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AUDIT FIRM CHARACTERISTICS AND AUDIT QUALITY IN NIGERIA

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Abstract

The chains of well-publicized cases of accounting improprieties in Nigeria and around the world have raised worries about the quality of audited financial statement. This has stirred a number of professional and regulatory organizations to recommend reforms that will improve auditor independence and thereby increase audit quality. This study examines the relationship between audit firm characteristics and audit quality in Nigeria. Data for the study were obtainedfrom the financial statements of 30 non-financial companies listed on the Nigerian Stock Exchange market within the period studied (2013-2017),The three widely used binary regression models (Logit, Probit and Gompit) were used to estimate the model for the study.The study found that auditor's independence exhibits positive insignificant impact on audit quality across the sampled firms while audit firm size showed positive significant impact on audit quality. Audit committee independence showed negative impact though insignificant using the logit and probit estimation technique. The study recommendsthat auditor's independence should be enhanced by regulating non audit services that could erode auditor's independence. Also, audit client should endeavor to patronize audit firms that have the necessary expertise for an audit engagement.
Keywords: Audit Quality, Auditor Independence, Audit firm size.

Introduction

The persistent economic failures experienced in almost all the sectors in Nigeria have raised some fundamental issues on the quality of audit and the independence of the external auditor amidst others. In particular, regulators have often expressed their concern that the length of the auditor-client relationship and executives association with auditors could impair auditor independence and thus audit quality (Daris, Soo, & Trompeter, 2003). The quality of an audit depends simultaneously on several audit firm characteristics such as auditor specialty, auditor independence, auditor tenure, audit firm size, audit fee, auditor enterprise and audit company type (Abedalgader, Ibrahim, & Baker, 2010). Auditors express their audit opinions on a financial statement presented to them based on audit evidence. The objective of an audit, therefore, is to plan and perform the audit to obtain appropriate audit evidence that is completely sufficient to support the opinion expressed in the

auditor's report. Inappropriate audit evidence may lead to wrong conclusions and this may affect the quality of the report. Hence, the issue of audit quality has received increased attention due to highly publicized audit failures culminating in corporate scandals, corporate fraud, and corporate failure. The scandals of Enron, Worldcom, Sunbeam, Global Crossing, Tyco, Anil Ambani, UB Group, Global Tele-Systems ltd, Coal India Ltd, Adani Group, Sahara Group, Ahold, Virendi, Cadbury Nigeria and Skandia are few examples that are very fresh in our minds that got world headlines (Farrarini et al., 2009; Mohammed, 2011; Al-Matari et al., 2012; Gupta, 2015). These scandals hurt the corporate entities as well as the stakeholders' wealth and by extension hurt the entire economies. These corporate scandals all had their roots in audit failures.

This concern inspired this current study of the relationship between firm characteristics and audit quality. The issues above raise some essential questions about how auditor's independence and audit firm size could possibly influence audit quality. Consequently, the broad aim of the study is to investigate audit firm characteristics and audit quality in Nigerian listed firms. The specific objectives are to:

1. examine the impact of auditors' independence on audit quality in Nigerian listed firms; and
2. ascertain the impact of audit firm size on audit quality in Nigeria listed firms.

In line with the above, the following hypotheses were formulated and tested

H_{01}: auditors' independence has no significant impact on audit quality in Nigerian listed firms.

H_{02}: audit firm size has no significant impact on audit quality in Nigeria listed firms.

The paper is organized as follows: section 2 discusses concepts, state of empirical literature and theories underpinning the study; section 3 is on methodology; section 4 addresses data presentation and analyses of the result while section 5 presents conclusion and recommendation.

Concepts of Audit quality

An audit is defined as a conscientious, objective examination and an inquiry into given statements of accounts relating to money or money's worth which also encompasses the examination, of the underlying documents and sometimes, physical assets to enable the auditor form an opinion as to whether or not the statements of accounts present a true and fair view of what it means to present (Okolo, 1989). According to the International Audit and Assurance Standard Board (IAASB), a sub-committee of the International Federation of Accountants (IFAC), an audit is an independent examination of, and expression of opinion on the financial statements of a business enterprise by an appointed auditor in accordance with his terms of appointment and in compliance with the relevant statutory and performance requirements. Essentially an audit refers to an examination and there are broadly, two types of audit – independent audit which is an external audit; and the internal audit, which is provided by an employee who is usually a member of the firm and is usually part of management function. Note worthily, most mentions of audit refer to external audit. The usage of the term here is consistent with that pattern.

An audit is said to be of quality when the audit exercise detect material errors and fraud leading to material misstatements in the financial statements where such exist. The Government Accountability Office (GAO 2003) defines audit quality as one performed in accordance with Generally Accepted Accounting Standards (GAAS) to provide reasonable assurance that the audited financial statements and related disclosures are (1) presented in

accordance with Generally Accepted Accounting Principles (GAAP) and (2) are not materially misstated whether due to errors or fraud. Titman & Truman (1986) see audit quality as the accuracy of the information reported by auditors. Many researchers define audit quality from different perspective. The widely used definition by DeAngelo (1981) defines audit quality as "the market assessed joint probability that a given auditor will both discover a breach in a client's accounting system, and report the breach". This definition considers the quality of an audit to be dependent on two factors. First, the auditor's ability to examine the accounts and identify errors or anomalies, i.e. their technical competence, and second, their objectivity, i.e. their independence. Audit quality is the combined probability that the auditor will detect and report on defects in accounts (Watts & Zimmerman, 1986). The technical competence is easy to conceptualize, but independence is more problematic, being "difficult to prove and easy to challenge" (Mednick, 1990). DeAngelo sees independence as the auditor's willingness to report defects in audited financial statements. This concept can be thought of as independence in fact, which in itself is not directly observable. Some researchers focus on defining "poor audit quality" by identifying adverse outcomes from an audit (Peecher & Piecey, 2008). Defining audit quality in terms of failure is appealing because it is easy to operationalize the definition. Chanterelle, Jensen& Knechel (2009) state "… we believe poor audit quality is observable with hindsight if an engagement results in litigation or a claim of malpractice against the auditor firm". However, assessing audit quality from this perspective has not been too easy because there are relatively few cases of detectable audit failures (Francis, 2011). Audit quality therefore combines the ability of an auditor to detect a breach (auditor competence) and a willingness to report such a breach (auditor independence).

Financial Reporting Council (2006b) considers five drivers that influence audit quality to include: audit firm culture, skills and personal qualities of audit partners and staff, the effectiveness of the audit process, and the reliability and usefulness of audit reporting, amongst factors that are outside the controls of the auditors. Previous studies used noticeable outcomes as proxies for audit quality this includes; audit opinions, auditors' selection and change, decisions, financial statements outcomes and analysts forecast. Carey & Simnett (2005) used the type of audit opinion as a proxy for audit quality in examining the relationship between the length of partner tenure and the propensity for audit partners to issue a modified audit opinion.

The study now proceeds to examine those audit firm characteristics that could determine audit quality.

Auditor Independence and Audit Quality

IAA (2010), viewed auditor independence as an expected auditor behavior that directs an auditor not to have personal interest in doing his / her jobs, because it is contrary to integrity. Auditor independence has been viewed as being very essential to the auditor's job and profession because, without it, audited financial statements would not have value in the perception of the end-users. Mautz & Sharaf (1961) spotted out two aspects of auditor independence. These are real independence and apparent independence. Real independence is the attitude which the individual auditor maintains in the conduct of his / her job that permits the provision of an opinion without being affected by influences that compromise judgment, allowing the individual to act with integrity and exercise objectivity and professional skepticism. Apparent independence has to do with the independence ascribed to the auditor, as a result of the image of auditors he enjoys as a member of a professional group. The first aspect of independence shows that an auditor should not only

be independent in appearance but should be independent in fact and character. Millichamp (2004) identified the following that could ruin the auditor's independence such as undue dependence on an audit client (audit fee represents more than 10% of the total fees of the auditor firm), family or other personal relationships, beneficial interest in shares or other investment, loan to and from the client, acceptance of goods and services, actual or threatened litigations, influences outside the practice, provision of other services, and receipts of reward from a third party other than the client. On state of empirical study on the relationship between Auditors' independence and audit quality, studies have shown a positive relationship (DeAngelo, 1981; Windsor & Warning-Rasmussen, 2009 and Alim, Trisni, & Lilik, 2007). It therefore follows that auditor independence is directly proportional to audit quality. Premised on the above, the study hypothesizes that:

H_{01}: Auditors' independence has no significant positive relationship with audit quality in Nigerian listed firms.

Audit Firm Size and Audit Quality

Ideally, it is expected that larger audit firms, because of their more abundant resources available to them, by reason of their size are better positioned to acquire and render better audit services. According to Salehi & Mansoury (2009), the size of an audit firm has been used as a proxy for audit quality, meaning that larger audit firms have a bigger reputation to safeguard and therefore will ensure a more independent quality audit service; they have better financial resources, research facilities, superior technology and more talented employees to undertake large company audits. As noted above, large firms are capable of attracting the services of such large audit firms, it is then expected that their audits will be of higher quality. Hassan & Bello (2013) asserted that large firms have stronger desires and are more likely to manipulate earnings growth trend and meet or beat earnings expectations.

Also, it is believed that large audit firm could have the necessary expertise to perform better audit engagement compared to small audit firms. Auditor expertise is very important to auditing firms because the auditing process is primarily human endeavor and audit firms are very dependent upon the quality of their professionals, including competence and decision making skills (Smith, Bedard, & Johnstone, 2009). Suyono (2012), stated that both expertises acquired through long working period, and through frequency of the audit engagement, affect audit quality. Lengthy tenure of audit job leads to an auditor gaining more general professional experience, which in turn enables the auditor to acquire more competencies. On the other hand, frequency of the audit work leads the auditor to amass client – specific experience. However, client – specific experience can lead to two counteracting effects on audit quality. On the one hand, it would enable an auditor to acquire more specific knowledge of the client's business, systems, and risks, which in turn would lead to high audit quality (Knapp, 1991). On the other hand, more clients – specific experience can result to long auditor tenure which may bias an auditor's judgment and ultimately lead to lower audit quality (Suyono, 2012).Quite a number of studies have been done to substantiate the empirical validation of audit firm size on audit quality. For instance, DeAngelo (1981) opines that audit firm size exhibits a positive relationship with audit quality, the reason being that larger audit firms would lose more if they fail to report material misstatement. Dye (1993) also revealed that large audit firms are more likely to disclose ailing firms because they have more wealth at risk from litigation. Other studies that revealed significant influence of audit firm size on audit quality were based on reasons

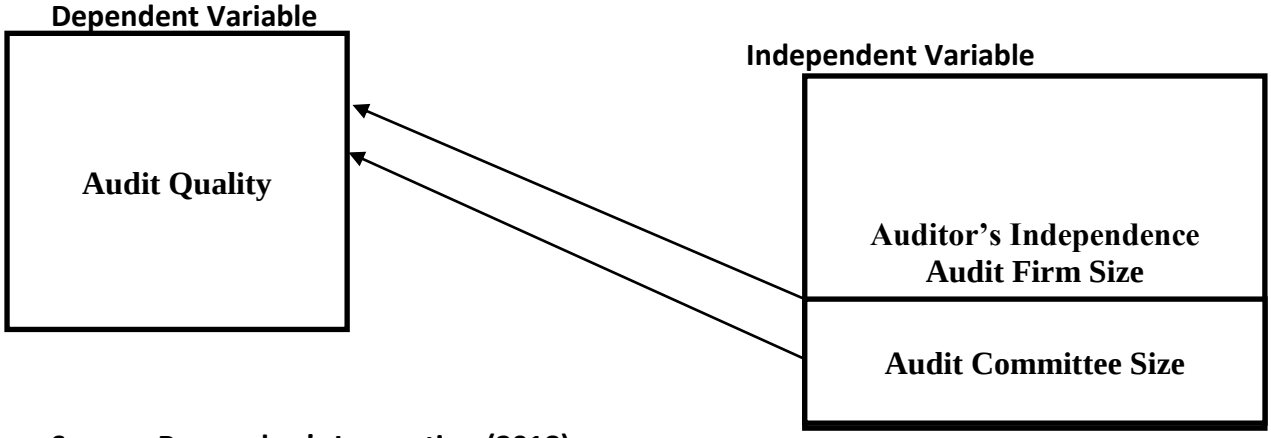
that large audit firms exhibit higher competence due to the use of standardized audit methodologies and training programmer. Similarly, it is also believed that large audit firms deliver good audit quality due to their brand name quality (Pardi & Molina, 2015; Sandstorm, 2013; Chen & Hsu, 2009). However, there exists other strand of studies that revealed insignificant impact (Yuniarto, 2011; Ali & Aulia, 2015). This implies that large audit firm size may not necessarily translate to audit quality because most of these big audit firms may have a lot of client firms to audit and this may put pressure on audit staff to finish the audit engagement on time thereby causing adverse effect on audit quality. Premised on the above, the study hypothesizes that:

H_{02}: audit firm has no significant positive relationship with audit quality in Nigerian listed firms.

Theoretical Framework

This study is anchored on the social exchange theory (SET). The theory emphasized relationship-oriented contract between employees and employers and it is characterized by mutual exchange of social emotional benefits, cooperation, trust and a long-term focus (Blau, 1964; Van Dyne, Graham, & Dienasch, 1994). According to Cropanzano and Mitchell (2005), the social exchange relationship that subsists between the employees and the organization is expected to motivate employees to behave in a manner that would provide beneficial outcomes for the organization due to the strong obligation on the part of the employees to support the organization. Adapting this theory to audit firm characteristics and audit quality, there subsist a contractual relationship between the audit firm and the client firm to undertake audit engagement. Giving the obligation of the audit firm to the client firm which is bind by contractual agreement, this is expected to bring about beneficial outcomes for the organization, in this regard high audit quality upon which users of financial statement could make informed economic judgment. The expected beneficial outcome could also be anchored on relational approach (social exchange based) which most client firm would prefer to have with their auditors than transactional approach (Fontaine & Pilose, 2011; 2012). Consequently, it therefore implies that the quality of audit services provided by the auditor is dependent on social relational exchange between the auditor and the audit client.

Figure 2.1: Conceptual Framework



Source: Researcher's Innovation (2018)

Methodology

The study used the cross sectional research design which has both cross section and time series dimensions. It is suitable for this study because the object of the study consist of

cross sections (companies) over a relatively short period of time (5 years). The study sampled thirty (30) financial firms as determined by the Yamane technique, and the sample size drawn from the population (all listed nonfinancial companies in the Nigerian Stock Exchange as at 31st December, 2017) drawn using convenience sampling method. The data are secondary in nature and were sourced from the annual reports of the sample companies for a time frame of five years (2013 to 2017). The study adapts the model of Ilaboya and Ohiokha (2014).

This study will make use of the binary regression analysis. The choice of the binary regression analysis is based on the fact that the dependent variable is binary (0 and 1). The study adopted the three widely used binary regression models (Logit, Probit and Gompit). The difference in these models is based on the type of probability distribution they assume. Logistic binary regression follows a cumulative logistic probability distribution, binary Probity assumes cumulative normal distribution while the Gambit binary regression follows a generalized extreme value distribution.

The functional forms of the models are presented below based on the empirical literature that audit independence, length of auditor's tenure, auditor's expertise and audit firm size are expected to impact audit quality in firms listed in the Nigerian Stock Exchange.

AUDQUL=ƒ(AUDIND) ----------1
AUDQUL=ƒ(AUDFSIZ) ----------2

To examine the combined effect of each of the variables above, the equation is translated into a single module as shown below:

AUDQUL=ƒ(AUDIND,AUDFSIZ)----------3

The ability of audit firm to give a quality audit exercise could be enhanced by internal audit environment of the audit client. This internal control environment determines whether the external auditor could have reliance on the internal audit environment, this also enables the external auditor to know the extent of check to be done on the internal control system. Consequently, apprising the audit committee, which is a key variable in internal audit of any firm becomes paramount.

AUDQUL=ƒ(AUDIND,AUDFSIZ,AUDCOMIND)----------4

The equation above could be restated in a binary regression form as:

-----5
-----6
-----7

Where:

AQ = Audit quality

AUDIND= Auditor's independence

AUDFSIZ= Auditor's firm size

AUDCOMIND = Audit Committee Independence

μ = Error term

Measurement of variables

Audit Quality: Use one (1) if audited by any of the big four audit firms in Nigeria, otherwise use zero (0) (Ilaboya & Ohiokha, 2014).

Auditor's Independence: Ratio of audit fee to company revenue (Adeniyi & Mieseigha, 2003)

Auditor's firm size: Amount of audit fees (Adeniyi & Mieseigha, 2003)

Audit committee Independence: Ratio of non-executive directors on the committee (Adhikary & Mitra, 2016)

Presentation and Discussion of Results

This section contains the presentation, analysis and interpretation of the data collected for this research work. Consequently, it entails the application of both mathematical and statistical techniques to provide the basis for the testing of the research hypotheses. Hence, it is a vital part of any research work, since it forms the basis for conclusion and recommendation at the end of the research. The preliminary analysis of the data is first conducted (descriptive and correlation analysis). Thereafter, the binary regression analysis is conducted. The results are presented and analyzed below:

Table 1: Descriptive Statistics

	AQ	AUDIND	AUDFSIZ	AUDCOMIND
Mean	0.635135	0.172770	54460.34	48.13649
Median	1.000000	0.090000	25009.50	50.00000
Maximum	1.000000	1.540000	624508.0	100.0000
Minimum	0.000000	0.010000	1800.000	0.000000
Std. Dev.	0.483027	0.234474	97919.71	13.89147
JB Stat.	25.27937	1343.836	1904.732	317.7769
JB Prob.	0.000003	0.000000	0.000000	0.000000
Observation	148	148	148	148

Source: Researcher's Compilation (2018)

Where; AQ= Audit Quality; AUDIND= Auditor's Independence; AUDFSIZ= Auditor's firm size; and AUDCOMIND = Audit committee independence.

Table 1 above presents the result for the descriptive statistics for the variables. As observed, AQ has a mean value of 0.635135 which indicates that about 63.5 % of the total sample of companies used for the study is audited by the big 4 auditing companies. The standard deviation is 0.483027 indicating the extent of dispersion of the mean from the distribution. AUDIND shows a mean value of 0.172770 which suggest that on the average, the samples firms audit firms compared to their total is quite low and within the expectations in order not to jeopardize auditor's independence and standard deviation is 0.234474. AUDCOMIND shows a mean value of 48.13649which indicates on the average companies maintain 48.14 % non-executive directorship on the audit committee with a standard deviation of 3.070559 indicating the extent of dispersion of the mean from the distribution. AUDCOMIND has a mean value of 0.474682 indicating that on the average about 47.47% non-executive directorship on the audit committee with a standard deviation of 13.89147 indicating the extent of dispersion of the mean from the distribution The study now proceed to conduct correlation analysis to show the relationship between the audit firm attributes and audit quality.

Table 2: Pearson Correlation Result

Covariance Analysis: Ordinary
Date: 11/02/18 Time: 07:39
Sample: 1 150
Included observations: 148
Balanced sample (list wise missing value deletion)

Correlation t-Statistic	AQ	AUDIND	AUDFSIZ	AUDCOMIND
AQ	1.000000 -----			
AUDIND	-0.052280 -0.632571	1.000000 -----		
AUDFSIZ	0.233041 2.895569	-0.110507 -1.343493	1.000000 -----	
AUDCOMIND	-0.139401 -1.700993	0.321975 4.109265	0.024926 0.301270	1.000000 -----

Source: Researcher's Compilation (2018)

From table 2 above, the correlation coefficients of the variables are examined. The focus of our analysis here is how the dependent variable (Audit quality) correlates with the other variables. We found that AQ is negatively correlated with AUDIND(r =0.052280), AUDCOMIND (r =0.139401) while it is positively correlated with AUDFSIZ(r =0.233041). The relationship between the audit quality and the explanatory variables are all insignificant (AUDIND, p-value of 0.633>0.05; AUDFSIZ, p-value of 2.896 > 0.05; AUDCOMIND, p-value of 1.701> 0.05. However, the Pearson correlation analysis is not sufficient to explain the impact of the explanatory variables on audit quality because of the possibility of bidirectional causality between the dependent and independent variables, the study now proceeds to estimate the binary regression.

BINARY REGRESSION RESULTS

The study adopted the three widely used binary regression models (Legit, Probity and Gambit). The binary regression results obtained below:

Table 3: Binary regression results

	Model 1 (Binary Legit)	**Model 2 (Binary Probity)**	**Model 3 (Binary Gambit)**
C	1.102245 {1.451525} (0.1466)	0.654043 {1.475911} (0.1400)	1.080706 {1.966900} (0.0492)*
AUDIND	0.682775 {0.842583} (0.3995)	0.394460 {0.780395} (0.4352)	0.503205 {0.825918} (0.4089)

AUDFSIZ	1.80E-05 {2.420213} (0.0155)*	9.77E-06 {2.604571} (0.0092)*	1.91E-05 {2.365385} (0.0180)*
AUDCOMIND	-0.026977 {-1.742725} (0.0814)	-0.015424 {-1.726471} (0.0843)	-0.020788 {-2.069089} (0.0385)*
McFadden R-Squared LR Statistics Log Likelihood (LL) Probability distribution N Obs with Dep = 0 Obs with Dep = 1	0.094703 18.394 (0.000)* -87.91567 Logistic 148 54 94	0.092397 17.946(0.000)* -88.13967 Normal 148 54 94	0.103455 20.09361(0.000) -87.06576 Gev 148 54 94

Note: (1) Parentheses ( ) are Z-statistic
(2) * 5% level of significance respective
(2) * 5% level of significance respective
Source: Researchers Compilation (2018)

In Table 3, we observed all three estimations; (legit, probity and Gambit). To select from the three models, the Log Likelihood (LL) was adopted. The Akaike Information Criterion (AIC) was not used to control for parameters when comparing the goodness-of-fits for these models since they all have the same number of parameters. The Bayesian Information Criterion (BIC) was also not used to control for the number of observations since all three models adopted 30 sampled companies. The McFadden R-squared value from the three binary regression results shows that, using the legit estimation, the model explains about 9%, using the probity estimation the model explains about 9% and using the Gambit estimation, the model explains 10% of the outcome of the dependent variable. The LR statistic for all three models revealed that they were all statistically significant and valid in explaining the outcome of the dependent variable. The reported results of all three binary regression models were based on Maximum Likelihood Huber/White Heteroskedasticity-consistent standard errors and covariance. This means that the binary regression results reported are free from Heteroskedasticity problem which is commonly associated with cross-sectional data. In analyzing the marginal effects of the selected explanatory variables, it is observed that AUDIND appears to have a positive insignificant {@ 5%} impact (legit result, $\beta_1 = 0.683$, $p = 0.3995$; probity result; $\beta_1 = 0.394$, $p = 0.4352$; Gambit result; $\beta_1 = 0.503$, $p = 0.4089$) on the likelihood that a firm has audit quality. AUDFSIZ appears to have a positive and significant {@5%} (legit result, $\beta_2 = 1.80$, $p = 0.0155$; probity result; $\beta_2 = 9.7$, $p = 0.0092$; Gambit result; $\beta_2 = 1.91$, $p = 0.0180$) on the likelihood that a firm has audit quality. On the control variable, AUDCOMIN Dimpacts negatively but with the coefficient for Gambit showing significance {@ 5%} (logit result, $\beta_3 = -0.026$, $p = 0.0814$; probity result, $\beta_3 = -0.015$, $p = 0.0843$; Gompit result, $\beta_3 = -0.02$, $p = 0.0385$) on the

likelihood that a firm has audit quality. The consensus is that the higher the value of LL, the better the results.

Discussion of the Result

This section tests the hypotheses and discusses the findings from the binary results.

Auditor's Independence and Audit Quality

The empirical estimates from our evaluation of the relationship between Auditor's Independence and audit quality revealed a positively but insignificantly {@ 5%} (legit result, $\beta_1 = 0.683$,p = 0.3995; probity result; $\beta_1 = 0.394$, p = 0.4352; Gambit result; $\beta_1 = 0.503$, p =0.4089) on the likelihood that a firm has audit quality. Consequently, we accept the null hypothesis that auditor's independence has no significant effect on audit quality. Studies that showed positive relationship between auditor's independence and audit quality corroborated this result (DeAngelo, 1981; Windsor & Warning-Rasmussen, 2009; Alim, Trisni, & Lilik, 2007). Although this study showed positive relationship, its impact appears insignificant which is not unexpected. For instance, Mill champ (2004) opines that dependence on an audit client (audit fee represents more than 10% of the total fees of the auditor firm) or other personal relationships, beneficial interest in shares or other investment, loan to and from the client, acceptance of goods and services, actual or threatened litigations, influences outside the practice, provision of other services could ruin auditor's independence to the audit client.

Audit Firm Size and Audit Quality

The empirical estimates from our evaluation of the relationship between audit firm size and audit quality revealed a negative relationship. It is observed that AUDFSIZ appears to have a positive significant {@ 5%} impact (legit result, $\beta_2 = 1.80$, p = 0.0155; probity result; $\beta_2 = 9.7$, p = 0.0092; Gambit result; $\beta_2 = 1.91$, p = 0.0180) on the likelihood that a firm has audit quality. Consequently, we reject the null hypothesis that audit firm size does not have a significant relationship with audit quality. This finding is in tandem with De Angelo (1981). Specifically, DE Angelo (1981) opines that audit firm size exhibits a positive relationship with audit quality, the reason being that larger audit firms would lose more if they fail to report material misstatement. Also, Dye (1993) also revealed that large audit firms are more likely to disclose ailing firms because they have more wealth at risk from litigation. Other studies that revealed significant influence of audit firm size on audit quality were based on reasons that large audit firms exhibit higher competence due to the use of standardized audit methodologies and training programmer.

Summary of findings, Conclusion and Recommendation

The specific objectives of this study are to examine the significant impact between auditor's independence and audit quality, audit firm size and audit quality; while the study control for the impact of audit committee independence on audit quality in Nigeria. Our findings include the following:

1. Audit independence exhibits positive insignificant impact on audit quality of listed firms in Nigeria;
2. Audit firm size shows positive significant impact on audit quality of listed firms in Nigeria; and
3. Audit committee independence shows a negative insignificant impact on audit quality using legit, probity but significant impact using the gambit estimations.

Conclusion and Recommendation

The series of well-publicized cases of accounting improprieties in Nigeria and around the world have raised doubts about the quality of audited financial statement. This has stirred a number of professional and regulatory organizations to recommend reforms that will improve auditor independence and thereby increase audit quality. The aim of this study was to examine the relationship between some audit firm characteristics and audit quality in Nigeria. Specifically, the study looked at the effects of auditor's independence, audit firm size on audit quality while audit committee independence was used as control variables. The three widely used binary regression models (Legit, Probity and Gambit) were adopted. The difference in these models is based on the type of probability distribution they assume. Logistic binary regression follows a cumulative logistic probability distribution, binary Probity assume cumulative normal distribution while the Gambit binary regression follows a generalized extreme value distribution. Our study found that auditor's independence exhibits positive insignificant impact on audit quality across the sampled firms while audit firm size showed positive significant impact on audit quality. Audit committee independence showed negative impact though insignificant using the legit and probity estimation technique. In the light of the research work, the following recommendations are suggested. Firstly, auditor's independence should be enhanced by regulating non audit services that could erode auditor's independence. Also, audit client should endeavor to patronize audit firms that have the necessary expertise for an audit engagement.

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Descriptive Statistics

	AQ	AUDIND	AUDFSIZ	AUDCOMIND
Mean	0.635135	0.172770	54460.34	48.13649
Median	1.000000	0.090000	25009.50	50.00000
Maximum	1.000000	1.540000	624508.0	100.0000
Minimum	0.000000	0.010000	1800.000	0.000000
Std. Dev.	0.483027	0.234474	97919.71	13.89147
Skegness	-0.561435	3.207264	3.853539	1.480280
Kurtosis	1.315209	16.29561	18.79482	9.539608
Jarque-Bera	25.27937	1343.836	1904.732	317.7769
Probability	0.000003	0.000000	0.000000	0.000000
Sum	94.00000	25.57000	8060131.	7124.200
Sum Sq. Dev.	34.29730	8.081764	1.41E+12	28367.03
Observations	148	148	148	148

Correlation Result

Covariance Analysis: Ordinary
Date: 11/02/18 Time: 07:39
Sample: 1 150
Included observations: 148
Balanced sample (list wise missing value deletion)

Correlation t-Statistic	AQ	AUDIND	AUDFSIZ	AUDCOMIND
AQ	1.000000			

AUDIND	-0.052280	1.000000		
	-0.632571	-----		
AUDFSIZ	0.233041	-0.110507	1.000000	
	2.895569	-1.343493	-----	
AUDCOMIND	-0.139401	0.321975	0.024926	1.000000
	-1.700993	4.109265	0.301270	-----

Individual Variable Results

Dependent Variable: AQ
Method: ML - Binary Legit (Quadratic hill climbing)
Date: 11/02/18 Time: 07:43
Sample: 1 150
Included observations: 149
Convergence achieved after 3 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.640486	0.212834	3.009317	0.0026
AUDIND	-0.428962	0.713453	-0.601247	0.5477

McFadden R-squared	0.001835	Mean dependent var	0.637584
S.D. dependent var	0.482319	S.E. of regression	0.483323
Akaike info criterion	1.334034	Sum squared resid	34.33943
Schwarz criterion	1.374355	Log likelihood	-97.38553
Hannan-Quinn criter.	1.350416	Deviance	194.7711
Restr. Deviance	195.1291	Restr. log likelihood	-97.56456
LR statistic	0.358048	Avg. log likelihood	-0.653594
Prob(LR statistic)	0.549592		

Obs with Dep=0	54	Total obs	149
Obs with Dep=1	95		

Dependent Variable: AQ
Method: ML - Binary Probity (Quadratic hill climbing)
Date: 11/02/18 Time: 07:45
Sample: 1 150
Included observations: 149
Convergence achieved after 3 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.398329	0.131135	3.037541	0.0024
AUDIND	-0.264586	0.447930	-0.590687	0.5547

McFadden R-squared	0.001811	Mean dependent var	0.637584
S.D. dependent var	0.482319	S.E. of regression	0.483332
Akaike info criterion	1.334065	Sum squared resid	34.34066
Schwarz criterion	1.374387	Log likelihood	-97.38786

Hannan-Quinn criter.	1.350447	Deviance	194.7757
Restr. Deviance	195.1291	Restr. log likelihood	-97.56456
LR statistic	0.353400	Avg. log likelihood	-0.653610
Prob(LR statistic)	0.552195		
Obs with Dep=0	54	Total obs	149
Obs with Dep=1	95		

Dependent Variable: AQ
Method: ML - Binary Extreme Value (Quadratic hill climbing)
Date: 11/02/18 Time: 07:45
Sample: 1 150
Included observations: 149
Convergence achieved after 4 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.865056	0.174540	4.956205	0.0000
AUDIND	-0.374321	0.575573	-0.650345	0.5155

McFadden R-squared	0.002036	Mean dependent var	0.637584
S.D. dependent var	0.482319	S.E. of regression	0.483250
Akaike info criterion	1.333770	Sum squared resid	34.32901
Schwarz criterion	1.374092	Log likelihood	-97.36589
Hannan-Quinn criter.	1.350152	Deviance	194.7318
Restr. Deviance	195.1291	Restr. log likelihood	-97.56456
LR statistic	0.397335	Avg. log likelihood	-0.653462
Prob(LR statistic)	0.528469		
Obs with Dep=0	54	Total obs	149
Obs with Dep=1	95		

Dependent Variable: AQ
Method: ML - Binary Logit (Quadratic hill climbing)
Date: 11/02/18 Time: 07:46
Sample: 1 150
Included observations: 149
Convergence achieved after 6 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.050193	0.263015	-0.190836	0.8487

AUDFSIZ	1.75E-05	7.19E-06	2.426004	0.0153

McFadden R-squared	0.075736	Mean dependent var	0.637584
S.D. dependent var	0.482319	S.E. of regression	0.463016
Akaike info criterion	1.237254	Sum squared resid	31.51440
Schwarz criterion	1.277575	Log likelihood	-90.17542
Hannan-Quinn criter.	1.253636	Deviance	180.3508
Restr. Deviance	195.1291	Restr. log likelihood	-97.56456
LR statistic	14.77828	Avg. log likelihood	-0.605204
Prob(LR statistic)	0.000121		

Obs with Dep=0	54	Total obs	149
Obs with Dep=1	95		

Dependent Variable: AQ
Method: ML - Binary Probity (Quadratic hill climbing)
Date: 11/02/18 Time: 07:46
Sample: 1 150
Included observations: 149
Convergence achieved after 5 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.008218	0.157057	-0.052323	0.9583
AUDFSIZ	9.76E-06	3.78E-06	2.583998	0.0098

McFadden R-squared	0.075014	Mean dependent var	0.637584
S.D. dependent var	0.482319	S.E. of regression	0.463914
Akaike info criterion	1.238200	Sum squared resid	31.63684
Schwarz criterion	1.278521	Log likelihood	-90.24589
Hannan-Quinn criter.	1.254582	Deviance	180.4918
Restr. Deviance	195.1291	Restr. log likelihood	-97.56456
LR statistic	14.63734	Avg. log likelihood	-0.605677
Prob(LR statistic)	0.000130		

Obs with Dep=0	54	Total obs	149
Obs with Dep=1	95		

Dependent Variable: AQ
Method: ML - Binary Extreme Value (Quadratic hill climbing)
Date: 11/02/18 Time: 07:47

Sample: 1 150
Included observations: 149
Convergence achieved after 6 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.210869	0.231119	0.912385	0.3616
AUDFSIZ	1.78E-05	7.46E-06	2.379314	0.0173

McFadden R-squared	0.081192	Mean dependent var	0.637584
S.D. dependent var	0.482319	S.E. of regression	0.459724
Akaike info criterion	1.230109	Sum squared resid	31.06789
Schwarz criterion	1.270430	Log likelihood	-89.64312
Hannan-Quinn criter.	1.246491	Deviance	179.2862
Restr. deviance	195.1291	Restr. log likelihood	-97.56456
LR statistic	15.84287	Avg. log likelihood	-0.601632
Prob(LR statistic)	0.000069		

Obs with Dep=0	54	Total obs	149
Obs with Dep=1	95		

Dependent Variable: AQ
Method: ML - Binary Legit (Quadratic hill climbing)
Date: 11/02/18 Time: 07:47
Sample: 1 150
Included observations: 149
Convergence achieved after 3 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	1.467615	0.635269	2.310226	0.0209
AUDCOMIND	-0.019252	0.012587	-1.529535	0.1261

McFadden R-squared	0.012463	Mean dependent var	0.630872
S.D. dependent var	0.484196	S.E. of regression	0.481682
Akaike info criterion	1.327411	Sum squared resid	34.10659
Schwarz criterion	1.367732	Log likelihood	-96.89212
Hannan-Quinn criter.	1.343793	Deviance	193.7842
Restr. deviance	196.2299	Restr. log likelihood	-98.11496
LR statistic	2.445684	Avg. log likelihood	-0.650283
Prob(LR statistic)	0.117848		

Obs with Dep=0	55	Total obs	149
Obs with Dep=1	94		

Dependent Variable: AQ
Method: ML - Binary Probity (Quadratic hill climbing)
Date: 11/02/18 Time: 07:48
Sample: 1 150
Included observations: 149
Convergence achieved after 4 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.906690	0.386964	2.343086	0.0191
AUDCOMIND	-0.011857	0.007707	-1.538451	0.1239

McFadden R-squared	0.012400	Mean dependent var	0.630872
S.D. dependent var	0.484196	S.E. of regression	0.481707
Akaike info criterion	1.327495	Sum squared resid	34.11010
Schwarz criterion	1.367816	Log likelihood	-96.89838
Hannan-Quinn criter.	1.343877	Deviance	193.7968
Restr. deviance	196.2299	Restr. log likelihood	-98.11496
LR statistic	2.433168	Avg. log likelihood	-0.650325
Prob(LR statistic)	0.118793		

Obs with Dep=0	55	Total obs	149
Obs with Dep=1	94		

Dependent Variable: AQ
Method: ML - Binary Extreme Value (Quadratic hill climbing)
Date: 11/02/18 Time: 07:48
Sample: 1 150
Included observations: 149
Convergence achieved after 4 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	1.508429	0.472159	3.194748	0.0014
AUDCOMIND	-0.015054	0.009021	-1.668720	0.0952

McFadden R-squared	0.012852	Mean dependent var	0.630872

S.D. dependent var	0.484196	S.E. of regression	0.481555
Akaike info criterion	1.326900	Sum squared resid	34.08863
Schwarz criterion	1.367221	Log likelihood	-96.85403
Hannan-Quinn criter.	1.343282	Deviance	193.7081
Restr. deviance	196.2299	Restr. log likelihood	-98.11496
LR statistic	2.521878	Avg. log likelihood	-0.650027
Prob(LR statistic)	0.112277		

Obs with Dep=0	55	Total obs	149
Obs with Dep=1	94		

Combine effect of all the variables

Binary Legit Result

Dependent Variable: AQ
Method: ML - Binary Legit (Quadratic hill climbing)
Date: 11/02/18 Time: 07:40
Sample: 1 150
Included observations: 148
Convergence achieved after 7 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	1.102245	0.759370	1.451525	0.1466
AUDIND	0.682775	0.810335	0.842583	0.3995
AUDFSIZ	1.80E-05	7.43E-06	2.420213	0.0155
AUDCOMIND	-0.026977	0.015480	-1.742725	0.0814

McFadden R-squared	0.094703	Mean dependent var	0.635135
S.D. dependent var	0.483027	S.E. of regression	0.458580
Akaike info criterion	1.242104	Sum squared resid	30.28263
Schwarz criterion	1.323109	Log likelihood	-87.91567
Hannan-Quinn criter.	1.275016	Deviance	175.8313
Restr. deviance	194.2251	Restr. log likelihood	-97.11257
LR statistic	18.39379	Avg. log likelihood	-0.594025
Prob(LR statistic)	0.000365		

Obs with Dep=0	54	Total obs	148
Obs with Dep=1	94		

Binary Probity

Dependent Variable: AQ
Method: ML - Binary Probity (Quadratic hill climbing)
Date: 11/02/18 Time: 07:41

Sample: 1 150
Included observations: 148
Convergence achieved after 7 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.654043	0.443145	1.475911	0.1400
AUDIND	0.394460	0.505463	0.780395	0.4352
AUDFSIZ	9.77E-06	3.75E-06	2.604571	0.0092
AUDCOMIND	-0.015424	0.008934	-1.726471	0.0843

McFadden R-squared	0.092397	Mean dependent var	0.635135
S.D. dependent var	0.483027	S.E. of regression	0.460193
Akaike info criterion	1.245131	Sum squared resid	30.49600
Schwarz criterion	1.326136	Log likelihood	-88.13967
Hannan-Quinn criter.	1.278043	Deviance	176.2793
Restr. Deviance	194.2251	Restr. log likelihood	-97.11257
LR statistic	17.94579	Avg. log likelihood	-0.595538
Prob(LR statistic)	0.000451		

Obs with Dep=0	54	Total obs	148
Obs with Dep=1	94		

Binary Gambit

Dependent Variable: AQ
Method: ML - Binary Extreme Value (Quadratic hill climbing)
Date: 11/02/18 Time: 07:42
Sample: 1 150
Included observations: 148
Convergence achieved after 7 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	1.080706	0.549446	1.966900	0.0492
AUDIND	0.503205	0.609268	0.825918	0.4089
AUDFSIZ	1.91E-05	8.10E-06	2.365385	0.0180
AUDCOMIND	-0.020788	0.010047	-2.069089	0.0385

McFadden R-squared	0.103455	Mean dependent var	0.635135
S.D. dependent var	0.483027	S.E. of regression	0.453767
Akaike info criterion	1.230618	Sum squared resid	29.65018
Schwarz criterion	1.311624	Log likelihood	-87.06576
Hannan-Quinn	1.263531	Deviance	174.1315

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Restr. Deviance	194.2251	Restr. log likelihood	-97.11257
LR statistic	20.09361	Avg. log likelihood	-0.588282
Prob(LR statistic)	0.000162		

Obs with Dep=0	54	Total obs	148
Obs with Dep=1	94		

Data

COMPANY	COUNTRY	CORE BUSINESS	AQ	AUDIND	AUDFSIZ	AUDCOMIND
7Up Nigeria	Nigeria	Breweries	1	0.04	41,000	50.00
7Up Nigeria	Nigeria	Breweries	1	0.05	39,000	50.00
7Up Nigeria	Nigeria	Breweries	1	0.05	38,000	50.00
7Up Nigeria	Nigeria	Breweries	1	0.04	35,000	50.00
7Up Nigeria	Nigeria	Breweries	1	0.05	33,000	50.00
A.G.Leventis Nig	Nigeria	Diversified Trade	1	0.38	43,226	50.00
A.G.Leventis Nig	Nigeria	Diversified Trade	1	0.25	32,141	50.00
A.G.Leventis Nig	Nigeria	Diversified Trade	1	0.24	29,500	66.67
A.G.Leventis Nig	Nigeria	Diversified Trade	1	0.23	26,900	33.33
A.G.Leventis Nig	Nigeria	Diversified Trade	1	0.20	23,865	33.33
Academy	Nigeria	Printing Press	1	0.33	7,000	33.33
Academy	Nigeria	Printing Press	0	0.31	6,350	33.33
Academy	Nigeria	Printing Press	0	0.27	6,350	33.33
Academy	Nigeria	Printing Press	0	0.27	6,350	33.33
Academy	Nigeria	Printing Press	0	0.28	6,350	33.33
Associated Bus Company	Nigeria	Passenger Tansport	0	0.16	11,723	50.00
Associated Bus Company	Nigeria	Passenger Tansport	0	0.17	11,722	50.00
Associated Bus Company	Nigeria	Passenger Tansport	0	0.16	11,034	50.00
Associated Bus Company	Nigeria	Passenger Tansport	0	0.15	10,679	50.00
Associated Bus Company	Nigeria	Passenger Tansport	1	0.20	13,291	50.00
B.O.C Gases Nig	Nigeria	Industrial Gas	0	0.59	15,000	50.00
B.O.C Gases Nig	Nigeria	Industrial Gas	1	0.88	17,500	50.00
B.O.C Gases Nig	Nigeria	Industrial Gas	1	0.81	16,164	50.00
B.O.C Gases Nig	Nigeria	Industrial Gas	1	0.63	14,036	50.00
B.O.C Gases Nig	Nigeria	Industrial Gas	1	0.62	12,936	50.00
Berger Paints Nig	Nigeria	Paints & Coating	1	0.57	17,500	50.00
Berger Paints Nig	Nigeria	Paints & Coating	1	0.63	16,275	50.00
Berger Paints Nig	Nigeria	Paints & Coating	1	0.51	15,500	50.00
Berger Paints Nig	Nigeria	Paints & Coating	1	0.54	16,500	50.00
Berger Paints Nig	Nigeria	Paints & Coating	1	0.57	15,500	50.00
Beta Glass Company	Nigeria	Glass Containers	1	0.28	61,093	50.00
Beta Glass Company	Nigeria	Glass Containers	1	0.12	22,272	0.00
Beta Glass Company	Nigeria	Glass Containers	1	0.14	22,272	50.00
Beta Glass Company	Nigeria	Glass Containers	1	0.12	20,527	50.00
Beta Glass Company	Nigeria	Glass Containers	1	0.14	19,184	50.00

Cadbury Nig	Nigeria	Food Process	1	0.07	23,000	50.00
Cadbury Nig	Nigeria	Food Process	1	0.09	27,000	50.00
Cadbury Nig	Nigeria	Food Process	1	0.13	35,831	50.00
Cadbury Nig	Nigeria	Food Process	1	0.12	37,421	50.00
Cadbury Nig	Nigeria	Food Process	1	0.07	26,000	50.00
Chellarams	Nigeria	Diversified Trade	0	0.07	9,200	50.00
Chellarams	Nigeria	Diversified Trade	0	0.05	9,600	50.00
Chellarams	Nigeria	Diversified Trade	0	0.04	9,075	50.00
Chellarams	Nigeria	Diversified Trade	0	0.03	7,350	57.14
Chellarams	Nigeria	Diversified Trade	0	0.03	7,150	50.00
Chemical & Allied Product	Nigeria	Paints & Coating	1	0.27	19,530	50.00
Chemical & Allied Product	Nigeria	Paints & Coating	1	0.29	19,530	50.00
Chemical & Allied Product	Nigeria	Paints & Coating	1	0.29	20,575	.
Chemical & Allied Product	Nigeria	Paints & Coating	1	0.30	21,060	33.33
Chemical & Allied Product	Nigeria	Paints & Coating	1	0.31	19,500	33.33
Conoil	Nigeria	Petrol Stations	0	.	.	33.33
Conoil	Nigeria	Petrol Stations	0	0.03	26,000	33.33
Conoil	Nigeria	Petrol Stations	0	0.03	26,000	33.33
Conoil	Nigeria	Petrol Stations	1	0.02	30,000	33.33
Conoil	Nigeria	Petrol Stations	1	0.02	27,500	50.00
Cutix	Nigeria	Cable	0	0.07	2,500	50.00
Cutix	Nigeria	Cable	0	0.07	2,000	50.00
Cutix	Nigeria	Cable	0	0.08	2,000	50.00
Cutix	Nigeria	Cable	0	0.09	2,000	50.00
Cutix	Nigeria	Cable	0	0.09	1,800	50.00
Dangote Sugar	Nigeria	Sugar Process	1	0.03	52,920	50.00
Dangote Sugar	Nigeria	Sugar Process	1	0.03	52,920	60.00
Dangote Sugar	Nigeria	Sugar Process	1	0.04	44,100	42.86
Dangote Sugar	Nigeria	Sugar Process	1	0.05	44,100	50.00
Dangote Sugar	Nigeria	Sugar Process	1	0.04	40,700	33.33
Eternaoil	Nigeria	Lube Marketing	0	0.01	25,000	33.33
Eternaoil	Nigeria	Lube Marketing	1	0.02	25,500	33.33
Eternaoil	Nigeria	Lube Marketing	1	0.02	19,500	33.33
Eternaoil	Nigeria	Lube Marketing	1	0.11	15,636	33.33
Eternaoil	Nigeria	Lube Marketing	1	0.01	14,636	42.86
Flour Mills Of Nigeria	Nigeria	Flour Process	1	0.06	296,900	100.00
Flour Mills Of Nigeria	Nigeria	Flour Process	1	0.18	624,508	50.00
Flour Mills Of Nigeria	Nigeria	Flour Process	1	0.07	206,354	50.00
Flour Mills Of Nigeria	Nigeria	Flour Process	1	0.05	179,958	50.00
Flour Mills Of Nigeria	Nigeria	Flour Process	1	0.05	135,947	50.00
Forte Oil (Ap)	Nigeria	Integrated Oil	0	0.06	73,695	50.00
Forte Oil (Ap)	Nigeria	Integrated Oil	0	0.05	73,486	50.00
Forte Oil (Ap)	Nigeria	Integrated Oil	0	0.05	67,162	50.00
Forte Oil (Ap)	Nigeria	Integrated Oil	0	0.04	66,349	50.00

Forte Oil (Ap)	Nigeria	Integrated Oil	0	0.05	65,345	50.00
Glaxosmithkline Nig	Nigeria	Pharma & Drugs	0	0.11	17,000	50.00
Glaxosmithkline Nig	Nigeria	Pharma & Drugs	1	0.19	28,000	50.00
Glaxosmithkline Nig	Nigeria	Pharma & Drugs	1	0.08	24,000	50.00
Glaxosmithkline Nig	Nigeria	Pharma & Drugs	1	0.09	27,721	50.00
Glaxosmithkline Nig	Nigeria	Pharma & Drugs	1	0.09	25,019	50.00
Guinness Nig	Nigeria	Breweries	1	0.03	32,500	50.00
Guinness Nig	Nigeria	Breweries	1	0.03	30,000	50.00
Guinness Nig	Nigeria	Breweries	1	0.03	35,144	100.00
Guinness Nig	Nigeria	Breweries	1	0.03	33,470	50.00
Guinness Nig	Nigeria	Breweries	1	0.03	31,575	50.00
Japaul Oil & Maritime Serv	Nigeria	Oil Services	0	0.53	10,000	50.00
Japaul Oil & Maritime Serv	Nigeria	Oil Services	0	0.41	12,500	50.00
Japaul Oil & Maritime Serv	Nigeria	Oil Services	0	0.15	12,500	50.00
Japaul Oil & Maritime Serv	Nigeria	Oil Services	0	0.09	10,000	50.00
Japaul Oil & Maritime Serv	Nigeria	Oil Services	0	0.10	12,906	50.00
Julius Berger	Nigeria	Heavy Const	0	0.07	99,741	50.00
Julius Berger	Nigeria	Heavy Const	0	0.07	96,920	25.00
Julius Berger	Nigeria	Heavy Const	0	0.07	88,025	25.00
Julius Berger	Nigeria	Heavy Const	0	0.04	88,025	25.00
Julius Berger	Nigeria	Heavy Const	1	0.05	99,000	25.00
Lafarge Cement Wapco Nig	Nigeria	Cement	1	0.07	221,264	25.00
Lafarge Cement Wapco Nig	Nigeria	Cement	1	0.09	191,024	25.00
Lafarge Cement Wapco Nig	Nigeria	Cement	1	0.07	187,180	50.00
Lafarge Cement Wapco Nig	Nigeria	Cement	1	0.08	156,005	50.00
Lafarge Cement Wapco Nig	Nigeria	Cement	1	0.14	142,545	50.00
May & Baker Nig	Nigeria	Pharma & Drugs	0	0.11	10,000	50.00
May & Baker Nig	Nigeria	Pharma & Drugs	0	0.12	10,000	50.00
May & Baker Nig	Nigeria	Pharma & Drugs	0	0.13	10,000	50.00
May & Baker Nig	Nigeria	Pharma & Drugs	1	0.14	10,000	50.00
May & Baker Nig	Nigeria	Pharma & Drugs	1	0.13	8,000	50.00
Mobil Nig	Nigeria	Petrol Stations	0	0.02	24,164	50.00
Mobil Nig	Nigeria	Petrol Stations	1	0.02	15,569	50.00
Mobil Nig	Nigeria	Petrol Stations	1	0.04	23,427	33.33
Mobil Nig	Nigeria	Petrol Stations	1	0.03	26,517	33.33
Mobil Nig	Nigeria	Petrol Stations	1	0.04	28,177	50.00
Nestle Nig	Nigeria	Household Food	0	0.01	35,000	50.00
Nestle Nig	Nigeria	Household Food	1	0.02	32,400	50.00
Nestle Nig	Nigeria	Household Food	1	0.02	30,000	50.00
Nestle Nig	Nigeria	Household Food	1	0.02	30,783	50.00
Nestle Nig	Nigeria	Household Food	1	0.03	35,676	50.00
Nigeria Breweries	Nigeria	Breweries	0	0.02	56,524	50.00
Nigeria Breweries	Nigeria	Breweries	1	0.02	49,591	50.00

Nigeria Breweries	Nigeria	Breweries	1	0.02	46,239	50.00
Nigeria Breweries	Nigeria	Breweries	1	0.02	43,692	50.00
Nigeria Breweries	Nigeria	Breweries	1	0.01	40,043	50.00
Nigerian Enamelware	Nigeria	Steel Packaging	0	0.34	8,500	57.14
Nigerian Enamelware	Nigeria	Steel Packaging	0	0.30	8,500	50.00
Nigerian Enamelware	Nigeria	Steel Packaging	0	0.29	7,500	50.00
Nigerian Enamelware	Nigeria	Steel Packaging	1	0.62	16,000	50.00
Nigerian Enamelware	Nigeria	Steel Packaging	1	0.60	15,000	50.00
Nigerian Northen Flour Mill	Nigeria	Flour Process	0	1.54	14,500	100.00
Nigerian Northen Flour Mill	Nigeria	Flour Process	0	1.48	14,500	100.00
Nigerian Northen Flour Mill	Nigeria	Flour Process	0	0.14	14,500	100.00
Nigerian Northen Flour Mill	Nigeria	Flour Process	0	0.13	14,500	100.00
Nigerian Northen Flour Mill	Nigeria	Flour Process	0	0.12	14,500	50.00
Oando	Nigeria	Integrated Oil	1	0.08	414,394	50.00
Oando	Nigeria	Integrated Oil	1	0.09	418,118	50.00
Oando	Nigeria	Integrated Oil	1	0.33	537,946	50.00
Oando	Nigeria	Integrated Oil	1	0.12	529,987	50.00
Oando	Nigeria	Integrated Oil	1	0.05	204,750	50.00
Okomu Oil Palm	Nigeria	Oil Palm	0	0.11	23,000	50.00
Okomu Oil Palm	Nigeria	Oil Palm	0	0.16	23,000	57.14
Okomu Oil Palm	Nigeria	Oil Palm	0	0.24	23,000	57.14
Okomu Oil Palm	Nigeria	Oil Palm	1	0.23	20,001	50.00
Okomu Oil Palm	Nigeria	Oil Palm	1	0.27	24,000	33.33
Pz Cussons	Nigeria	Personal Products	1	0.06	48,864	33.33
Pz Cussons	Nigeria	Personal Products	1	0.06	40,112	33.33
Pz Cussons	Nigeria	Personal Products	1	0.05	36,599	33.33
Pz Cussons	Nigeria	Personal Products	1	0.04	32,694	33.33
Pz Cussons	Nigeria	Personal Products	1	0.04	27,297	33.33
Total Nigeria	Nigeria	Petrol Stations	1	0.01	39,047	50.00
Total Nigeria	Nigeria	Petrol Stations	1	0.01	27,359	50.00
Total Nigeria	Nigeria	Petrol Stations	1	0.01	24,228	50.00
Total Nigeria	Nigeria	Petrol Stations	1	0.01	21,446	50.00
Total Nigeria	Nigeria	Petrol Stations	1	0.01	29,977	50.00
Uac Of Nig	Nigeria	Holding Com	1	0.19	167,541	50.00
Uac Of Nig	Nigeria	Holding Com	1	0.21	179,537	50.00
Uac Of Nig	Nigeria	Holding Com	1	0.25	184,635	50.00
Uac Of Nig	Nigeria	Holding Com	1	0.26	220,968	50.00
Uac Of Nig	Nigeria	Holding Com	1	0.25	200,063	.
Unilever Nig	Nigeria	Household Food	1	0.03	25,310	33.33
Unilever Nig	Nigeria	Household Food	1	0.03	22,500	33.33
Unilever Nig	Nigeria	Household Food	1	0.03	15,752	33.33
Unilever Nig	Nigeria	Household Food	1	0.03	15,800	33.33

Unilever Nig	Nigeria	Household Food	1	0.03	17,539	20.00
University Press	Nigeria	Book Publishing	0	0.26	4,200	20.00
University Press	Nigeria	Book Publishing	0	0.29	4,200	60.00
University Press	Nigeria	Book Publishing	0	0.24	4,200	50.00
University Press	Nigeria	Book Publishing	0	0.17	4,200	33.33
University Press	Nigeria	Book Publishing	0	0.14	3,200	33.33
Vitafoam Nig	Nigeria	Foam Furniture	1	0.17	29,762	33.33
Vitafoam Nig	Nigeria	Foam Furniture	1	0.23	31,300	33.33
Vitafoam Nig	Nigeria	Foam Furniture	1	0.11	19,400	33.33
Vitafoam Nig	Nigeria	Foam Furniture	1	0.11	18,500	33.33
Vitafoam Nig	Nigeria	Foam Furniture	1	0.17	27,950	33.33