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## DO AUDITORS' CHARACTERISTICS ENHANCE QUALITY OF FINANCIAL REPORTING IN NIGERIA?

**EGBADJU**, Lawrence U.  
Department of Accounting,  
Federal University Otuoke, Yenagoa,  
Bayelsa State, Nigeria

**CHIJOKE**, Willie Ishiusah  
Faculty of Management Science  
Department of Accounting  
Ignatius Ajuru University of Education

### ABSTRACT

*This study investigates the impact which auditor's characteristics have on financial reporting quality in Nigeria. The period which the study covers is from 2015 to 2019 of fifteen consumers goods firms listed in the Nigerian Stock Exchange as information about them are extracted from their financial statements. Two models, the Jones and the Modified Jones, are used as the dependent variable while audit firm size audit independence and company size are the independent variables. The results of the Fixed Effect and Random Effect Ordinary Least Squares reveals that for the Jones model, audit independence and company size negatively affect financial reporting quality while audit firm size relationship with financial reporting quality is positive and significant. With respect to the Modified Jones model, audit firm size and company size are positively related to financial reporting quality while audit independence is negatively related to financial reporting quality. We gave some recommendations.*

**Keywords:** Financial reporting quality; audit firm size; audit independence; company size

### INTRODUCTION

It is mandated by law that every business organization should present a financial report or a financial summary of its economic use of owners' resources at a specified time period each year. Financial reports, in the views of Akpan and Nsentip (2020), summarizes key information every year about the financial health and cash flows of any business organization. It is no longer being perceived as a mere recording of transactions but as a crucial tool in the management of a company and as a measure of management stewardship of resources trusted to them (Uwuigbe et al., 2018).

Information to be disclosed must possess, according to International Accounting Standard Board (IASB, 2010), qualitative characteristics which are both fundamental (relevance and faithful representation) and enhancing (timeliness, comparability, understandability and verifiability). These aptly distinguish between financial reports that are useful from those that are full of material misstatement and this places a high responsibility management of companies. Thus, the quality of a firm's performance is a reflection of management's fulfillment of its fiduciary responsibilities and obligation.

It is really necessary that the quality of financial reporting presented should be such that can influence the users to make useful investments decisions and this to a large extent will enhance market efficiency. In addition, the broader concept of financial reporting quality encompasses not just financial information; but also other non-financial information with significant benefits accruing to investors and other providers of funds for the firm. Boons (2018) was of the opinion

that the quality of financial reporting reduces information asymmetry and adverse selection problem and this can make companies to attract lower interest capital payment since the risks to providers of capital is lower than what it ought to be. Again, Im and Nam(2019) noted that when a firm's financial reports is of high quality, it could affect the company's cost of capital and favourably attracts other interested parties to the company. The Conceptual Framework of IASB (2010) highlighted that a high quality financial reporting information is very necessary because it will influence in a positive manner capital providers as well as other stakeholders in making investment, credit, and similar resource allocation decisions and these will greatly enhance overall market efficiency. Accordingly, providing decision-useful information is the primary objective of financial reporting.

However, it is not always true that managers will act favourably in the interest of providers of capital but act in their own self-interest. Since managers do spend the resources of the organization on perquisite and maximize their own objectives instead of those of the owners, it became necessary that a third party examination of the books of account and supporting document be carried out. This gave rise to the use of an auditor who is expected to express an opinion about the truth and fairness position of the reports prepared and presented by management. Both supervisory and regulatory organizations in the accounting and auditing professions demand that financial statements of enterprises be audited so as to assure investors of the quality of financial reports (Lamido et al., 2022).

Soroushyar (2022) noted that it was very necessary for audit firms to continually evaluate accounting information so as to reduce the information asymmetry between managers and users of accounting information due to the problem emanating from agency theory. Mstoi (2020) observed that the major purpose of auditing is the determination of the reliability of financial reports which assure investors and other providers of capital that the financial statements have satisfied both the fundamental and enhancing qualitative characteristics as spelt out in the IASB Conceptual Framework.

The independent auditor's examination of a company's financial statements to ensure that it is free from material misstatements and errors serves as a good control mechanism that give assurance to users regarding the quality of the financial reporting (Umaru, 2014). The auditor's monitoring mechanism is meant to solve the agency problems coming from managers' self maximising incentives.

Bagirova (2018) also opined that the role of the auditor who is an agent for the investors is very vital as a monitoring mechanism that reduces information irregularity and defend the interests of the providers of capital by reassuring them that the organization's financial reports are fairly and faithfully represented. When this is the case, then managers begin to manipulate accounting figures instead of maximizing the wealth of the owners and other stakeholders and the end result is poor financial reports. Thus, in Hosseinniakani (2020) view, auditing gives a reasonable assurance which reduces uncertainty with respect to the financial reports, enhances investors' confidence due to high capital market's efficiency.

Financial statements is expected to be a veritable source of relevant information to parties which rely extensively on it for informed business decisions. It is, therefore, of great importance that such reports provide accurate accounting numbers for both actual and potential investors. Since the main objective of investors is to maximize their wealth, the decision reached by these investors,

like accurately predicting future cash flows, will definitely be strongly influenced by the quality of financial reporting. Inaccurate financial reporting, according to Umaru (2014), leads investors to make wrong business judgment for as much as over-reliance on accounting numbers provide incentives for managers to manipulate earnings to their own advantage or to meet the expectations of investors. A situation which has so far resulted in the collapse of notable companies around the world even after auditors have certified a clean bill of financial health.

Just as Egbadju and Kunemoemi (2019) noted that there have been unprecedented corporate fraud and corruption from the early 2000s till date as witnessed and defined by the ethical wrongdoing of Enron (2001); WorldCom (2002); Tyco (2002); HealthSouth (2003); Freddie Mac (2003); Parmalat (2003); American International Group (AIG) (2005); Lehman Brothers (2008); Bernie Madoff (2008); Satyam (2009); Olympus (2011); Tesco (2014), to mention but a few.

According to Asegdew (2016), auditors who are expected to be impartial umpires with respect to independent judgment and objectivity in the discharge of their oversight function are now placed under scrutiny when a company which showed no sign of any failure suddenly file for bankruptcy. Thus, several studies have been conducted both in developed and developing economies to investigate the relationship that exists between the characteristics of audit firm and financial reporting quality.

The following hypotheses are formulated and will be tested in line with the research objectives and questions.

- Ho<sub>1</sub>: There is no significant relationship between audit firm size and financial reporting quality of quoted consumers' goods industry in Nigeria.
- Ho<sub>2</sub>: There is no significant relationship between auditor's independence and financial reporting quality of quoted consumers' goods industry in Nigeria.
- Ho<sub>3</sub>: There is no significant relationship between company size and financial reporting quality of quoted consumers' goods industry in Nigeria.

## LITERATURE REVIEW

### Theoretical framework

This study is anchored on the Agency theory. Jensen and Merklung (1976) defined an agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. They noted that since the principal and the agent are utility maximizers, it is very likely that the agent will not always act to protect the best interests of the principal. The principal then tries to minimize this conflict of interest or divergences from his best interest through the establishment of an appropriate incentives scheme so as to encourage the agent and also by incurring monitoring costs to checkmate the limit of the agent's aberrant activities.

The need for auditing comes as a result of the role of the auditor as a monitoring mechanism through the audited financial statements in the principal-agent relationship with its attendant agency costs which Jensen and Merklung (1976) defined as the sum of: the monitoring expenditures by the principal; the bonding expenditures by the agent and the residual loss. Thus, the audited financial statement helps in reducing information asymmetry, protects the interests of

all stakeholders by giving reasonable assurance that the financial statements prepared management are at least free from any material misstatements.

### **Empirical Literature**

Soroushyar (2022) attempted to ascertain the extent to which auditors' characteristics affect the quality of financial reporting in Iran. Data used in this study were secondarily sourced from 145 companies listed on the Tehran Stock Exchange (TSE) between the period 2011 and 2020. While the dependent variable was financial reporting quality (FRQ) was the dependent variable, auditors' tenure and auditor industry specialization were the independent variables with client business strategy as moderating variable. The result of the OLS Regression Model showed that auditors' tenure and auditor industry specialization impact on FRQ were positively and statistically significant.

Lamido et al. (2022) in their study, tried to identify certain board attributes that determine the quality of financial reporting. The researchers used secondary data sourced from selected twelve listed consumers' goods firms quoted in the Nigerian Exchange Group spanning the period 2006 to 2020. Kothari (2005) discretionary accrual was the dependent variable representing financial reporting quality (FRQ) while auditors' independence, audit rotation, auditor opinion, audit quality, and tenure were the independent variables. The result of the ordinary least squares (OLS) regression showed that the impacts of audit rotation, audit tenure and auditor opinion on FRQ were positively significant while that of audit quality and auditor independence were insignificant.

Daferighe and George (2020) empirically tested the impact which some audit firms attributes had on financial reporting quality in Nigeria. The study made use of eighty observations which comprises sixteen quoted manufacturing firms on the floor of the Nigerian Stock Exchange for five years starting from 2011 to 2015 financial years. The dependent variable was financial reporting quality (FRQ) while the independent variables were audit fees, audit firm size and audit delay. The results of the OLS showed that while the impacts of audit fees on financial reporting quality was negative but significant, that of audit firm size and audit delay were positively and negatively insignificant respectively.

Otuya (2019) studied whether there is any relationship between auditors' independence and quality of corporate financial reporting in Nigeria. The researchers used annual data spanning the periods 2013 to 2017 collected from the Nigerian Stock Exchange (NSE). Audit tenure, audit incentives, audit reporting lag, auditor's status (Big4 audit firms) and audit client size were the independent variables while financial reporting quality (FRQ) was the dependent variable. The results of the Ordinary Least Squares (OLS) showed that audit client size, audit incentives and audit tenure were positively significant with financial reporting quality, audit reporting lag was positively insignificant while auditor's status (Big4 audit firms) was negatively significant. Alsmairat et al. (2019) investigated the impact which audit firms' characteristics had on the audit quality of Jordanian companies.

A survey research design was adopted where questionnaires were administered and primary data collected data from Jordanian two hundred (200) auditors from a population of four hundred and nineteen (419) registered auditors. The results of the Partial Least Squares-Structural Equation Modeling (PLS-SEM) revealed that while there was a positive and significant relationship between audit tenure and audit quality, while that of firm size and audit quality was positively insignificant. Kalabeke et al. (2019) researched on the extent to which audit tenure influenced the quality of

financial reporting in Nigeria. Secondary data totally 2800 firm-year observations which covered the period 2008 to 2017 of Pakistani Stock Exchange non-financial listed firms were used in the study. FRQ was the dependent variable while audit tenure, firm size, sales growth, leverage, big4 audit firms and industry were the independent variables. The OLS regression results showed that audit tenure and sales growth significantly influenced FRQ negatively, the big4 audit firm's influence was negatively insignificant while leverage and firm size influence on FRQ were positive but insignificant.

Chukwu and Nwabochi (2019) studied, in a research work, how certain audit committee characteristics influenced the timeliness of financial reporting in the corporate Nigerian insurance industry. The researchers used a total sample of fifteen insurance firms quoted on the floor of the Nigerian Stock Exchange starting from year 2012 to 2015 for the study. Audit lag as a measure of timeliness was the dependent variable while audit committee meeting frequency, audit committee gender, audit committee independence, audit committee size, profitability, leverage, firm size were the independent variables. The result of the OLS regression revealed that audit committee size was positively significant with audit lag; audit committee meeting frequency was negatively significant with audit lag while audit committee gender, audit committee independence, audit committee size, profitability, leverage and firm size were all negatively insignificant with audit lag.

Soyemia and Olawale (2019) attempted to ascertain the extent to which firm's characteristics influenced the quality of financial reporting in Nigeria. Data used in this study were secondarily sourced from the twenty-five selected quoted manufacturing firms audited financial reports between the period 2009 and 2016 totaling two hundred firms-years observations. FRQ was the dependent variable while profitability, firm size, growth and firm tangibility were the independent variables. The result of the OLS Fixed Effect Regression Model showed that the impacts of firm tangibility and growth on FRQ were negatively significant, that of firm size on FRQ was positively significant while that of profitability was positive too but not significant. Aifuwa and Embele (2019) in their study, tried to identify certain board attributes that determine the quality of financial reporting.

The researchers used secondary data sourced from selected thirty-seven listed manufacturing firms out of forty-three quoted manufacturing from a population of one hundred and sixty-nine firms in the Nigerian Stock Exchange spanning the period 2013 to 2017. FRQ was the dependent variable while board independence, board expertise, board diversity, firm size and auditors' independence were the independent variables. The result of the Generalized Linear Model Regression showed that the impacts of auditors' independence and, board expertise on FRQ were positively significant, that of board diversity and firm size on FRQ were also positive but not significant while that of board independence was negatively insignificant.

Yuliastuty et al. (2018) empirically analyzed the impact which firm size and audit tenure had on audit delay and how it affects financial reporting timeliness. The study made use of ninety observations which comprises thirty quoted firms on the Indonesia Stock Exchange (IDX) for three years starting from 2014 to 2016 financial years. The dependent variable was financial reporting timeliness while the independent variables were audit tenure, firm size and audit delay. The results of the Structural Equation Modeling (SEM) showed that while the impacts of firm size and audit tenure to financial reporting timeliness were insignificant, that of audit delay on financial reporting timeliness was very significant. Pham et al. (2017) carried out an empirical assessment of the effects of certain audit firms' attributes on audit quality.



The researchers used a total sample of one hundred and ninety two companies quoted on the floor of the Hanoi and Ho Chi Minh Stock Exchange starting from year 2006 to 2014 for the study. Audit quality was the dependent variable while audit reputation (big4), audit firm size, audit fees, operating cash flow, leverage and return on assets were the independent variables. The result of the OLS regression revealed that audit firm size, audit fees are positively significant with audit quality but audit reputation (Big4) was negatively significant. Leverage and operating cash flow were negatively insignificant with audit quality.

Mahboub (2017) made an attempt to investigate the main factors that influenced financial reporting quality in Lebanon. Secondly sourced data used in this study were from the twenty-two selected Lebanese banks audited financial reports between the period 2012 and 2015 totaling eighty-eight firms-years observations. A forty-item FRQ Index was the dependent variable while banks' characteristics such as: profitability, firm size, leverage and corporate governance mechanisms such as: ownership structure, board size and board independence were the independent variables. The result of the OLS regression Model showed that the impacts of ownership structure, financial leverage and board size on FRQ were positively significant while that of profitability, bank size and board independence on FRQ were not significant at all.

Asegdew (2016) empirically assessed the factors that determine financial reporting quality in Ethiopia. Panel secondary data obtained from the Stock Exchange of Addis Ababa on fourteen large manufacturing companies over the period 2010 to 2014 were used in this study. FRQ was the dependent variable while firm size, leverage, shares dispersion, liquidity, board composition, profitability, type of auditor (Big4) were the independent variables. The result of the OLS regression revealed that type of auditor, profitability and shares dispersion had a positive and significant relationship with financial reporting quality while firm size was negatively insignificant. Leverage, liquidity and board composition were not significant at all in explaining the quality of financial reporting.

Kibiyaa et al. (2016) examined the impact which audit committee attributes had on the financial reporting quality (FRQ). The study covered the period 2010 to 2014 of one hundred and one selected Nigerian listed non-financial firms. FRQ was the dependent variable while audit committee independence, firm age, firm size, audit committee share ownership and audit committee financial expertise were the independent variables. The OLS regression results indicated that firm age, firm size, audit committee share ownership and audit committee financial expertise were positively and statistically significant but audit committee independence was positively insignificant.

Fetry (2015) investigated the influence which business ethics commitment have had on toward financial reporting quality in Indonesia. A cross-sectional data from eighty-seven companies were obtained both from companies audited financial reports and other official publications. The dependent variable was financial reporting while the independent variables were Implicit Business Ethics Commitment which comprises: Top Management Support, Culture, Ethical Leadership, Open Communication Channels and Ethics Training as well as Explicit Business Ethics Commitment which comprises: Codes of Ethics, Ethics Hotlines, Ethics Officer and Ethics Committee. The researchers found that the composite Implicit Business Ethics Commitment positively and significantly influenced the quality of financial reporting.

Kamolsakulchai (2015) evaluated the impact which audit committee effectiveness and audit quality had on the quality of financial reporting in Thailand. Panel secondary data obtained from the Stock Exchange of Thailand over the period 2008 to 2012 were used in this study. FRQ was the dependent variable while audit committee effectiveness and audit quality were the independent variables. The result of the OLS regression Panel Fixed Effects Model indicated that audit committee effectiveness, audit quality, financial risk, size of board of directors, growth and return on assets all had a positive and significant relationship with financial reporting.

Hamidzadeh and Zeinali (2015) carried out a study to investigate the impact growth potential and sales growth on the quality of financial reporting quality in Iran. Secondary data spanning the period from 2007 to 2011 collected from the Tehran Stock Exchange (TSE) on one hundred quoted firms were used in the study. The independent variables were sales growth, growth potential, firm size and leverage while the dependent variable was Financial Reporting Quality (FRQ). The results of the OLS regression revealed a positive and significant relationship between sales growth, growth potentials and financial reporting quality in model 1 and model 2 respectively. While firm size and FRQ was positively significant in model 1, it was negatively significant in model 2. Conversely, while leverage and FRQ was negatively insignificant in model 1, it was positively insignificant in model 2.

Umaru (2014) carried out a study to evaluate the impact that audit firms' characteristics had on the quality of financial reporting quality in Nigeria. Secondary data covering the period from 2002 to 2011 collected from the NSE on eight quoted building material firms in Nigeria were used in the study. The independent variables were Audit Firm Type (The Big4 audit firms), Joint Audit, Audit Firm Independence and Audit Compensation while the dependent variable was Financial Reporting Quality (FRQ). The results of the OLS regression revealed a positive and significant relationship between audit compensation and audit firm independence with financial reporting quality, but a negative and insignificant relationship between joint audit and audit firm type-Big4 with financial reporting quality.

Chalak et al. (2012) examined the impact which corporate governance mechanisms had on the financial reporting quality (FRQ). The study covered the period 2003 to 2011 of firms quoted in the Tehran Stock Exchange. FRQ was the dependent variable while board independence, institutional ownership, board size, ownership concentration, audit firm size, firm age and firm size were the independent variables. The OLS regression results indicated that all the variables of interest for corporate governance mechanisms and those of control were either positively or negatively insignificant with financial reporting quality for the period under review.

Shafie et al. (2009) in their study, carried out an empirical investigation into the relationship that exists between audit firm tenure and the quality of auditor reports in Malaysia. Secondly used cross-sectional data were from financial reports of quoted firms on the floor of the Malaysian Stock Exchange for the year 2002. The dependent variable was auditor reporting quality measured as auditors' going-concern opinion while the independent variables were audit firm tenure, audit firm size, non-executive directors audit committee members, default and probability of bankruptcy. The results of the Logistic regression revealed that the relationship of the probability of bankruptcy and audit firm tenure with auditor reporting quality were positive and significant while that of audit firm size, non-executive directors audit committee members and default with auditor reporting quality were insignificant.

**METHODOLOGY**

The study uses the ex-post facto research design, otherwise called the descriptive or correlational research design, to investigate the relationship if any between certain audit firms’ characteristics and financial reporting quality in Nigeria. The population of this research comprises all consumer goods firms of the manufacturing industry listed on the floor of the Nigerian Stock Exchange (NSE). Secondly sourced data obtained from fifteen companies’ annual reports over the period 2015 to 2019, making a total number of seventy five observations, is used in this study.

**Table1: Measurement and Definitions of Variables**

S/N	Variables Names	Definitions	Types	Measurements
1	FRQjm	Financial Reporting Quality-Jones Model	Dependent	Discretionary Accruals
2	FRQmjm	Financial Reporting Quality-Modified Jones Model	Dependent	Discretionary Accruals
3	AFS	Audit Firm Size	Independent	A dummy variable,1, if company was audited by one of the Big4, otherwise it is, 0,
4	AudInd	Auditor’s Independence	Independent	Logarithms of the audit fees paid by the company
5	CompSize	Company Size	Independent	Logarithms of the total assets of the company.

**Derivation of the Dependent Variable**

Financial reporting quality (FRQ) is measured from the perspective of discretionary accrual which is the usual proxy for earnings management. Beginning with Healy,1985 and DeAngelo,1986, according to Lee and Vetter(2015), earnings management models have passed through major changes since Jones (1991), Dechow et al. (1995), Kang and Sivaramakrishnan, 1995), Dechow and Dichev (2002), Kothari et al. (2005) to mention but a few. In this study, we use the Jones (1991) as well as the Dechow et al. (1995), otherwise known as the Modified Jones Model. The following steps are taken to taken in order to calculate the discretionary accruals which is our proxy for financial reporting quality both for the Jones Model (1991) and the Modified Jones Model (1995).

Step1: Calculate the total accruals as follows:

$$TACC_{it}/TA_{t-1} = (\Delta CA_{it} - \Delta Cash_{it} - \Delta CL_{it} + \Delta DCL_{it} - DEP_t) / TA_{t-1} \dots \dots \dots Eq1$$

where:  $TACC_{it}$  = Total accruals for firm i in year t

$\Delta CA_{it}$  = Change in current assets for firm i in year t

$\Delta Cash_{it}$  = Change in cash and cash equivalent for firm i in year t

$\Delta CL_{it}$  = Change in current liabilities for firm i in year t

$\Delta DCL_{it}$  = Change in short term debt included in current liabilities for firm i in year t

$DEP_{it}$  = Depreciation and amortization for firm i in year t

$TA_{it-1}$  = Total assets for firm i in year t-1, that is, lag of one year.

Step2: Estimate the Jones model in equation2a and the Modified Jones model in equation2b as the case may be using the Ordinary Least Squares (OLS) regression technique.

$$TACC_{it}/TA_{t-1} = \alpha_1 / TA_{it-1} + \alpha_2 \Delta Rev_{it} / TA_{it-1} + \alpha_3 PPE_{it} / TA_{it-1} + \epsilon_{it} \dots \dots \dots Eq2a$$



$$TACC_{it}/TA_{t-1} = \alpha_1 1/ TA_{it-1} + \alpha_2(\Delta Rev_{it}-\Delta Rec_{it})/ TA_{it-1} + \alpha_3 PPE_{it}/ TA_{it-1} + \epsilon_{it} \dots \dots \dots Eq2b$$

Where:  $TACC_{it}/TA_{t-1}$  = Total accruals for firm i in year t scaled/divided by total assets for firm i in year t-1

$\Delta Rev_{it}$  = Change in revenues for firm i in year t

$\Delta Rec_{it}$  = Change in receivables for firm i in year t.

$\alpha_1, \alpha_2$  and  $\alpha_3$  = Parameters or coefficients to be estimated to derive  $\hat{\alpha}_1 \hat{\alpha}_2 \hat{\alpha}_3$ , the estimated parameters

$\epsilon_{it}$  = Residuals or error terms for firm i in year t

Step3. Thereafter, we shall calculate the non-discretionary accruals (NDACC) by replacing  $\alpha_1, \alpha_2$  and  $\alpha_3$  with  $\hat{\alpha}_1 \hat{\alpha}_2 \hat{\alpha}_3$  in equations 2a and 2b above without,  $\epsilon_{it}$ , the error terms as:

$$NDACC_{it}/TA_{t-1} = \hat{\alpha}_1 1/ TA_{it-1} + \hat{\alpha}_2 \Delta Rev_{it} / TA_{it-1} + \hat{\alpha}_3 PPE_{it}/ TA_{it-1} \text{ for Jones model.}$$

$$NDACC_{it}/TA_{t-1} = \hat{\alpha}_1 1/ TA_{it-1} + \hat{\alpha}_2(\Delta Rev_{it}-\Delta Rec_{it})/ TA_{it-1} + \hat{\alpha}_3 PPE_{it}/ TA_{it-1} \text{ for Modified Jones model.}$$

Where:  $NDACC_{it}/TA_{t-1}$  = Non-discretionary accruals for firm i in year t scaled/divided by total assets for firm i in year t-1

Step4: Finally, we shall calculate the discretionary accruals as total accruals less non-discretionary accruals.

$$DACC_{it}/TA_{t-1} = TACC_{it}/TA_{t-1} - NDACC_{it}/TA_{t-1} \dots \dots \dots Eq3$$

This discretionary accruals (DACC), as a proxy for Earnings Management, is also used as a proxy for Financial Reporting Quality (FRQ) as well as a proxy for Audit Quality (AQ) in the literature.

**Model Specification**

The functional equation of the Financial Reporting Quality (FRQ) to test the three hypotheses each specified for the Jones and Modified Jones models is stated as:

$FRQ = f(\text{AFS, AudInd, CompSize})$  (1) The functional testable model will be derived as:

$$FRQ_{jm} = \beta_0 + \beta_1 \text{AFS} + \beta_2 \text{AudInd} + \beta_3 \text{CompSize} + \epsilon_1 (2a).$$

$$FRQ_{mjm} = \beta_0 + \beta_1 \text{AFS} + \beta_2 \text{AudInd} + \beta_3 \text{CompSize} + \epsilon_1 (2b)$$

where the definitions are as stated in Table1 above.

$\beta_1, \beta_2, \beta_3$  = Beta coefficient of the independent variables AFS, AudInd, CompSize. From this study, we expect  $\beta_1, \beta_2, \beta_3$  to be greater than zero.

$\epsilon_1$  = Error term

Since we are using panel data, the model will be specified in the form of the three commonly used methods which are:

The Pooled Ordinary Least Squares Model

$$FRQ_{it} = \beta_0 + \beta_1 AFS_{it} + \beta_2 AudInd_{it} + \beta_3 CompSize_{it} + \epsilon_{1it} (3)$$

The Fixed Effect Model.

$$FRQ_{it} = \beta_0 + \beta_1 AFS_{it} + \beta_2 AudInd_{it} + \beta_3 CompSize_{it} + \sum_{i=1}^q \beta_1 Dum + \epsilon_{1it} (4)$$

The Random Effect Model

$$FRQ_{it} = \beta_0 + \beta_1 AFS_{it} + \beta_2 AudInd_{it} + \beta_3 CompSize_{it} + \epsilon_{1it} (5)$$

We shall, however, limit our analysis to the Fixed Effect Model and the Random Effect Model since they take the individual company's specific characteristics into consideration.

### Method of Data Analysis

Data collected are to be analyzed using Eviews 10+ in the following order: Unit root test, Estimation of the models and performance some diagnostics tests.

### Unit Root Test

Once the EViews workfile has been structured in panel data form, we can go ahead and perform a panel data unit root test.

**Table 2: Unit Root Test**

Variables	Hadri Unit Root Test	PP Fisher Unit Root	Decision
FRQ_JM	0.0000	Has unit roots	I(0) stationary
FRQ_MJM	0.0000	Has unit roots	I(0) stationary
AFS	0.0000	Has unit roots	I(0) stationary
AUDIND	0.0000	0.0000	I(0) stationary
COMPSIZE	0.0000	0.0000	I(0) stationary

The results of the Hadri unit root and that of PP Fisher p-values of their test statistics are as shown in Table3. For Hadri, all the variables of interest are I(0), that is, stationary at levels. With respect to PP Fisher, AUDIND and COMPSIZE are stationary while FRQ\_JM, FRQ\_MJM and AFS have unit roots meaning that the variables are not stationary. When variables are not stationary, it means that they can drift apart on the long run and the regression results obtained can be spurious or nonsensical. We, therefore, decided for the Hadri test statistics. Thus we can use the OLS method of estimation.

### Regression Models Estimation

We shall consider two- the Fixed Effects Model and the Random Effects Model.- of the three commonly used panel data estimators- Pooled Ordinary Least Squares Model, the Fixed Effects Model and the Random Effects Model. In the Fixed Effects (FE) model, the individual-specific effects of the variables are recognized but it assumes that they are correlated with the explanatory variables. The Random Effects (RE) model also takes into consideration the individual-specific effects of the variables but it assumes that they are uncorrelated with the explanatory variables. Thus, in estimating the impact of the independent variables on the dependent variable the starting point shall be to estimate the RE model. Thereafter, we shall perform the Hausman test on the output of the RE model. If the P-value of the Hausman test is greater than 0.05, then the RE model is better than the FE model and, therefore, we shall stop there and use the RE output to report our hypotheses. However, If the P-value of the Hausman test is less than 0.05, then the FE model is better than the RE model.

**Table 3: OLS Regression Analysis.**

Dependent Variable: LOG(FRQ\_JM)

Method: Panel Least Squares

Date: 06/29/22 Time: 13:00

Sample (adjusted): 2016 2019

Periods included: 4

Cross-sections included: 15

Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(AFS)	4.66E-05	6.18E-14	7.55E+08	0.0000
LOG(AUDIND)	-8.45E-06	3.30E-13	-25610009	0.0000
LOG(COMPSIZE)	-4.74E-05	1.32E-13	-3.60E+08	0.0000
C	0.664270	2.45E-12	2.71E+11	0.0000

  

Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	1.000000	Mean dependent var	0.663273	
Adjusted R-squared	1.000000	S.D. dependent var	9.45E-06	
S.E. of regression	7.78E-14	Akaike info criterion	-57.28800	
Sum squared resid	2.54E-25	Schwarz criterion	-56.65970	
Log likelihood	1736.640	Hannan-Quinn criter.	-57.04224	
F-statistic	5.12E+16	Durbin-Watson stat	2.585355	
Prob(F-statistic)	0.000000			

**Table 4: Correlated Random Effects - Hausman Test**

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	25.769212	3	0.0000

\*\* WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
LOG(AFS)	0.000047	0.000047	0.000000	0.0012
LOG(AUDIND)	-0.000008	-0.000008	0.000000	0.0000
LOG(COMPSIZE)	-0.000047	-0.000047	0.000000	0.0021

4.2.2a. Dependent Variable: LOG(FRQ\_MJM)

Method: Panel EGLS (Cross-section random effects)

Date: 06/29/22 Time: 13:28

Sample (adjusted): 2016 2019

Periods included: 4

Cross-sections included: 15

Total panel (balanced) observations: 60

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(AFS)	6.46E-08	6.09E-14	1060421.	0.0000
LOG(AUDIND)	-7.09E-08	3.25E-13	-217759.3	0.0000
LOG(COMPSIZE)	5.33E-09	1.30E-13	41033.38	0.0000
C	0.799692	2.41E-12	3.31E+11	0.0000

#### Effects Specification

	S.D.	Rho
Cross-section random	0.000000	0.0000
Idiosyncratic random	7.67E-14	1.0000

#### Weighted Statistics

R-squared	1.000000	Mean dependent var	0.799692
Adjusted R-squared	1.000000	S.D. dependent var	1.18E-08
S.E. of regression	6.64E-14	Sum squared resid	2.47E-25
F-statistic	6.25E+11	Durbin-Watson stat	4.405004
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	1.000000	Mean dependent var	0.799692
Sum squared resid	2.47E-25	Durbin-Watson stat	4.405004

#### 4.2.2b. Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	3	1.0000

\* Cross-section test variance is invalid. Hausman statistic set to zero.

\*\* WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
LOG(AFS)	0.000000	0.000000	-0.000000	NA

LOG(AUDIND)	-0.000000	-0.000000	-0.000000	NA
LOG(COMPSIZE)	0.000000	0.000000	-0.000000	NA

#### 4.4.2c. Hausman Test Results

H0: Random effects are not correlated with the explanatory variables.

H1: H0 is not true.

The decision criteria will be, if result is:

H0: Select Random Effects model where p-value is greater than 0.05.

H1: Select Fixed Effects model where p-value is less than 0.05.

The results of the Hausman test in Table 4.2.1b showed that the Fixed Effect model of Table 4.2.1a is preferred to the Random Effect model because the p-value is 0.0000 which is less than 0.05. The Random Effect model result is in Appendix A. The results of the Hausman test in Table 4.2.2b showed that the Random Effect model of Table 4.2.2a is preferred to the Fixed Effect model because the p-value is 1.0000 which is greater than 0.05. The Fixed Effect model result is in Appendix B

#### Discussion of Regression Results

From Table 4.2.1a and Table 4.2.1b above, the R-squared ( $R^2$ ) tells us the extent to which the variation in the dependent variable is explained by the independent variables. The higher the value the better the model and the more the predictive power of the variables. In our study, 1.0000 means that 100% of the variation in FRQ\_JM and FRQ\_MJM (dependent variables) can be explained by AFS, AUDIND and COMPSIZE (independent variables). The F-statistic tells us how jointly significant the independent variables are in explaining our dependent variable and the higher the value the better the model. In this study, our F-stat values of 5.12E+16 and 6.25E+11 are significant enough in explaining our model taking into consideration their probability values of (0.000000). The S.E. of the regression is the standard error which measures the standard deviation for the coefficients. It shows how much deviation occurs from accurately predicting the estimate of the slope coefficients. The Durbin-Watson statistic is used to test for first-order serial correlation in the error term. The rule of thumb is that if the Durbin-Watson value is less than 2, it is an evidence of a positive serial correlation in the model. A value of 4.405004 and 2.585355 in this research shows that there is no serial correlation in our model.

#### Hypotheses Testing

In this study, we shall restate and test our hypotheses earlier stated in the null form so as to either accept or reject the null hypotheses using the t-Statistic and its corresponding probability value at the 5% level of significance. FRQ\_JM and FRQ\_MJM (dependent variables) can be explained by AFS, AUDIND and COMPSIZE (independent variables).

H01a: There is no significant relationship between AFS and FRQ\_JM of quoted consumers' goods industry in Nigeria.

From the result in Table 4.2.1a above, AFS has a t-Statistic of 7.55E+08 and a p-value of 0.0000. This means that AFS has a positive and statistically significant relationship with FRQ\_JM. We, therefore, reject the null hypothesis and accept the alternative hypothesis which the test confirmed. The coefficient of AFS is 4.66E-05. It means that 1% increase in audit firm size will lead to a



4.66E-05% increase in FRQ\_JM. This result is supported by the work of Shafie et al. (2009); Pham et al. (2017). It is however contrary to those of Otuya (2019); Kalabeke et al. (2019) and Umaru (2014).

H<sub>01b</sub>: There is no significant relationship between AFS and FRQ\_MJM of quoted consumers' goods industry in Nigeria.

From the result in Table 4.2.2a above, AFS has a t-Statistic of 1060421 and a p-value of 0.0000. This means that AFS has a positive and statistically significant relationship with FRQ\_MJM. We, therefore, reject the null hypothesis and accept the alternative hypothesis which the test confirmed. The coefficient of AFS is 6.46E-08. It means that 1% increase in audit firm size will lead to a 6.46E-08% increase in FRQ\_MJM. This result is the same as those reported by FRQ\_JM in H<sub>01a</sub> above.

H<sub>02a</sub>: There is no significant relationship between AUDIND and FRQ\_JM of quoted consumers goods industry in Nigeria.

From the result in Table 4.2.1a above, AUDIND has a t-Statistic of -25610009 and a p-value of 0.0000. This means that AUDIND has a negative and statistically significant relationship with FRQ\_JM. We, therefore, reject the null hypothesis and accept the alternative hypothesis which the test confirmed. The coefficient of AUDIND is -8.45E-06. It means that 1% increase in auditor's independence will lead to a -8.45E-06% decrease in FRQ\_JM. This result is supported by the work of Daferighe and George (2020) but negates the works of Aifuwa and Embele (2019) and Pham et al. (2017).

H<sub>02b</sub>: There is no significant relationship between AUDIND and FRQ\_MJM of quoted consumers goods industry in Nigeria.

From the result in Table 4.2.2a above, AUDIND has a t-Statistic of -217759.3 and a p-value of 0.0000. This means that AUDIND has a negative and statistically significant relationship with FRQ\_MJM. We, therefore, reject the null hypothesis and accept the alternative hypothesis which the test confirmed. The coefficient of AUDIND is -7.09E-08. It means that 1% increase in auditor's independence will lead to a -7.09E-08% decrease in FRQ\_MJM. This result is the same as those of FRQ\_JM in H<sub>02a</sub> above.

H<sub>03a</sub>: There is no significant relationship between COMPSIZE and FRQ\_JM of quoted consumer goods industry in Nigeria.

The regression output from Table 4.2.1a COMPSIZE has a t-Statistic of -3.60E+08 and a p-value of 0.0000. This means that COMPSIZE has a negative and statistically significant relationship with FRQ\_JM. We, therefore, reject the null hypothesis and accept the alternative hypothesis which the test confirmed. The coefficient of COMPSIZE is -4.74E-05. It means that 1% increase in company size will lead to a -4.74E-05% decrease in FRQ\_JM. There is no work which supports this result. However, the researches of Otuya (2019), Alsmairat et al. (2019), Kalabeke et al. (2019), Soyemia & Olawale, (2019), Aifuwa and Embele (2019), Kibiyaa et al. (2016) and Hamidzadeh and Zeinali (2015) negate the outcome of this study.

Ho<sub>3b</sub>: There is no significant relationship between COMPSIZE and FRQ\_MJM of quoted consumers goods industry in Nigeria.

The regression output from Table 4.2.2a COMPSIZE has a t-Statistic of 41033.38 and a p-value of 0.0000. This means that COMPSIZE has a positive and statistically significant relationship with FRQ\_MJM. We, therefore, reject the null hypothesis and accept the alternative hypothesis which the test confirmed. The coefficient of COMPSIZE is 5.33E-09. It means that 1% increase in company size will lead to a 5.33E-09% increase in FRQ\_MJM. The research studies by Otuya (2019), Alsmairat et al. (2019), Kalabeke et al. (2019), Soyemia and Olawale (2019), Aifuwa and Embele (2019), Kibiyaa et al. (2016) and Hamidzadeh and Zeinali (2015) are in agreements with the outcome of this study.

## CONCLUSIONS AND RECOMMENDATIONS

In this study, we investigated the impact which certain auditor's characteristics such as auditor's independence and audit firm size as well as a control variable like company size have on financial reporting quality of listed consumers' goods industry in Nigeria. Two models, the Jones Model and the Modified Jones Model, are used in the analysis. The results of the tests show that auditor's characteristics significantly influence financial reporting quality of listed consumers' goods industry in Nigeria in the period under review. Specifically, from the Jones Model, while audit firm size positively and significantly influences financial reporting quality, the impact of auditor's independence and company size on financial reporting quality are negative but significant. With respect to the results of the Modified Jones Model, while auditor's independence negatively and significantly influences financial reporting quality, the impact of audit firm size and company size on financial reporting quality are positively significant.

Two unusual results are the negatively significant results of auditor's independence (logarithms of the audit fees paid by the company) and company size (logarithms of the total assets of the company) in the Jones model as well as the auditor's independence in the Modified Jones Model. The negative result of company size (logarithms of the total assets of the company) in the Jones model is compensated for in the Modified Jones Model. The Modified Jones Model use profit after tax/Total assets (ROA) to modify the Jones model. With respect to auditor's independence (logarithms of the audit fees paid by the company), both the Jones and the Modified Jones Models have negatively significant impact. One reason for this may be that the auditor's independence is highly correlated with company size. Another reason may be that the auditors in this industry are compromising their independence. Generally in this study, auditor's characteristics improve the quality of financial reporting in the consumer goods industry for the period under reviews.

Based on the results of our study, we recommend that:

- a) companies in this industry should consider engaging the Big4 audit firms as audit firm size has a positive and significant relationship with financial reporting quality for both the Jones and the Modified Jones models.
- b) companies in this industry should be made to understand that the big companies have reputations to protect and so always do the needful to present quality financial reports as the extant literatures point out.
- c) those in charge of making policy and regulations should look into regulations with respect to audit fees if audit independence is any way being jeopardized.

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