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## **EFFECT OF AUDIT QUALITY ON CAPITAL INVESTMENT OF QUOTED CONSUMER GOODS COMPANIES IN NIGERIA**

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### **Abstract**

*The study examined the effect of audit quality on capital investment of quoted consumer goods companies in Nigeria. The data used were secondary data and were drawn for 2008 to 2017. The data used in this study were sourced from the firm's annual report and Nigerian Stock Exchange fact book. This study applied ex post facto research design. The data collected were analysed using Ordinary Least Square Method. The results show that audit firm size (AFS) and audit firm tenure were negative and positive respectively and have significant impact on capital investment of quoted consumer goods companies in Nigeria; whereas Auditor's industry specialization (AIS) was positive, but does not have significant effect on capital investment of quoted consumer goods companies in Nigeria. The study, therefore among others recommends that the relevant laws should be enshrined to make sure that audit tenure should be limited to a specific period and not indefinitely as has been the case.*

### **INTRODUCTION**

#### **1.1 Background to the Study**

The search for mechanisms to ensure reliable, high quality financial reporting has largely focused on the structure of audit quality. The auditing profession has been proactive in attempting to improve audit quality by issuing standards focused on discovery and independence. As a result, there has been a concerted effort to devise ways of enhancing independence (Corporate Governance Code of Nigeria, 2005; Blue Ribbon Committee, 1999. The profession has also responded to denigrations on audit quality. It emphasized that, by its nature, the inherent limitations of an audit makes it impossible to eliminate the risk of audit failure (Ricchiute, 1998 IFAC, 2009).

Investors' confidence is fundamental to the successful operation of the world's financial markets. When making decisions about capital allocation and investment, investors need to know that financial information they are given is credible and reliable. The quality of audits and audit opinions expressed on financial reports are crucial to achieving a sustained investor's confidence. Independent auditors play a vital role in enhancing the reliability of financial information by attesting to the trustworthiness of the financial statements. However, the study of Ghosh and Moon (2005) noted that a number of accounting and reporting irregularities and frauds in the last one decade have led to intense scrutiny of corporate governance frameworks and drove intense debate about issues such as financial statement audit, audit approach and audit quality.

The quality of audits is dependent not only on the technical skills of audit teams, but also on the organisational values and labour processes embedded within audit firms. Thus, some firms may impose tight time constraints on audit staff even though such constraints play a major part in audit failures and in the incompleteness of audit work. As a result, audit staff may carry out unprofessional practices such as accepting doubtful audit evidence, failing to test the required number of items in a sample, or falsifying audit working papers in order to give the impression that the work had been done (Mitchell and Sikka, 2002). As the audit review process cannot completely re-perform the audit, irregular audit practices rarely come to light before the completion of an auditing assignment. In this audit environment of tight time constraints, competition and the pursuit of higher profits, auditing firms seek ways of achieving efficiency. A common practice is to use checklists for controlling, planning and recording an audit. Such devices standardize audits and make the process much more mechanical and predictable. It has been claimed, however, that this 'checklist mentality' encourages irregular practices because it is subjective and discretionary (Mitchell and Sikka, 2002).

## **1.2 Statement of the Problem**

Financial reporting in recent times has been characterized by several audit approaches coupled with a lack of adequacy, reliability and timeliness (Hans, Ezzamel and Gwilliam, 1993). Subsequently, users of financial statements often question the quality of audit work done through whatever approach that might have been adopted by the auditor.

Many a times, auditors were seen as subservient to the wishes of the company's management. Hence, the confidence that the users have is put at risk. Therefore, this study sought to examine the audit quality and its implications on the capital investment of quoted consumer goods companies in Nigeria. It is noted that the stability of any economy is hinged on the integrity of the market and businesses operated. Consequently, a lot of problems have been facing many corporate enterprises worldwide such as the squander, the misallocation, the embezzlement of funds and their eventual collapse. These series of problems has led to various changes in the approach to the quality of audit of an entity's financial statement.

Various studies have been carried out in respect of audit quality and those studies include; Kim, Lee & Park (2015), Adeyemi, Okpala & Dabor (2012), Fagbemi, Abogun, Uadiale & Uwuigbe (2013), Hassan and Bello (2013), Mensah and Deajeon (2013), Desai, Roberts & Srivastava (2010), Kantudu & Samaila (2015), Fathi (2013), Asegdew (2016). Most of those studies carried out were not in relation to capital investment. For instance, Kim, Lee & Park (2015), investigate the monitoring role of high quality auditor in Europe. Adeyemi, Okpala & Dabor (2012), investigate the factors affecting audit quality in Nigeria. Hassan and Bello (2013), studied the effect of firm characteristics on financial reporting quality of listed manufacturing firms in Nigeria. Desai, Roberts & Srivastava (2010), advanced research in internal audit (IA) evaluation by developing an internal audit (IA) assessment model that considers interrelationships among specific factors used by external auditors to evaluate the strength of the IA function. No study has been done on the effect of audit quality on capital investment using quoted companies in Nigeria (to the best of our knowledge). Therefore, it becomes necessary to ascertain if there is any relationship between audit quality and the capital investment amidst the various corporate scandals witnessed after an external auditor has given its opinion on an entity's financial statement.

## **1.3 Objective of the Study**

The main objective of this study is to investigate the effect of audit quality on capital investment of quoted consumer goods companies in Nigeria. Thus, the specific objectives of this study are to:

- I. Determine the effect of audit firm size on capital investment of quoted consumer goods companies in Nigeria.
- II. Ascertain the effect of audit-firm tenure on capital investment of quoted consumer goods companies in Nigeria.
- III. Investigate the effect of auditor industry specialization on capital investment of quoted consumer goods companies in Nigeria.

#### **1.4 Research Questions**

- I. To what extent does audit firm size influence capital investment of quoted consumer goods companies in Nigeria?
- II. To what extent does audit-firm tenure affect capital investment of quoted consumer goods companies in Nigeria?
- III. How does auditor industry specialization affect capital investment of quoted consumer goods companies in Nigeria?

#### **1.5 Research Hypotheses**

The study was guided with the following null hypotheses:

- I. Audit firm size does not have any significant effect on capital investment of quoted consumer goods companies in Nigeria.
- II. Audit-Firm Tenure does not have any significant effect on capital investment of quoted consumer goods companies in Nigeria.
- III. Auditor industry specialization does not significantly affect capital investment of quoted consumer goods companies in Nigeria.

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Conceptual Framework**

##### **2.1.1 Audit Quality**

Knechel, Krishnan, Pevzner, Stefchik and Velury (2013) note that there is little consensus among researchers regarding the definition of audit quality. Audit quality is defined in numerous ways that link audit quality to the risk of failure to modify audit reports of financial statements that contain material misstatements (Watkins, Hillison & Morecroft, 2004). Nevertheless, a widely used definition of audit quality is that by DeAngelo (1981a), which states that the 'quality of audit service is the market-assessed joint probability that a given auditor will both (a) discover a breach in the client's accounting system and (b) report the breach'. Breach detection is related to the auditor's abilities and competence in exercising control over the quality of reported information through assuring conformity with GAAP, while reporting a breach is related to the auditor's independence, which is an important driver for the demand of the audit service. This definition considers two factors involved in audit quality. In fact, audit quality is a function of the ability to detect significant deviations which is considered as the auditor's competence, ability, and willingness to report misconduct relating to auditor independence. Audit quality is defined as the accuracy of the information provided to investors and auditors. Timan and Troman (1986) and Daividsen and Neo (1993) cited in Kheirallah, Behshour and Azad (2014) indicated that audit quality is the auditor's ability to detect and remove significant deviations and manipulations performed in the reported earnings.

## **Audit Firm Size**

The big audit institutions vividly have more resources to guide audit tests. Most of the empirical studies of quality are based on the hypothesis that bigger auditors (with trademark) compared to smaller auditors (without trademark) have more supervision ability. For the variables of audit firm size, if the audit firm is big, the dummy variable in audit firm size would be equal to one (1), otherwise its value is considered zero (0). Audit function has a key role in the control of the management of companies where the owners do not provide stewardship. An external audit can significantly influence the amount of information disclosed. This relationship is consistent with agency theory; an audit firm with large size has a strong incentive to maintain their independence and to impose more stringent disclosure standards because they have more to lose from damage to their reputation. The large audit firms invest more to maintain their reputation as providers of effective control than small audit firms (DeAngelo, 1981).

Signal theory suggests that the choice of an external auditor can serve as a signal of the value of the company. In general, entrepreneurs are likely to choose a large audit firm size (e.g., Big 4) because it is a signal to investors. The choice of audit firm has been found to be a signal of firm value. The presence of big audit firm is considered as a signal quality of the disclosure of the company and the integrity of financial information (Datar, Feltham and Hughes, 1991). However, the empirical researches of associations between the size of engaged audit firms and the quality of disclosures in financial statements for different authors provide different results. Ahmed and Nicholls (1994) and Wallace and Naser (1995), find a positive relationship between the size of the audit firm and the quality of disclosures in financial statements, however Firth (1979), Malone, Fries and Jones (1993), Ali, Ahmed & Henry (2004) in their research find no evidence of statistically significant relationship.

## **Audit-Firm Tenure**

For effective and quality financial reporting, the audit-firm tenure is also considered because it is of great influence. Audit-firm tenure is the length of the audit-firm-client relationship as of the fiscal year-end covered by the audited financial statements. Following prior research (Pierre and Anderson 1984; Stice 1991), audit tenure is defined as short when the same auditor has audited the financial statements of a company for two or three years. Audit tenure is defined as long when the same auditor has audited the financial statements of a company for nine or more years (Pierre and Anderson 1984). On the basis of definition of short and long term tenure, we define audit tenure as medium when the same auditor has audited the financial statements for four to eight years. Some researchers like Antonius and Nopmanee (2013) used auditor tenure as a measure of audit quality.

## **Auditor industry specialization**

In this study, we also operationalize audit quality using office level industry specialization. The auditor's industry specialization reflects its expertise and knowledge on the specific industry of their clients. Balsam et al. (2003) and Krishnan (2003) find that nationwide industry specialists constrain their client's earnings management. Dunn and Mayhem (2004) show that firms audited by national level industry specialists provide enhanced voluntary disclosure. Capital market participants also place a positive value on audit engagements with an industry specialist (Knechel, Naiker, and Pacheco 2007). Moreover, Ferguson (2003) and Francis and Wilson (1988) find that industry leaders defined as the auditors with the highest audit market share in their clients industry earn a significant audit fee premium. In particular, Francis et al (2005) report that the fee premium is highest for auditors who are both national and city level industry specialists.

Following recent studies on office level industry expertise (e.g., Francis et al. 2005; Reichelt and Wang 2010), we define an auditor's office specific industry specialization at three level; (1) the national level, (2) the city level, and (3) the joint national and city level. Following Francis et al. (2005) and Reichelt and Wang (2010), we define a city using the U.S. Census Bureau definition of metropolitan statistical areas (MSAs) and require a minimum of three observations per city industry year combination. We calculate the auditor's market share for each industry at the national or city level by the sum of audit fees in each two digit Standard Industry Classification (SIC) industry. We set the variable National to equal to one (1) if an audit firm has the largest nationwide market share in the industry to which a client firm belongs, and zero (0) otherwise. In this study, for the calculation of audit quality, National criteria were used. Some researchers like Zhang and Vang (2012) also used this criterion.

### **2.1.2 Capital Investment**

A capital investment is defined as an investment in a real asset expected to generate some future return (Brealey et al. 2011). Bierman and Smidt (2012) provides a similar definition: "commitments of resources made in the hope of realising benefits that are expected to occur in future periods" and Emmanuel et al. (2010) mention for instance investments in new facilities or new technology. Their study follows these definitions of a capital investment and capital investment decisions as resource allocation decisions. The investment process is in turn the decision-making process in which these decisions are made (e.g. Bower 1986).

Rasmussen (2016) takes a process perspective on investment decision making. It takes its point of departure in the behavioural theory of the firm in which the path towards making a decision is process oriented and takes place through organisational decision making (Cyert and March 1963). Their decision-making model is comprised by four concepts: (1) quasi-resolution of conflict, which builds on the notion that there are different goals represented within the organisation and there is a latent conflict between these goals; (2) uncertainty avoidance, which means that the organisations "achieve a reasonably manageable decision situation by avoiding planning where plans depend on predictions of uncertain future events and by emphasising planning where the plans can be made self-confirming through some control device"; (3) problemistic search, simply meaning that search stems from an identified problem; and (4) organisational learning, meaning that organisations' behaviour is adaptive over time (Cyert and March 1963). The model is illustrated as a step-by-step process, yet in the form of a flow chart in which the start is arbitrary and the four concepts recur during the process.

## **2.2 Theoretical Framework**

### **2.2.1 Signalling Theory**

The signalling theory argues that the existence of information asymmetry can also be taken as a reason for good companies to use financial information to send signals to the market (Ross 1977). Information disclosed by managers to the market reduces information asymmetry and is interpreted as a good signal by the market. Although the signalling theory was originally developed to clarify the information asymmetry in the labour market (Spence, 1973), it has been used to explain voluntary disclosure in corporate reporting (Ross, 1977).

Empirically, several studies have studied signalling influence on disclosure: Watson, Shrivs and Marston (2002) and Haniffa and Cooke (2002). The disclosure literature identifies several variables as a proxy for signalling theory including profitability, liquidity and leverage. The theory argues that directors who believe their company can perform better than other companies will want to signal this

to shareholders in order to attract more investments. Directors may do this in a sort of disclosure in excess of any information that is required by regulations.

Signalling theory suggests that when a corporation's performance is good, managers will signal companies' performance to their investors, stakeholders and the market by making disclosures that poorer companies cannot make. By enhancing disclosures, directors wish to receive more benefits: a better reputation and the firm's value will increase (Abdulla, 2011). In contrast, firms with poor performance may choose to keep silent rather than reveal unflavoured performance. However, investors may misinterpret this silence as withholding the worst possible information (Verrecchia, 1983).

### **2.3. Empirical Review**

Kim, Lee, and park (2015) investigates the monitoring role of high quality auditors defined as office level industry specialists in the stock market valuation of cash assets Europe. Using regression method, they find that the market value of cash holdings is significantly higher for the client of an industry specialist auditor. The marginal value of cash is 34 cents higher for the client of a joint industry specialist at both the national and city levels than for the client of a non-specialist. They also find that cash holdings are more closely associated with capital investment and the market value of capital investment is significantly higher when the auditor is a joint industry specialist. Moreover, they find that the value of cash increases significantly when the client changes its auditor to a joint industry specialist. Their findings hold even after controlling for the clients governance efficacy and financial reporting quality. Their results provide new insight into the mechanism through which high quality audits affect firm value; External audits facilitate shareholders monitoring over managerial cash expenditures, thereby leading market participants to attach a higher value of cash holdings.

Adeyemi, Okpala & Dabor (2012) investigate the factors affecting audit quality in Nigeria. The primary data were supplied by 430 respondents across several stakeholders in the fields of financial reporting and auditing. The secondary data were generated from the financial statements of forty annual reports of companies quoted on the Nigerian Stock Exchange. The test of hypotheses and other analysis of data were done using SPSS, version 17. The tests revealed that among others, multiple directorships are the most significant in affecting audit quality in Nigeria. In addition, it is found that provision of non-audit service would likely have a significant effect on the audit quality in Nigeria. However, the study did not find audit firm rotation to be a significant factor for enhancing audit quality in Nigeria. The study recommends efforts should be made to strengthen audit quality if the quality of financial reporting was to be improved. Also, regulatory authorities should ensure that the same firm do not render audit services and offer management advisory services in the same company simultaneously.

Nnubia and Orjinta (2016) investigate the effect of financial statements on shareholders' investment decisions making in Nigerian Stock Market. The main type of data used in this study is secondary; sourced from the Nigerian Stock Exchange factbook for a period of 17 years (from 1998-2014). The regression analysis of the least square is the estimation technique employed in this study. Their studies revealed that return on investment (ROI), dividend per share (DSP), earnings per share (EPS), leverage and liquidity had significant positive effect on investment decision. The study recommends that shareholders are to make proper investigation about the financial status of the company of their choice before making investment decisions. They should consult financial analysts so as to be properly guided when making investment decision.

Hassan and Bello, (2013) have studied the effect of firm characteristics on financial reporting quality of listed manufacturing firms in Nigeria. This study investigated firms' characteristics from perspective of structure (using firm size and leverage as proxies), monitoring (using board composition and institutional shareholding as proxies) and performance elements (using profitability, liquidity and growth as proxies). The quality of financial reporting measured by modified model of Dechow and Dechev (2002) of listed manufacturing firms in Nigeria. The study adopted correlational research design with pooled balanced panel data of 24 firms served as sample of the study using multiple regression as a tool of analysis. The result reveals that larger and more leveraged firms in Nigerian manufacturing sector are less likely to manage earnings and increase in sales as well as institutional investors serve as a monitoring tool of preventing managers from opportunistic behaviour in managing earnings. In addition, profitability and independent directors are positively associated with earnings quality while liquidity is inversely related with quality of financial reporting despite significant at 1% level of significance. In summary, firm characteristics of listed manufacturing firms in Nigeria have impacted significantly on their financial reporting quality. Therefore, it is recommended among others that the shareholders of Nigerian listed manufacturing firms should ensure all the seven firm characteristics used in this study keep on improving to decrease manipulative accounting and increase the quality of financial reporting.

Fathi (2013) examined the relationship between the quality of financial information disclosed and governance mechanisms. The measures of governance used are certain features of the board, ownership structure and control system. The study used French companies listed on the SBF 250 for a period of five years from 2004 to 2008. The quality of financial information is approximated by the discretionary accruals and with a disclosure index with 78 items. The results show that the size of the Board, attendance of members at meetings of the Board, the presence of the auditors belonging to the big 4 and the presence of a double listing have a positive impact on the quality of information financial disclosed.

Atanasko (2013) examine the degree and quality of disclosures of financial information related to fair value by Macedonian listed entities and associations with several corporate attributes. An un-weighted disclosure index comprising 51 disclosed information in audited financial statements of 32 listed entities for 2010 was composed. The association between the disclosure index of each company and various corporate characteristics have been considered. The study used multiple regression analysis to capture the effect of size, industry, ownership concentration, type of auditor, internationalization, and leverage on disclosure index. Based on the results of the two regression analysis, three of the hypothesis can be statistically confirmed. The first hypothesis H1 according to which there is positive relationship between the degree of disclosures of fair value in financial statements and the size of the company, audit firm part of international network and leverage. The research also reveals areas of improvement for listed companies reporting of fair value information in financial statements.

Asegdew (2016) assessed the determinants of financial reporting quality in large manufacturing share companies in Addis Ababa. Accordingly, the study used documentary analysis of companies' audited financial statements and in depth interview with directors/officials of manufacturing firms. Using simple random sampling method, the study selected a sample of fourteen (14) companies to study them for the period of five years (2010-2014) with the total of 70 observations. The results of panel least square regression analysis show that: Firm Profitability, Type of Auditor and Share Dispersion, have statistically significant and positive relationship with manufacturing share companies' financial reporting quality. On the other hand, Firm Size has a negative and statistically significant relationship with manufacturing share companies' financial reporting quality. The study suggests, stakeholders to

consider intensive investigation and internal control for low performance and large firm size respectively, further, employing large audit firms improve the quality of information produced.

Desai, Roberts, and Srivastava (2009), advance research in internal audit (IA) evaluation by developing an IA assessment model that considers interrelationships among specific factors used by external auditors to evaluate the strength of the IA function. The model is based on three factors identified by auditing standards and by prior academic research: Competence, Work Performance, and Objectivity (SAS 65 1991; Messier and Schneider 1988; Krishnamoorthy 2002; PCAOB 2007). We develop an analytical expression of the model using the belief function framework. By using this framework we overcome limitations of prior research regarding the modelling of interrelationships among factors and regarding difficulties in application. The results of our analysis revealed that modelling the “And” relationship is essential for assessing the strength of the IA function. As far as interrelationships are concerned, the analysis showed that when the three factors have a strong or a perfect relationship, the strength of the IA function remains high even if there is positive or negative evidence about one of the factors. This result holds as long as there are high levels of beliefs about the other two factors. Further, we demonstrate how the quality of corporate governance affects the evaluation of the IA function and how a cost benefit analysis can be applied to this framework to help determine the amount of external audit work to be carried out for compliance with the Sarbanes-Oxley Act of 2002 (SOX) and the Public Company Accounting Oversight Board (PCAOB) standards. Our analysis revealed that the extent of external audit work to be carried out by the external auditor depends on the strength of the IA function and the amount of litigation and regulatory costs likely to be faced by the external auditor.

## **METHODOLOGY**

### **3.1 Research Design**

The study adopted the ex post facto research design. The reason for this is because the data used were secondary data. The secondary data used for this study were sourced from the internet, annual financial reports and Nigerian Stock Exchange factbook over a period of 2008 to 2017. Panel data were used for the ten (10) listed firms over ten (10) year period on five (5) focus variables in the study.

### **3.2 Population of the Study**

The population of this study consists of the total number of quoted consumer goods companies in the Nigerian Stock Exchange (NSE) which amount to 21.

### **3.3 Sample Size and Sampling Techniques**

Sample of ten (10) companies was purposively selected based on availability of the required data, and the judgmental sample method was used. The firms selected are Cadbury Plc.; Guinness Nigerian Plc.; Nigerian Breweries Plc.; Flour Mills Nig. Plc.; Champion Breweries Plc.; Unilever Plc.; PZ Cussons Nigeria Plc.; Dangote Flour Mills Plc.; International Breweries Plc.; and Vita Foam Nigeria Plc.

### **3.4 Model Specification**

This study adopted a model used by Asegdew (2016) with modifications to suit this study.

The model of Asegdew (2016) is as follows:

$$RQ = f(FP, TA, SD, FS, \mu) \dots \dots \dots 1$$

$$RQ = \beta_0 + \beta_1 FP_{it} + \beta_2 TA_{it} + \beta_3 SD_{it} + \beta_4 FS_{it} + \mu \dots \dots \dots 11$$

Where,

RQ = Reporting Quality

FP = Firm Profitability

TA = Type of Auditor

SD = Share Dispersion

FS = Firm Size

Therefore, the model for this study is as follows:

$$FAI = f(AFS, AFT, AIS, \mu) \dots \dots \dots 1$$

$$FAI = \beta_0 + \beta_1 AFS_{it} + \beta_2 AFT_{it} + \beta_3 AIS_{it} + \mu \dots \dots \dots 11$$

Where,

FAI = fixed asset investment

AFS = audit firm size

AFT = audit firm tenure

AIS = auditors industry specialization

$\mu$  = Error term

$\beta_0$  = Intercept

$\beta_1$ - $\beta_3$  =- the independent variable coefficients

In the new model, there is introduction of audit firm size, audit firm tenure and auditor's industry specialization to modify the model of Asegdew (2016).

### 3.7 Measurement of Variables

**Table 3: Variables measurement**

Variable	Measure
	<b>Dependent variable</b>
Fixed asset investment (FAI)	= <u>non-current asset</u>
	Total assets
	<b>Independent variables</b>
Audit firm size (AFS)	= if the audit firm is joint, the dummy variable in audit firm size would be equal to one (1), if the audit firm is big (e.g. big 4), the dummy variable in audit firm size would be equal to 0.50, otherwise its value is considered zero (0).
Audit firm tenure (AFT)	= “1” if the same auditor has audited the financial statements of a company for two or three years. “2” if the same auditor has audited the financial statements for four to eight years, and “3” if the same auditor has audited the financial statements of a company for nine or more years.
Auditors industry specialization (AIS)	= one (1) if an audit firm has the largest nationwide market share in the industry to which a client firm belongs, 0.75 if the audit firm is big 4, and 0.25 if none of the above.

### DATA PRESENTATION AND ANALYSIS

The summary of the analysis result and its corresponding interpretations of the effect of audit quality on capital investment of quoted consumer goods companies in Nigeria are presented below.

## 4.1 Descriptive Statistics

**Table 4.1** Descriptive Statistics

VARIABLES	FAI	AFS	AFT	AIS
Mean	1.066600	0.450000	2.390000	0.757500
Median	1.065000	0.500000	2.000000	0.750000
Maximum	1.990000	0.500000	3.000000	1.000000
Minimum	0.120000	0.000000	2.000000	0.250000
Std. Dev.	0.466414	0.150756	0.490207	0.199289
Skewness	0.084386	-2.666667	0.451051	-1.255864
Kurtosis	2.185562	8.111111	1.203447	4.805354
Jarque-Bera	2.882470	227.3663	16.83913	39.86702
Probability	0.236635	0.000000	0.000221	0.000000
Sum	106.6600	45.00000	239.0000	75.75000
Sum Sq. Dev.	21.53664	2.250000	23.79000	3.931875
Observations	100	100	100	100

**Source:** Researcher summary of descriptive statistics (2019)

Table 4.1 above shows the mean (average) for each variable, their maximum values, minimum values, standard deviation. The result provides some insight into the nature of the selected firms' data used for the study. Firstly, it was observed that over the period under review, the sampled firms have positive average capital investment (FAI) of 1.066600, while the mean of audit firm size (AFS) is 0.450000, this also means that the selected firms has a positive audit firm size in the period of the study. The table also reveals that a positive average value of 2.390000 for audit firm tenure (AFT), and 0.757500 for auditor's industry specialization (AIS) for the selected firms used in the study. These values mean that within the period under review, quoted firms meet up 107% on the average within the period under review. The maximum value of AFS is 0.500000 and its minimum value is 0.000000, maximum value for AFT is 3.000000 and its minimum value is 2.000000; maximum value for AIS is 1.000000 and its minimum value is 0.250000. The large differences between the maximum and minimum value shows that the firm's data used for the study are homogeneous.

## 4.2 Correlation Analysis

**Table 4.2** Correlation Analysis

VARIABLES	FAI	AFS	AFT	AIS
FAI	1.000000	-0.319201	0.208197	-0.214890
AFS	-0.319201	1.000000	0.266530	0.853129
AFT	0.208197	0.266530	1.000000	0.279944
AIS	-0.214890	0.853129	0.279944	1.000000

**Source:** Researcher summary of correlation analysis (2019)

The correlation matrix is to check for multi-collinearity and to explore the association between each explanatory variable and the dependent variable. The table shows that capital investment (FAI) has positive association with audit firm tenure (0.208197) and negative association with audit firm size (-0.319201) and auditor's industry specialization (-0.214890). Audit firm size has a positive association with audit firm tenure (0.266530) and auditor's industry specialization (0.853129). Audit firm tenure is positively associated with auditor's industry specialization (0.279944). In checking for multi-collinearity, the study observed that no two explanatory variables were perfectly correlated.

### 3.3 Regression Analysis

**Table 4.3: Fixed Asset Investment (FAI) Model**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.524368	0.518240	1.011826	0.3142
AFS	-2.267285	1.066026	-2.126857	0.0360
AFT	0.282071	0.092034	3.064857	0.0028
AIS	0.999592	1.030430	0.970073	0.3345
R-squared	0.724573	Mean dependent var	1.066600	
Adjusted R-squared	0.711081	S.D. dependent var	0.466414	
S.E. of regression	0.424646	Akaike info criterion	1.173587	
Sum squared resid	17.13084	Schwarz criterion	1.303845	
Log likelihood	-53.67935	Hannan-Quinn criter.	1.226305	
F-statistic	6.108164	Durbin-Watson stat	1.830617	
Prob(F-statistic)	0.000204			

**Source:** Researcher summary of regression analysis (2019)

The R-squared which is the co-efficient of determination or measure of goodness of fit of the model, tests the explanatory power of the independent variables in any regression model. From our result, the R-squared ( $R^2$ ) is 72% in Fixed Asset Investment (FAI) Model. This showed that our model displayed a good fit because the  $R^2$  is closer to 100%, these explanatory variables can impact up to 72% out of the expected 100%, leaving the remaining 28% which would be accounted for by other variables outside the models as captured by the error term.

The F-statistics measures the overall significance of the explanatory parameters in the model, and it shows the appropriateness of the model used for the analysis while the probability value means that model is statistically significant and valid in explaining the outcome of the dependent variables. From table 4.3 above, the calculated value of the f-statistics is 6.108164 and its probabilities are 0.000204 which is less than 0.05. We therefore accept and state that there is a significant relationship between the variables. This means that the parameter estimates are statistically significant in explaining the relationship in the dependent variable.

The t-statistics helps in measuring the individuals' statistical significance of the parameters in the model from the result report. It is observed from table 4.3 above that audit firm size (AFS) and audit firm tenure were statistically significant at 5% with its values as -2.126857 and 3.064857 respectively. This implies that they have contributed significantly to capital investment at the 5% level of

significance. Auditor's industry specialization (AIS) was statistically insignificant at 5% with its values as 0.970073. This implies that they have contributed insignificantly to capital investment at the 5% level of significance.

Our model is free from the problem of autocorrelation because the Durbin-Watson value is 1.830617 which is approximated as 2 (that means, the absence of autocorrelation in the model used for the analysis).

The a priori criteria are determined by the existing accounting theory and states the signs and magnitude of the variables from the result. Audit firm tenure and auditor's industry specialization has positive sign with values as 3.064857 and 0.682691 respectively. In the Model, this implies that increase in audit firm tenure and auditor's industry specialization increases the capital investment by 306% and 68% respectively. Audit firm size also has negative sign and its values are -2.126857. In the Model, this also implies that firms audited by small audit firm negatively affect their capital investment by 213%, and this conforms to our theoretical expectation of agency theory.

#### **4.4 Hypotheses Testing**

**H<sub>01</sub>:** Audit firm size does not have any significant effect on capital investment of quoted consumer goods companies in Nigeria.

From the result of our test in table 4.3 above, we found that the value of our t-test for audit firm size is -2.126857 with a probability of 0.0360. This probability value is less than the desired level of significant of 0.05. We accept the alternative and reject the null hypothesis, which says that audit firm size have significant effect on capital investment of quoted consumer goods companies in Nigeria. Thus, audit firm size has a negative and significant impact on capital investment of quoted consumer goods companies in Nigeria at 5% level of significant.

**H<sub>02</sub>:** Audit-Firm Tenure does not have any significant effect on capital investment of quoted consumer goods companies in Nigeria.

From the result of our test in the table 4.3 above, we found that the value of our t-test for audit-firm tenure is 3.064857 with a probability of 0.0028. The probability value is also less than the level of significance of 0.05. We therefore accept the alternative and reject the null hypothesis, which says that audit-firm tenure have significant effect on capital investment of quoted consumer goods companies in Nigeria. Thus, audit-firm tenure has a positive and significant impact on capital investment of quoted consumer goods companies in Nigeria at 5% level of significant.

**H<sub>03</sub>:** Auditor industry specialization does not significantly affect capital investment of quoted consumer goods companies in Nigeria.

Drawing inference from table 4.3 above, we found that the computed value, t-value for auditor industry specialization is 0.970073, while its probability is 0.3345. This probability value is greater than the level of significance of 0.05. We therefore, reject the alternative and accept the null hypothesis, which says that the auditor industry specialization does not have significant effect on capital investment of quoted consumer goods companies in Nigeria. Thus, auditor industry specialization has a positive and non-significant effect on capital investment of quoted consumer goods companies in Nigeria at 5% level of significant.

#### **4.5 Discussion of Findings**

The study used capital investment as dependent variable, audit firm size; audit firm tenure, auditor industry specialization and internal auditor's presence were used as independent variables.

The result shows that audit firm size (AFS) were statistically significant at 5% with its values as -2.126857. This implies that it has contributed significantly to capital investment at the 5% level of significant. This finding was in line with the findings of Asegdew (2016), that type of auditor has statistically significant relationship with manufacturing share companies' financial reporting quality.

The result also shows that audit firm tenure were statistically significant at 5% with its values as 3.064857. This also implies that it has contributed significantly to capital investment at the 5% level of significant. This finding was against the findings of Adeyemi, Okpala and Dabor (2012) which find that audit firm rotation is not a significant factor for enhancing audit quality in Nigeria.

The remaining variable auditor's industry specialization (AIS) with its values as 0.970073 is not statistically significant at 5%. This finding was against the findings of Kim, Lee and Park (2015) which fines that market value of cash holdings is significantly higher for the client of an industry specialist auditor. The marginal value of cash is 34 cents higher for the client of a joint industry specialist at both the national and city levels than for the client of a non-specialist.

Therefore, increase in the variable like audit firm tenure will increases capital investment by 306%, and decrease in variable like auditor firm size (AFS) will decreases capital investment by 213%; whereas increase in the variables like auditor's industry specialization (AIS) will have no effect on capital investment.

## **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Summary of Findings**

The study investigated the effect of audit quality on capital investment of quoted consumer goods companies in Nigeria, and the following were found at the 5% level of significant:

- I.** Audit firm size has a negative and significant impact on capital investment of quoted consumer goods companies in Nigeria.
- II.** Audit-firm tenure has a positive and significant impact on capital investment of quoted consumer goods companies in Nigeria.
- III.** Auditor's industry specialization has a positive and non-significant effect on capital investment of quoted consumer goods companies in Nigeria.

### **5.2 Conclusion**

The objective of preparing a company's financial statement is to make known the company's performance. Specifically, it provides information about a company's financial performance, financial position, and cash flows. However, if the financial statement must effectively meet this objective, it must provide adequate information that relates to the various items or components (capital and recurrent) of the final accounts.

Based on the result, the study concluded that audit firm size is negative and has significant impact on capital investment of quoted consumer goods companies in Nigeria at 5% level of significant. Thus, the study rejects the null hypothesis and accepts the alternate hypothesis. On the audit firm tenure, the analysis reveals that audit-firm tenure is positive and has significant impact on capital investment

of quoted consumer goods companies in Nigeria; while auditor's industry specialization is positive, but does not have significant effect on capital investment of quoted consumer goods companies in Nigeria. This confirms with the study of Asegdew (2016).

### **5.3 Recommendations**

The study, therefore recommends the following based on the findings of the study.

- I. It is recommend that since audit firm size has negative and significant impact on capital investment; firms should not seek the services of reputable/bigger audit firms as this will negatively affect the companies and its cost of administrations.
- II. Relevant laws should be enshrined to make sure that audit tenure should be limited to a specific period like 2 to 3 years and not indefinitely as has been the case.
- III. In making investment decision, investors should not put much consideration as regards to auditor's industry specialization in his decision, since the mentioned variable was positive and have insignificant effect on capital investment of quoted consumer goods companies in Nigeria.

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