruence and prevent loss of investment. This need motivates the engagement of auditors who are given the assignments of being the watch dogs and monitoring agents, to prevent, detect, and report fraud and other illegal acts and errors if found in the financial reports with the motive of ensuring that investors do not lose investments.

Even with this mechanism in place there are reported cases of failure globally. The Case of Tyco, Xerox, Cadbury, Enron, Intercontinental bank and Oceanic bank are cases of insider abuse, accounting manipulation, fraud and failure of auditors. The debate however shifts from the monitoring rule of auditors to the quality of the job done by the auditors. Audit quality is fundamental to effectiveness and efficient financial reporting' system. External audit provide confidence to investor in the quality of financial reports and improve trust in corporate reporting. IAASB reported that the objective of external auditing is to provide reasonable assurance about whether the financial statement as a whole are free from material misstatement, whether due to fraud or error, thereby enabling the auditors to express an opinion on whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework, report and

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communicate auditor's findings in accordance with generally accepted accounting practice and standards (IAASB, 2012).

This requirement has ignited debate on the need, quality or effectiveness of auditors. Prior research has examined this subject across the globe without consensus even as the quality of financial reports are suspected to affect performance. First there are many researches on the subject with different outcomes. Secondly, the yardstick for measuring the qualities of a good audit is a subject of debate resulting in measurement problem as many variables are used in various studies. Thirdly, different methodologies are deployed in the studies with each method having the negative or positive impacts on the result of the study. Fourthly, there are other theoretical basis which negates agency theory and suggests that auditing function should be obliterated. For instance Stewardship theory argues that Managers will act as good stewards, comply with rules and achieve goal congruence without the monitoring function suggested by agency theory.

Nigeria is a developing country with peculiar characteristics. The country is presently facing hyper inflation, declining standard of living and per

capita income, food shortages and hunger, high unemployment and under employment, high interest rate which discourages investment, poor transportation system, nepotism and tribalism, declining economic growth and falling gross domestic product. The problems above notwithstanding, the country is faced with weak institutions and poor enforcement of laws due to corruption and violators of accounting rules are likely to escape judgement. These scenario motivates further study on the subject although many prior studies have been carried out. Therefore this study anchored on Agency theory is investigating how the quality of audit affects performance of manufacturing firms in Nigeria.

2. LITTERATURE

2.1 Conceptual Framework

According to Creswell categorization, mapping and description of concepts and inter relationships amongst variable of study can be achieved through conceptual framework (Creswell, 2003). The framework assist the researcher to establish the research, scope, identify gaps in literature and establish relationships among the concepts of study.

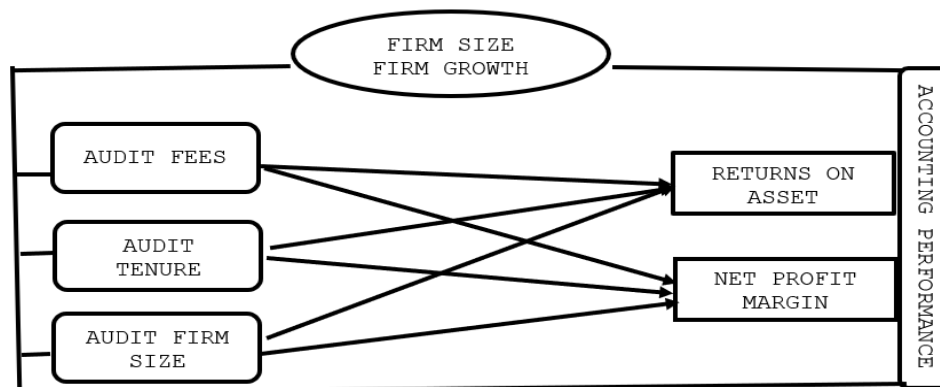


Figure 1: Conceptualized Framework of Audit Quality and Accounting Performance

2.2 Empirical Review

Rompotis and Balios examined the effect of audit quality on firm performance using data of 75 companies listed in the Athens Exchange in Greece and covering the period 2018–2021 (Rompotis and Balios, 2023). The results provide evidence of a positive relationship between financial performance and audit quality. The opposite is the case for stock returns and risk. On the other explanatory variables, age has a clearly negative relationship with financial performance. The opposite is the case for liquidity and efficiency. The size factor also has some sort of a positive correlation with financial performance, whereas the opposite correlation concerns the leverage ratio.

Jeroh and Ozegbe examined the relationship of audit quality attributes as possible determinant of financial performance for quoted companies in Nigeria between 2011 and 2020 (Jeroh and Ozegbe, 2022). The proxy for audit quality were audit services, auditor tenure, auditor independence and audit firm size whereas firm size was measured by Return on Assets. From the results, audit independence exerts significant negative influence on ROA; audit tenure and audit firm size had positive relationship with ROA, although, this relationship was not significant. Conversely, statutory audit service on its own significantly influenced firm performance (ROA). Overall, measures of audit quality exert joint significant influence on ROA

A group researcher investigated the effect of internal audit quality on the financial performance of insurance companies operating in Kosovo (Ahmeti et al., 2022). The results of the study show that professional competence has a significant positive impact on financial performance, while the effectiveness of internal audits negatively impacts the financial performance of insurance companies. Regarding the control variables, the size of the insurance company has a strong positive correlation, in contrast to the age of the company, which has a negative and significant impact on the financial performance of insurance companies in Kosovo.

Etukudo and Azubuike focused on the audit quality and financial performance of deposit money banks' financial report in Nigeria (Etukudo and Azubuike, 2022). Audit fee, audit firm size and audit tenure were used. The finding revealed that (i) There is a positive relationship between audit fee and earnings per share of deposit money banks financial report in Nigeria (ii) There is a positive relationship between audit firm size and

earnings per share of deposit money banks financial report in Nigeria (iii) There is a negative relationship between audit tenure and earnings per share of deposit money banks financial report in Nigeria.

Sagir examined the impact of Audit Quality on Financial Performance of listed construction companies in Nigeria (Sagir, 2021). The study found that audit tenure and audit fee have no significant impact on financial performance of listed construction companies in Nigeria, while audit firm size has significant impact on financial performance of the listed construction companies in Nigeria.

A group researcher examined the impact of audit quality on the financial performance of all the 15 listed DMBs in Nigeria from 2011-2017 (Ugwu et al., 2020). Independent variables used are audit firm size, joint audit and audit fee, while ROA, proxy for financial performance, is the dependent variable. The study revealed significant and positive relationship between audit firm size and ROA, negative and significant relationship between joint audit and ROA and negative and insignificant relationship between audit fee and ROA.

Ndubuisi and Chinyere ascertained the effect of audit quality on the financial performance of quoted conglomerates in Nigeria from 2010-2019 (Ndubuisi and Chinyere, 2020). The results showed that audit committee size, audit committee independence, and audit committee financial expertise have a significant positive effect on return on assets at 5% level of significance respectively.

Amahalu and Obi ascertained the effect of audit quality on the financial performance of quoted conglomerates in Nigeria from 2010-2019 (Amahalu and Obi, 2020). The results showed that audit committee size, audit committee independence, and audit committee financial expertise have a significant positive effect on return on assets

Felix and Chinyere examined the effect of audit quality on shareholders earnings of listed industrial goods firms in Nigeria 2012-2018 (Felix and Chinyere, 2020). The study found that auditor's independence and audit firm size have positive and significant effect on shareholder's earnings of listed industrial goods firms in Nigeria while auditors' tenure has a negative and insignificant effect on shareholders earnings of listed industrial goods firms in Nigeria. per share, book value per share, leverage,

dividend yield, book to market ratio

determination.

3. METHODOLOGY

3.1 Research Design

The study adopts longitudinal, cross-sectional and ex-post facto research design to ascertain the effect of audit quality on financial performance. The sampling technique is census and does not require sample size

3.2 Variables of study

The independent variable in the study is audit quality which is measured by audit tenure, audit fees and audit firm size while the dependent variable is financial performance measured with returns on Asset and Net profit Margin. A summary of the variables and yardstick for measurement are highlighted on the table below:

Table 1: Measurement of Variables summarized

Independent Variable	Measurement	Expected Sign
Audit Firm size	A dummy value of 1 is used if a firm uses any of the Big 4 audit firm and 0 if otherwise. (DeAngelo, 1981; Wati and Bambang, 2003; Fawzi, 2014)	Positive
Auditors tenure	Length of auditor-client relationship: '1' if 3 yrs+ and '0' if otherwise. (Bhagat and Bolton, 2009; Geiger and Rangunandan, 2002)	Negative
Audit fees	Natural log of fees paid to auditors in a year (Wallace, 1987; Carcello et al., 2002; Choi et al., 2010; Hsieh, 2011)	Positive
Dependent Variable		
Net Profit Margin	Net profit for the period X 100 Sales Revenue	Positive
Returns on Asset	Net Profit / Total Assets	Positive
control Variables:		
Firm size	Natural Log of Total sales	Negative/positive
Growth	GRW _{i,t} = Change in total asset divided by total asset of firm <i>i</i> in year <i>t</i> as a proxy of growth of the firm	Positive

3.3 Model Specification

$$NPM = \beta_0 + \beta_1 AUT + \beta_2 AFS + \beta_3 AUF + \beta_4 GRW + \beta_5 LogFMS + U_{1,t} \quad (1)$$

$$ROA = \beta_0 + \beta_1 AUT + \beta_2 AFS + \beta_3 AUF + \beta_4 GRW + \beta_5 LogFMS + U_{4,t} \quad (2)$$

Where β_0 are the regression intercepts and $U_{1,t}$, $U_{2,t}$, $U_{3,t}$, $U_{4,t}$ are the autoregressive coefficients or persistence terms

Model (i), expresses Net profit margin as an accounting performance function of its own one period lagged value, variables which in this study is AUT, AFS, AUF and the control variables growth opportunities and firm size. Although there is recession, we expect that the proceeds of the explanatory variables will induce audit quality and consequently performance will increase and earnings management will decrease. Hence

our expectation is that all Audit quality variables (AUT, AFS, AUF) would enter the econometric model positively and influence performance significantly. In other words, we expect apriori, that all will be positive and statistically different from zero model (i1), expresses Returns on asset as an econometric function of its own one period lagged value, AUT, AFS, AUF while GRW, FMS and one control variable. We expect that the variables would enter econometric model positively and significantly In other words, we expect apriori, that all would be positive and statistically different from zero.

4. RESULT

The annualized summary statistics for all the variables in the study are presented for the sampled manufacturing companies over the 11 years period. Table 2 shows the descriptive statistics of the variables included in the empirical model of the study for the manufacturing firms in Nigeria.

Table 2: Descriptive Statistics for Panel Data

Variable	Mean	Max.	Min.	Std. Dev.	Skew.	Kurt.	J-B	Prob.
NPM	11.22	47.95	0.34	11.40	1.21	3.53	27.72	0.00
ROA	0.90	2.70	0.06	0.60	1.02	3.72	21.05	0.00
AFS	14.65	22.00	6.00	3.50	-0.10	2.49	1.33	0.51
AUF	0.19	1.33	0.05	0.13	5.89	49.60	104.72	0.00
AUT	3.34	333.00	0.02	31.87	10.30	107.01	510.57	0.00
GRW	55.06	129.00	23.00	34.40	0.86	2.26	15.82	0.00
FMS	7.85	9.61	5.59	0.83	-0.32	3.20	2.05	0.36

Source: Author's computation

Average Net profit margin for the manufacturing firms over the period is 11.22. Note that Net profit margin is used as proxy for accounting performance for the manufacturing firms. The standard deviation of the variable is 11.4, which is close to the mean value and suggests that the net profit margin of the manufacturing firms appear to be quite close to the mean value in general. The positive skewness value however shows that there are more manufacturing firms that reported lower net profit margin than the mean value. This is shown by the wide difference between the maximum value of Net profit margin variable of 47.94 and the minimum of 0.34. Average Return on Assets for the manufacturing firms is 0.90, with a standard deviation of 0.60. The ROA is essentially high and shows revenue generated from assets is high and risk of failure very low.

For Audit quality characteristics variables, average audit firm size (AFS) is approximately 1. The standard deviation value of 3.5 is however low

relative to the mean value, suggesting that most of the manufacturing firms used the big four accounting firms. Average audit fees (AUF) score is 0.19 or 19 percent, indicating that on average, 19 percent of revenue on the average is paid to auditors. The standard deviation of 0.13 shows that audit fees percentage is almost similar among the manufacturing firms. Average ratio of audit tenure members over the total number of years in the study is 3.34, which is low and shows that audit firm size is more valued than audit tenure among the manufacturing firms in Nigeria.

From the descriptive analysis, the skewness value falls within the normal range of ± 10.3 while the kurtosis figures are high for Tobin Q and Audit tenure, indicating large extreme values for some of the manufacturing firms in the sample. Another important descriptive statistic considered is the Jarque-Bera (J-B) statistic which shows the normality of the probability distribution of the datasets. Given that the data are inherently

heterogenous (with different firms involved), it is not surprising that almost all the variables are significant in terms of the J-B test statistic, indicating that the datasets underlying the variables are non-normally distributed as expected. This is a strong basis for providing a panel-form analysis in the regression process for the study.

4.1 Correlation Analysis

Correlation analysis is carried out to provide the initial pattern of relationship among the independent variables as well as to detect any multicollinearity among the independent variables used in the models.

The study used Pearson correlation coefficients to examine the required relationships to allow for the non-normality of the variables in question. Given that the independent variables are presented in each equation as a set of characteristic factors, we provide a correlation analysis to evaluate the pattern of relationships among the main independent variables. The result is presented in Table 4.3. The correlations among the dependent variables are generally low, indicating that the measures of financial performance are generally unrelated.

The correlation among the independent variables are also weak. Only audit tenure and growth have significant correlation among them.

Table 3: Correlation Matrix

Variable	NPM	ROA	AFS	AUF	AUT	GRW	FMS
NPM	1						
ROA	0.19	1					
	0.05						
AFS	-0.35	-0.11	1				
	0.00	0.28					
AUF	-0.04	0.14	-0.13	1			
	0.67	0.14	0.16				
AUT	-0.07	0.20	0.07	-0.01	1		
	0.49	0.03	0.50	0.90			
GRW	-0.37	-0.11	0.12	-0.05	0.19	1	
	0.00	0.27	0.21	0.58	0.05		
FMS	0.25	0.05	0.08	-0.03	0.07	0.07	1
	0.01	0.59	0.42	0.74	0.44	0.49	

Source: Author's computation

4.2 Tests of Time Series and Cross-sectional Properties of the Panel Data

4.2.1 Panel Unit Root Test

The manufacturing sector in Nigeria is highly heterogenous in terms of the operational and technical positions and capacities. Hence, the manufacturing sector used in the study are likely to exhibit both firm-specific characteristics (individual heterogeneity) and common (homogenous) characteristics. This implies that there is need for the use

of panel unit root tests to check for the stationarity of the data – especially those that combine the two panel influences. In this study, the test developed by Levin, Lin and Chu (LLC) was used to examine the stationarity properties of the homogenous panel. This test assumes identical co-integration vectors among the countries. Given that each of the country in the study is likely to exhibit differences in their emissions, especially as it relates to institutional and outcomes, heterogenous-based results from the Im, Pesaran and Shin (IPS, 2003) and the Augmented Dickey-Fuller tests are also included in the study. The results of the unit root test are presented on table 4 below.

Table 4: Panel Data Unit Root Tests Results

Variables	Common unit process	individual unit root process		
	LLC	IPS	ADF	PP-Fisher
NPM	-3.17**	-0.63	25.93*	23.81
ROA	-3.93**	-2.06*	36.41*	54.24**
AFS	-2.29*	1.20	13.89	60.67**
AUF	2.61*	-0.07	25.17*	58.31**
AUT	-3.29**	-2.05*	35.46*	58.27**
GRW	5.56**	3.28	18.76	45.63**
FMS	4.92**	3.31	6.38	12.05

Source: Estimated by the Author. *Note:* ** and * indicate significant at 1% and 5 % levels respectively; IPS = Im, Pesaran & Shin; LLC = Levin, Lin & Chu

It should be noted that only the tests for the variables in levels are reported. This is because the author observes that the variables used in the study are in ratios, rates or indexes that are often stable over time. Thus, it is expected that the variables are stationary in their levels. If this is the case, the estimation to test for long term relationships can be facilitated with the variables in levels (Greene, 2011). From the results, it can be seen that the coefficient of the test for the variables in levels indicates that all the variables are stationary (given that the critical test values are higher than the test statistic at the 5 percent level). Based on this outcome, The results indicate that all the variables are stationarity in levels and are therefore all integrated of order zero (i.e., I[0]). Therefore, a cointegrated analysis can be performed for the variables with meaningful outcomes.

4.2.2 Cross-sectional Dependence Test

The cross-sectional dependence tests are also conducted for each of the equations estimated in the study. This test helps to evaluate the cross-

sectional properties of the panel dataset by examining the issue of cross-section correlations in the data. Note that the data used in the study are all from one sector (the banking sector) which tend to face similar outcomes. This pattern of influences is expected to generate certain levels of interdependencies among each of the banks which may lead to spatial autoregressive processes within the datasets. The problem and presence of cross-sectional dependence in the study is investigated by implementing the (Pesaran, 2004). The data used in this study has a panel structure where the cross-sectional dimension (10 banks) is less than the time dimension (11 years) - (i.e., $N < T$). Given this pattern of panel setup, the Pesaran cross sectional dependence (CD) test Tis more appropriate. The null hypothesis for the Pesaran CD test is the absence of cross-sectional dependence. Hence, it is expected that the test statistics fail the significance tests at the chosen level of significance (5% in this case) in order to ascertain the absence of cross-sectional dependence in the data. The Pesaran cross-section dependence test results are presented in Table 5.

Table 5: Cross-section Dependence Test Results

Variables series tested	Pesaran CD	P-value	Abs corr
NPM	0.635	0.516	0.144
TOBIN	-0.692	0.488	0.170
MPS	1.330	0.103	0.291
ROA	1.010	0.316	0.127

Source: Author's computations

From the results reported in Table 5, it is seen that the Pesaran CD test statistics for each of the equations fail the significance tests at the 5 percent level (p value > 0.05). This shows that for these equations, there is absence of cross-sectional dependence in the estimates. The absence of cross-sectional dependence indicates that the estimated equations are free of heteroskedastic influences.

4.2.3 Co-integration Tests

The unit root results strongly indicate that the stationarity status of the variables are equal for each of the variables being I[0]. The long run conditions of the variable interactions can therefore be established using the panel co-integration tests. The result of the panel co-integration tests are presented in Table 4.6. Both the results of the Pedroni and Kao co-integration tests are presented. The coefficients of the residual based (Kao) panel co-integration tests are all significant at the 5 percent level. For the Pedroni Tests, at least two of the test statistics pass the significance test at the 5 percent level in each of the equations. This implies that the null hypothesis of no co-integration can be rejected for the equations. The Kao residual co-integration tests for all the equations indicate that the null hypothesis of no co-integration can be rejected for each of the equations. Thus, the co-integration tests results show that there is strong long run relationships among the variables in the study. The panel estimation framework can therefore be employed in the empirical analysis.

Panel Cointegration Test Result for Audit Quality

Table 6: Kao Panel Cointegration Test Results.

Equation: NPM	Panel Statistics	Group Statistics	Kao (ADF)
Variance ratio	-2.99	--	-4.090**
Rho	3.86	5.18	
IPS	-0.45	-2.82**	
ADF	-1.69*	-1.75*	
Equation: ROA	Panel Statistics	Group Statistics	Kao (ADF)
Variance ratio	-2.71	--	4.821**
Rho	2.53	4.31	
IPS	-5.07**	-10.44**	
ADF	-0.71	-4.22**	

Note: **, * indicates the rejection of the null hypothesis of no cointegration at the 0.01 and 0.05 level of significance respectively

Source: Author's computations

4.2.4 Regression Analysis

For the panel data analysis procedure there is need to select between the fixed effects or random effects models as the best representation of the relationships. The standard Hausman test for random effects test is therefore used for identifying the time-varying conditions of the panel data used in the study in order to determine the method of panel analysis to be adopted. The result of the Hausman tests for each of the equations of the study are reported in Table 7. In the results of the Hausman tests presented in Table 7 (a), the Chi-Square values for each of the Equations fails the significance test at the 5 percent level. Thus, the null hypothesis cannot be rejected in this case. This implies that the random effects estimation procedure is the most efficient procedure for estimating the relationships.

Table 7 (a): Hausman Test for Cross-Section Random Effects

Model	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
NPM	11.021	5	0.051
ROA	5.473	5	0.361

Source: Author's computations

Since the analysis in this study focuses on cause-effect relationship, the analysis of the estimated relationships is preceded by examining the causality patterns between the set of dependent variables and the set of independent variables. The estimation of the models can then be justified if sufficient causality patterns are observed to run from the independent variables to the dependent variables. This causality analysis also helps to avoid the problem of simultaneity bias in the estimations. The result of the causality tests between the pair dependent and three independent variables is presented in Table 7(b). In the result, causality is shown to run mostly from the independent variables to the dependent variables. There is no evidence that causality runs from the dependent variables to the independent variables. Based on this tests, the study shows evidence that audit quality variables actually generates effects on the financial performance variables.

Table 7 (b): Hausman Test for Cross-Section Random Effects

Null Hypothesis:	Obs	F-Statistic	Prob.
AFS does not Granger Cause NPM	100	3.07	0.03
NPM does not Granger Cause AFS		1.22	0.27
AUF does not Granger Cause NPM	100	2.00	0.05
NPM does not Granger Cause AUF		1.53	0.22
AUT does not Granger Cause NPM	98	4.05	0.01
NPM does not Granger Cause AUT		0.27	0.60
ROA does not Granger Cause AFS		0.67	0.41
AUF does not Granger Cause ROA	100	0.62	0.43
ROA does not Granger Cause AUF		1.81	0.18
AUT does not Granger Cause ROA	98	2.10	0.05
ROA does not Granger Cause AUT		0.10	0.75

4.3 Panel Estimation Analysis

From the Hausmann test result the best method to apply in evaluating the relationship between Audit quality and financial performance is the random-effect strategy. In order to show the robustness of the estimates, however, we also report the OLS estimates of the results.

4.3.1 Audit Quality and Net Profit Margin

In terms of Net profit margin for the manufacturing firms, the effects of audit quality variables are presented in Table 4.8. Like the previous result, the estimates of the random effects are better than those of the OLS. The random effects estimates have impressive goodness of fit indicators. The adjusted R-squared value of 0.874 indicates that over 87 percent of the systematic variations in value relevance indicators of the banks was explained in the model. The F-statistic value is also high and passes the test at the 5 percent level, indicating that there is a significant relationship between the independent combined and the dependent variable.

Table 8: Regression Result for Net Profit Margin

Variable	OLS			Random-effect		
	Coeff.	t-Stat.	Prob.	Coeff.	t-Stat.	Prob.
C	3.690	0.386	0.701	3.588	2.510	0.014
AFS	-1.117	-4.173	0.000	-1.034	-25.006	0.000
AUF	8.326	1.198	0.234	6.322	4.830	0.000
AUT	0.000	0.001	0.999	0.004	1.048	0.297
FMS	4.075	3.660	0.000	3.784	19.112	0.000
GRW	-0.118	-4.288	0.000	-0.112	-10.915	0.000
Adjusted R-sq.	0.297				0.874	
F-statistic	10.138				143.109	

Source: Author's computation

A close consideration of the coefficients of the explanatory variables reveals that among the corporate governance variables, the coefficients of Audit firm size and audit fees both pass the significance tests at the 1 percent level, while the coefficient of audit tenure fails the significance test even at the 5 percent level. Thus, the result shows that it is audit firm size and audit fees that significantly influence the Net profit of manufacturing

firms in Nigeria. In terms of their signs, the coefficient of audit firm size is negative, while that of audit fees is positive. This result indicates that audit firm size has a negative effect on the net profit margin of manufacturing firms. In essence, an increase in the audit firm will lead to a decline in Net profit of manufacturing firms 1.117 points. Thus, there is evidence that large audit firms are inefficient in terms of improving the Net profit margin of manufacturing firms in Nigeria. On the other hand, the coefficient of audit fees is positive and shows that audit fees significantly improves Net profit margin of manufacturing firms. The higher the audit fees, the greater the chances of increasing Net profit Margin. Auditor tenure is also shown to have no significant effect on Net profit margin of manufacturing firms in Nigeria. For firm specific characteristics variables, firm size has a significant positive impact on Net profit margin, while growth prospects has a significant negative impact.

4.3.2 Audit Quality and Returns on Asset

In terms of audit quality in relation to returns on Asset, the impact of audit quality on Returns on Asset is presented on Table 4.14. Like the previous result, the estimates of the random effects are better than those of the OLS. The random effects estimates have impressive goodness of fit indicators. The adjusted R-squared value of 0.538 indicates that over 53.8 percent of the systematic variations in discretionary accruals of the manufacturing firms was explained in the model. The F-statistic value is also high and passes the test at the 1 percent level, indicating that there is a significant relationship between the independent combined and the dependent variable.

Table 9: Regression Result for ROA						
Variable	OLS			Random effect		
	Coeff.	t-Stat.	Prob.	Coeff.	t-Stat.	Prob.
Constant	0.822	1.407	0.163	0.845	3.987	0.000
AFS	-0.016	-0.958	0.340	-0.019	-3.192	0.002
AUF	0.571	1.344	0.182	0.494	4.985	0.000
AUT	0.004	2.432	0.017	0.004	36.567	0.000
FMS	0.040	0.587	0.559	0.040	1.270	0.207
GRW	-0.002	-1.417	0.159	-0.002	-2.331	0.022
Adj. R-sq.	0.049			0.538		
F-statistic	2.103			26.154 (0.00)		

Source: Author's computation

A close consideration of the coefficients of the explanatory variables reveals that among the Audit quality variables, the all the coefficients of Audit quality pass the significance tests at the 1 percent level. Thus, the result reveals that audit fees, audit firm size and audit tenure significantly influence Returns on assets. In terms of their signs, the coefficient of firm size is negative, while those of audit fees and audit tenure are positive. This result indicates that audit firm size has a negative effect on Returns on Asset. In essence, an increase in the audit firm size will lead to a decline in ROA by 0.016 points. Thus, there is evidence that larger audit firm sizes are inefficient in terms of improving returns on Asset. On the other hand, the coefficient of audit fees and audit tenure are positive and indicate that audit fees and audit tenure significantly improve Returns on Asset of manufacturing firms in Nigeria. The higher the audit fees and the longer the tenure of the auditors the higher the Returns on Asset. For the manufacturing companies' characteristics, firm size has a significant positive impact on ROA of the firms, while firm growth has a significant negative impact.

4.4 Post Estimation Tests

4.4.1 Multicollinearity Tests

The first test conducted is the multicollinearity test which measures the extent of correlation among trend collinearity among the explanatory variables. The results of the multicollinearity test are presented in Table 10. In the result, the focus is on the output of the uncentred variance inflation factors (VIF) variables. The VIF value must be less than 5.0 for the variable in an equation to be free from collinearity. In the report on Table 10, the VIF values for all the variables are less than 5. Thus, it can be seen that the estimated coefficients for the equations do not integrate excessively among themselves and the estimates are therefore reliable.

Table 10: Post Estimation Test Results		
Variable	Coefficient Variance	Uncentered VIF
AFS	0.572	1.750
AUF	1.523	2.649
AUT	2.264	1.929
FMS	0.010	1.144
GRW	0.000	1.370

Source: Author's computations

4.4.2 Tests for Stability of Regression

The second robustness test is to evaluate and to observe any form of serially correlated errors, while the third test detects for non-normality in the distribution of residuals. The normality test is conducted using the J-B procedure while the serial correlation tests are performed using the LM statistics. The results for all the estimates are presented in Table 11. From the results, none of the J-B and LM statistics passed the significance test even at the 5 percent level which implies that the null hypothesis is accepted in both cases. The null hypothesis is the absence of non-normality and serial correlation respectively. Thus, the tests indicate that the residuals are normally distributed and are devoid of serial correlation. Thus, each of the estimated equations can be adjudged to be stable and effective for long term prediction and analysis.

Table 11: Post estimation test results for serial correlation and normality		
Equation	Test	Statistic
NPM	Normality test (J-B)	2.22 (0.09)
	Serial Correlation LM Test	1.75 (0.08)
ROA	Normality test (J-B)	0.62 (0.49)
	Serial Correlation LM Test	1.82 (0.31)

Source: Note: p-values in parentheses. Author's computations

5. DISCUSSION OF FINDINGS

H01: Audit firm Size, Audit fees, audit tenure and Net Profit Margin of manufacturing firms in Nigeria

The test of this hypothesis is based on the coefficients of the estimated variables reported in Table 4.8. In the result the coefficients of Audit firm size and audit fees both pass the significance test at the 1 percent level (p-value < 0.01), while the coefficient of audit tenure failed the significance test even at the 5 percent level (P-value > 0.05). Based on this result, the null hypothesis is rejected for audit firm size and audit fees, and it is shown that audit firm size and audit fees affect Net profit margin of manufacturing firms in Nigeria. The null hypothesis is accepted in the case of audit tenure, demonstrating that audit tenure does not significantly affect Net profit margin of manufacturing firms in Nigeria. This agrees with the study of Etukudo and Azubuike which concludes insignificant relationship of audit tenure with performance (Etukudo and Azubuike, 2022). However, in respect of relationship of audit fees and performance this result support previous result by other researchers of positive effect of audit fees on market price (Barzegarnezhad and Jamshidinavid, 2017; Rompotisand Balios, 2023). suggest a positive and significant. The results however are at variance with previous findings that showed that audit tenure had significant impacts on market price

H02: Audit firm Size, Audit fees, audit Tenure does not significantly affect Returns on Asset of manufacturing firms in Nigeria

The test of this hypothesis is based on the results of the estimates in Table 11. In the estimates, the coefficients of audit firm size, audit fees and audit tenure all pass the significance test at the 1 percent level. Based on this outcome, the null hypothesis is rejected at the 1 percent level for all the variables. This shows that audit firm size, audit fees and audit tenure each has a significant impact on Returns on Asset in Nigeria. The coefficients of audit fees and audit tenure are positive, while that of audit firm size is negative (Jeroh and Ozegebe, 2022). From the results, audit independence exerts significant negative influence on ROA; audit tenure. This shows that the higher the audit fees and the longer the audit tenure the higher the contribution to returns on asset while audit firm size significantly limits Returns on Asset of manufacturing firms in Nigeria.

6. CONCLUSION

In this study, the focus is examining the effects of audit quality on audit firm size, audit fees and audit tenure on accounting performance of manufacturing companies. The goal is to show that effective audit can ultimately enhance firm performance. Four measures of financial performance were adopted in the study reflecting accounting and market performance of firms. Data used for the empirical analysis involved financial data from ten manufacturing companies over a period of ten years over the period of 2012 to 2022, while the random-effects panel estimation framework was adopted for estimating the relationships and testing hypotheses. In general, the results from the empirical analysis demonstrated that audit quality variables matter significantly in influencing the performance of manufacturing firms in Nigeria. In particular, the following conclusions were made:

- 1) That audit firm size and audit fees affect Net profit margin of manufacturing firms in Nigeria, while audit tenure does not significantly affect Net profit margin of manufacturing firms in Nigeria.
- 2) That audit firm Size, audit fees and audit tenure each has a significant impact on Return on Assets of manufacturing firms in Nigeria, although the effects of audit fees and audit tenure positive, while that of audit firm size is negative.

RECOMMENDATIONS

Based on the findings of this research, this study, therefore, presents the following recommendations which will be useful to all firms' stakeholders.

The findings of this research show that audit fees is a major audit quality factor that promotes manufacturing firms' performance in Nigeria. It is therefore recommended that appropriate and commensurate fees should be offered to external auditors to motivate them for enhanced quality of work which will ultimately affect firm performance.

The findings of this research also show that audit tenure also directly enhances the performance of manufacturing firms in Nigeria. The study therefore recommends that audit tenure of highly performing audit firms should be enhanced

The study also found that audit firm size decreases financial performance estimation. Thus, it is recommended that audit firm size should not be a deciding factor in hiring and retention of audit firms but rather the quality of audit offered. From the findings of the study larger audit firms mitigate performance.

There is also the need regulatory agencies and standard setters in the financial sector to state a uniform reporting period for the external auditors in order to enhance quality of reporting.

IMPLICATIONS OF THE STUDY FOR PRACTISE

The performance of the firm is valuable to various stakeholders Users of financial reports require accurate and timely information to be made available to them with utmost quality that is reflected on the timeliness of report delivery and the usefulness of the reports. The better the quality of financial reports by companies, the more relevant it is for investors and other market players in making economic decisions. The quality of reports also matters for other stakeholders in the company like investors and shareholders. The annual financial reports are considered a necessary means not only for gauging the performance of the entity but also for understanding how money invested in the firm has been used and enabling those interested in the entity to make appropriate decisions. The role of auditors in ensuring quality financial report is sacrosanct In this study, the effects of audit firm size, audit fees and auditor tenure on performance of manufacturing firms in Nigeria have been examined. The findings of this study have major implications for shareholders, managers, investors, and regulators in Manufacturing sub sector in Nigeria. In particular, the study emphasizes the importance of audit fees and audit tenure in promoting efficiency and quality of financial reporting among manufacturing firms in Nigeria. This in turn enhances performance. The study also highlighted the negative impacts that audit firm size have on the manufacturing firms An ultimate efficient mix and coordination of Audit

processes is therefore required to ensure that all the different components of financial reporting are well coordinated and guided towards enhanced performance of manufacturing firms in Nigeria.

CONTRIBUTION TO KNOWLEDGE

The goal of the research was to determine the effect of audit quality on performance of manufacturing firms in Nigeria. The research contributes to the growing literature on the subject by identifying the role each audit quality metric plays on performance. First, the research reveals that different factors react differently to the different segments of performance and therefore regulators should be guided in making policy decisions. The research contributes to knowledge by highlighting audit fees as a major factor which drives performance. The study also contributes to knowledge by highlighting the negative role audit firm size plays on performance and guides the hiring and retention policy of the firm.

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