

**IMPACT OF AUDIT QUALITY ON EARNINGS MANAGEMENT OF
LISTED MANUFACTURING COMPANIES IN NIGERIA**

BY

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B.Sc. ACCOUNTING (KWASU)
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**BEING A DISSERTATION SUBMITTED AND PRESENTED TO THE DEPARTMENT
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CERTIFICATION

The undersigned certify that this dissertation was carried out and reported by Adeoluwa Victoria ADEKANYE with matriculation number 17/27/MAC004 entitled: “Impact of Audit Quality on Earnings Management of Listed Manufacturing Companies in Nigeria” has been read and approved to meet the requirements of the Department of Accounting and Finance and Postgraduate School of Kwara State University, Malete, Nigeria for the award of Master of Science (M.Sc) Degree in Accounting.

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DECLARATION

I, Adeoluwa Victoria ADEKANYE declare that this is a record of research work carried out by me at the Department of Accounting and Finance, College of Humanities, Management and Social Science, Kwara State University, Malete. Nigeria. The said report has not been submitted for any degree or examination in any other University to the best of my knowledge. All quotations are distinguished by quotation marks and the sources of information are acknowledged by means of references.

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DEDICATION

This work is dedicated to God, for his sufficient grace.

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ABSTRACT

The steady occurrence of manipulations of accounting figures in the financial statement has led to the collapse of many manufacturing companies, which is due to lack of credibility in the audited financial statement. Therefore, this study investigated the effect of audit quality on earnings management of listed manufacturing companies in Nigeria. This study was achieved by examining the effect of audit firm size, joint audit service, audit fee, auditor's experience and audit tenure on earnings management of the listed manufacturing company in Nigeria. Ex-post facto research design was employed with the population consisting of seventy-six (76) listed manufacturing companies, and sixty-four (64) out of the companies were chosen as the sample size using Krejcie and Morgan (1970) sample size determination table and fifty-five (55) was used due to the availability of data. Descriptive and inferential statistic (random effect regression analysis with OLS techniques) were employed in the analysis of the secondary data collected from the annual reports and accounts of the chosen sample companies for the period of five years (2013-2017). The study found out that audit firm size, joint audit service and audit fee has a significant negative effect on the level of earnings management practice of listed manufacturing companies in Nigeria at 5% significant level (t-value of -0.3238, -1.1757 and -0.3409 with p-value of 0.002, 0.000 and 0.001 respectively). This audit firm size, joint audit and audit fee restrict and reduce the level of earnings management in listed manufacturing companies. However, audit tenure has a contrary opinion because it has a positive relationship with earnings management (t-value of 0.1156 with p-value of 0.044). This implies that the longer the period an audit firm spends with the client, the more the independence is compromised, while auditor experience has no significant relationship with earnings management (t-value of -0.0021 with p-value 0.063). The study thereby concluded that audit firm size, joint audit service, audit fee and audit tenure has a significant impact with earnings management practice of listed manufacturing companies in Nigeria, while auditor's experience has no significant effect. Therefore, the study recommends that management should make use of large audit firms to audit their financial statement and the audit firms should emphasize more on high professional standards.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

In the last two decades several accounting scandals have been witnessed mainly because of the manipulation of the accounting figures provided in the financial statements. This could have been due to the managers having motives to mislead the users of financial statements through the use of different accounting choices or methods in financial reporting as they can have the opportunity to exercise judgment in financial reporting. Stakeholders sometimes doubt the functions of auditors for failing to detect and report the manipulations found in the financial statement which often lead to financial loss and damage of reputation of the victim organization.

A series of high profile accounting scandals have occurred across the world such as Cendant(1998), Rank Xerox (2000), Enron(2001), WorldCom(2002), Adelphia(2002), Global Crossing(2002), Waste Management Inc.(2002), Sunbeam(2002), American International Group (2005), Lehman Brothers (2010), Theranos Inc. (2018) in US and in Europe fraudulent financial scandals occurred from a number of companies, such as, Ahold and Tyco International (2002), Parmalat(2003) and Adecco(2008) has left the economy with much of skepticism and a handful of globally known audit firms are available to perform their audits on large complex institutions. All those cases were generally attributed to earnings management and clearly shows the importance of audit quality in constraining accounts manipulation, but it failed when it engaged in accounting scandals (Demaki, 2011; Norwani, Mohamad & Chek, 2011).

The potential collapse of those companies damaged the trust and confidence of investors along with its gruesome impacts on the financial stability as a whole (European Commission (EC), 2010). As pointed out by Watts and Zimmerman (1986), audit minimizes information asymmetry and protect the interest of the principals, investors, creditors, suppliers, employees and the general public, by providing reasonable assurance that financial statements prepared by management are free from material misstatements. To achieve this goal, audit quality realization became obvious. A high quality audit increases the perception that the auditors are not less objective and therefore higher probability to report discovered errors, misstatement and intentional misstatement in financial statement or earnings management (Lowe & Pany, 1995).

The audit quality provided reflects a variation in the credibility offered by the auditors, and in the earnings quality of the clients (Lin & Hwang, 2010). The quality of auditing function may vary, given there are many audit firms with different capabilities. Audit quality describes how well an auditor detects and reports material misstatements of financial statements (Gul, Fung, & Jaggi, 2009). High audit quality should be associated with high information quality of financial statements because financial statements audited by high quality auditors should be less likely to contain material misstatements (Balsam, Krishan, and Yang, 2003) and consequently reduce earnings management.

In the developing countries the issue of manipulation of financial statement have a dreadful consequence on the economy; such as the case of Satyam computer services Ltd (2009) in India. The scandal involved cooking of accounts which the auditor(PricewaterhouseCoopers) failed to recognize. In addition, Shenzhen Yuanye industrial corporation limited folded up because it had committed fraudulent accounting and financial practices by forging sales. The auditing firm (K.Y. Chan & Co.) was shut down because it provided false capital contribution certificate and unqualified audit report for the client (El Diri, 2017). Recently, 1Malaysia Development Berhad (2018) also involved in intentional manipulation of financial statements due to suspicious money transactions, money laundering and government bribes.

In Nigeria, the presence and negative effects of earnings management on credibility of financial reporting and corporate failure has also been experienced. For example, a report of creative accounting scandal in 2006, with the case of Cadbury Plc scandal which was audited by Akintola Williams Delloite (AWD) and also called the Nigeria version of Enron Corporation scandal case. Furthermore, in 2009, the Nigerian banks which are the Afribank Nigeria Plc, Intercontinental Bank Plc, Finbank, UBA and Oceanic bank were also found in fraudulent financial reporting which also demonstrates the relationship between audit quality and account manipulation. The financial statement of African Petroleum Plc. (2010), Oando Plc. (2017), Lever Brothers Nigeria. Plc (2018) and Sky Bank Plc. (2018) showed that the company did not fairly present its financial position (Oyejide & Soyibo, 2001). In the above fraudulent cases, Administrative Proceedings Committee (APC) found the parties were guilty of preparation of fraudulent financial statements, outright fraud and gross negligence.

Earnings management is being seen as an underlying reason for a wide range of pervasive financial scandals, raising a big concern on the quality of financial information (El Diri, 2017). Earnings management gives misleading profits which is not a consequence of the economic reality, it actually represents the privilege of the financial engineering. A firm can intentionally alter reported financial results, i.e., income statement and statement of cash flows, or reported statement of financial position, in some desired amount and/or some desired direction. Earnings management is primarily accomplished through accounting transactions that are designed to achieve desired earnings level. Prior research suggests that managers have both personal and business motivations to display impressive or at the very least satisfactory performance in their reports on a consistent basis (DeFond & Park, 2001; Greenfield, Carolyn, Norman, & Wier 2008). Some accounting practices and its accepted principles allow managers to apply their assessment and judgment in financial reporting in order to transfer data. The managers' application of judgment is known as earnings management and for many years accounting researches have considered earnings management and its implications. Furthermore, the question is always whether earnings management improves the quality characteristics of accounting information or reduces its information content. However, due to a variety of reason, the sustainability of such a performance is sometimes impossible. In these circumstances managers may decide to use their discretions in the application of accounting principles and procedures which can result in altering the business operations to a more favorable outcome, which has again turned researchers' attention to the study of earnings management which leads to this research work.

1.2 Statement of the problem

The primary objective underlying the quality of an auditor is to ensure that a financial statement is free of misrepresentation either from error or fraud. Even when financial statement has been audited, there is no assurance that the statement is free from material misrepresentation, both from error or even fraud. Therefore, auditor will always be blamed when manipulated financial statement scandal is revealed because auditors are expected to be independent of the management staff of the company being audited.

In recent times, the manipulation of financial statement may be due to the size of the audit firm. It is believed that the Big 4 audit firms have large number of staff which will make it easier for the management to penetrate through one of their staff. For instance, Arthur Andersen was formally

one of the big five auditing firms along with PricewaterhouseCoopers, Deloitte, Ernst & Young and KPMG. In 2002, the firm voluntarily surrendered its licenses after being found guilty of criminal charges relating to the firm's auditing of Enron (Brown & Dugan, 2002). Furthermore, Cadbury and Akintola Williams Delloite's (AWD) case of fraudulent financial reporting also demonstrates the relationship between audit quality and account manipulation (Eriabie and Dabor, 2017). Joint audit service which is the audit of the financial statements by more than one auditor may have impact on earnings manipulation. When two big audit firms audit a company, the two firms are independent of their one another and management may penetrate through one of the firms since it is only one audit firm that will be a signatory to the audit report.

Audit fee appears to impair audit quality and auditor independence (Simunic, 1980). If the management pays additional fee apart from the required audit fee, it may influence the auditor's decision by being reluctant to bring out negative report when auditing the financial statement. Attribute of auditor that could affect the audit quality positively and increase the chances of discovering and reporting material intentional errors and misstatements in the financial statements is when auditor has no experience. When audit firms are to audit a complex firm, the lack of experience may affect their decision. And lastly, familiarization of an auditor may also lead to manipulation of earnings management. This could be as a fact that an extended relationship may cause the auditor to become friendly with the management, could affect the auditor's objectivity and thereby leading to substandard audits and/or auditors tending to agree with client preferences.

Previous studies (such as Okolie, 2014; Aliyu, Musa and Zachariah, 2015; Ibrahim, 2017, Eriabie *et al.*, 2017) were conducted on the impact of audit quality on earnings management in Nigeria, but to the best of the researchers' knowledge the studies reviewed in Nigeria context have not examined the effect of auditors' experience on earnings management. Thus, the study will provide empirical evidence from Nigeria.

1.3 Research Questions

The light of the research problem, the following questions served as a guide to achieve the objectives of the study:

- i. How does audit firm size affect earnings management of listed manufacturing companies in Nigeria?

- ii. What influence does joint audit services have on earnings management of listed manufacturing companies in Nigeria?
- iii. To what extent does audit fee impact on earnings management of listed manufacturing companies in Nigeria?
- iv. What is the impact of auditor experience on the earnings management of listed manufacturing companies in Nigeria?
- v. To what extent does audit tenure affect earnings management of listed manufacturing companies in Nigeria?

1.4 Objectives of the study

The general objective of this study is to investigate the impact of audit quality on earnings management of listed manufacturing companies in Nigeria. In line with this, the specific objectives of the study are to:

- i. examine the effect of audit firm size on earnings management of listed manufacturing companies in Nigeria;
- ii. assess the influence of joint audit on earnings management of listed manufacturing companies in Nigeria;
- iii. examine the extent of the impact of audit fees on earnings management of listed manufacturing companies in Nigeria;
- iv. determine the impact of audit experience on earnings management of listed manufacturing company in Nigeria; and
- v. ascertain the level at which audit tenure affect earnings management of listed manufacturing company in Nigeria.

1.5 Research Hypotheses

The following research hypotheses were stated in null (H_0) form in order to answer the research questions and achieve the research objectives:

- H₀₁: Audit firm size has no significant effect on the earnings management of listed manufacturing companies in Nigeria.
- H₀₂: There is no significant influence between joint audit service and earnings management of listed manufacturing companies in Nigeria.
- H₀₃: Audit fee has no significant impact on the earnings management of listed manufacturing companies in Nigeria.

H₀₄: There is no significant impact between auditor experience and earnings management of listed manufacturing companies in Nigeria.

H₀₅: Audit tenure has no significant effect on the earnings management of listed manufacturing companies in Nigeria.

1.6 Justification for the study

Empirical research findings are very crucial to the development of the nation. This study is paramount as it added value to the existing research towards audit quality and earnings management in the manufacturing companies in Nigeria at large. The general purpose of this study is to evaluate how some of the determinant of audit quality influence the level of earnings management in the listed manufacturing companies. In this pursuit therefore, the study drew a link between audit firm size, joint audit service, audit fee, audit experience, audit tenure and the level of earnings management.

The reviewed literatures such as (Aliyu, *et al.*, 2015; Chou and Chan, 2018; Eriabie *et al.*, 2017; Hong and Nguyen 2018) show that most empirical work on earnings management focus on provision for loan/ asset loss and cashflow operation as a proxy in measuring earnings management. with regard to this study discretionary (abnormal) accrual was used to proxy earnings management.

However, there had been few studies on audit firm size, joint audit service, audit fee, audit experience and audit tenure such as Ilaboye and Olukha (2014) and Mahdi, Abolfazi and Ali (2011) but to the best of researcher's knowledge, none of the previous studies put all the five variables together as a proxy to measure audit quality. Most of the research work in this regard was situated in developed countries (Eriabie *et al.*, 2017; Toyokoso 2017; Aliyu, Musa & Zachariah, 2015). Furthermore, their scope is on the listed deposit money banks and insurance companies (Eriabie *et al.*, 2017; Tyokoso 2017; Aliyu *et al.*, 2015). None of the studies looked at audit quality and earnings management in listed manufacturing companies. This study improves the problem identified in the previous studies by making use of listed manufacturing companies in Nigeria.

Furthermore, findings of this study will be of relevance to the Accounting field by providing empirical evidence and it will serve as a body of reference for further researchers. More so, to the

management, shareholders and policy makers (such as the Institute of Chartered Accountants of Nigeria (ICAN), the Association of National Accountants of Nigeria (ANAN), the Manufacturers Association of Nigeria and Nigeria Stock Exchange) as a feedback to enhance audit quality in Nigeria, likewise, in formulating and administering pragmatic policies to improve audit quality in Nigeria audit setting such as reducing the length of audit firm tenure and finally to the government through her agencies such as Corporate Affairs Commission (C.A.C), the Companies and Allied Matters Act (CAMA), and most importantly the Financial Reporting Council of Nigeria, this study will be of great benefit by way of reviewing, promoting and enforcing compliance with the accounting and financial reporting standards adopted by the Council.

1.7 Scope of the Study

The focus of this study is to investigate the impact of audit quality on earnings management of listed manufacturing companies in Nigeria. The study made use of all the seven manufacturing sectors (Construction, Consumer goods, Health care, Industrial goods, Oil and gas, Natural resources and Conglomerates). This is because the manufacturing sector has a high tendency of using discretionary accrual due to the nature of their business which involves conversion of raw materials into finished product. Furthermore, the study covered a period of five years from 2013 to 2017 because it was within this period that some firms such as Cadbury Plc. and African Petroleum Plc. suffered crises which involved management's unethical practices through accounting manipulation. Year 2013 was considered because it was within this period that the corporate governance reviewed was being implemented and year 2017 was also considered as a result of availability of data (annual reports) for the targeted population.

CHAPTER TWO

LITERATURE REVIEW

This chapter deals with the conceptual issues (the concepts of the earnings management, audit quality concepts as well as the approaches to the measurement of audit quality), various theories in relation to the study and the previous empirical studies carried out on the topic from which research gaps in existing literatures are identified.

2.1 Conceptual Review

This sub section forces on the conceptualization of key variables in this study, such as audit and auditing, qualities of an auditor, audit quality, audit firm size, joint audit, audit fee, audit experience, audit tenure, likewise earnings management and discretionary accruals.

2.1.1 Audit and Auditing

Historically, audit has been in existence since the medieval period. It was primarily a check of the accounting for stocks and revenues by authorized officers of the Exchequer of England into a sophisticated professional assurance service performed by independent accountants of the interests of their clients and other users of financial information (Mahdi *et al.*, 2010).

The word audit comes from the Latin word *audire* meaning 'to hear'. An audit is a simple form developed with the organized system of accounting (Mark 2019). In early period person appointed to check the accounts used to hear from the bookkeeper matter relating to the transaction of the business, the spread of double-entry bookkeeping was first described by Luca Pacioli in 1494. In course of time the mode of audit changed according to accounting system of different types of business. Auditing is a specialized function having complex, legal, economic implications.

The International Audit and Assurance Standard Board (IAASB) (2014), a sub-committee of the International Federation of Accountants (IFAC) described an audit as 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.

Spicer and Pegler (2013) defined audit as an examination of the books, accounts and voucher of business which will enable the auditor to satisfy himself that the balance sheet is properly drawn

up, so as to give and fair view of the state of the affairs of the business and whether the profit and loss accounts gives a true and fair view profit or loss for the financial period, according to the best of the his information and the explanation given to him and as shown in books, and if not, in what respects he is not satisfied.

Batliboi (2015) defined audit as an intelligent and critical scrutiny books of accounts with the vouchers for which the auditors relied upon for the purpose of ascertaining whether the working result for a particular period as shown by the profit and loss account and also the exact financial condition of the business as reflected in the balance sheet are truly determine and presented by those responsible for their compilations.

According to Mautz (1964), auditing is concerned with the verification of accounting data, with determining the accuracy and reliability of accounting statements and reports. The auditing of financial statements refers to conducting an objective evaluation of the financial statements of a company by an independent auditor. The limited liability companies annual accounts are by law required to be audited, in order to ensure that the financial statements give a true and fair view to the users of these statements (European Commission, 2010). Although it is acknowledged that it is not reasonable to expect that the audited accounts are entirely free of misstatements, the European Commission (2010) argues that the goal of auditors is to minimize the risk that financial information is misstated. By performing the audit of companies financial statements, the auditor will provide stakeholders such as investors and shareholders with an opinion on the extent to which the company's financial statements are accurately presented.

The institute of Chartered Accountants of India (2014) defined auditing as a systematic and independent examination of data, statements records operations and performance (financial or otherwise) of an enterprise. In any auditing situations the auditor perceives and recognize the preposition before him for examination and which makes the auditor formulate his judgement which is communicated through his audit report.

Lawrence (2010) defined auditing has an examination of accounting records undertaken with a view to establishing whether they correctly and completely reflect the transaction to which they relate. In some instance it may be necessary to ascertain whether the transaction themselves are supported by authority.

Mahdi *et al.* (2010) explained auditing as a systematic examination of the books and the records of a business in order to ascertain or verify and the report upon the facts regarding its financial operations and the result thereof. Auditing is a formal, systematic and disciplined approach designed to evaluate and improve the effectiveness of processes and related controls, auditing is governed by professional standards, completed by individuals independent of the process being audited and normally performed by individuals with one of several acknowledged certificate (Mark, 2019).

2.1.2 Qualities of an Auditor

An efficient auditor must possess some certain qualities, specially, they should possess integrity and objectivity, which implies that an auditor must be straightforward and honest in performing professional services, professional service is any service requiring accountancy or related skills performed by a professional accountant including accounting, auditing, taxation, management consulting and financial management services (Aeisha, 2017). The principle of objectivity imposes the obligation on all professional auditors to be fair, intellectually honest, and free of conflicts of interest. Professional auditors will be exposed to many situations where they are under pressure from managers, colleagues or clients. Situations and relationships should be avoided in which bias or influences of others might override auditor objectivity. Professionals involved in assurance services should neither accept nor offer gifts or entertainment that might appear to have a significant improper influence on their professional judgment.

More so, an auditor should have professional competence and due care, this implies that he is competent to perform the services. Professional competence requires a high standard of general education followed by specific education, training, examination in relevant subjects, and work experience. In addition, auditors should perform all services with due care, competence and diligence in performing their duties (Aeisha, 2017).

Furthermore, according to salehi (2009) professional auditors have an obligation to respect the confidentiality of information about a client's (or employer's) affairs acquired in the course of professional services. Auditors should respect the confidentiality of information acquired during the course of performing professional services. They should not use or disclose any such information without proper and specific authority. There exists a responsibility to keep the information discovered in the course of an assurance service confidential and thus continues even

after the auditor–client or the auditor–employer relationship ends. Auditors must also ensure that in addition to themselves, staff and under their control understand and follow the principle of confidentiality. Information acquired during the engagement should not be used by those involved in the service for personal advantage or for the advantage of a third party.

Lastly, an auditor must possess professional behavior, an auditor should act in a manner consistent with the good reputation of the profession and should refrain from any conduct that might bring discredit to the profession regarding responsibilities to clients, third parties, other members of the auditing profession and the general public (Aeisha, 2017).

2.1.3 Audit Quality

An audit is an independent examination of the financial statements of an enterprise as prepared by the management of that enterprise by an appointed person called the auditor in order to express a professional opinion whether or not those financial statements show a true and fair view of the position of the enterprise as at the financial period in accordance with the relevant statutory and professional regulation (Okolie *et al.*, 2000).

According to Knechel and Vanstraelen (2007) audit quality consists of two components; audit competence and auditor independent, deterioration in audit in a short tenure audit may be due to either lack competence or loss independence, while a loss in quality in a long tenure audit is most likely due to a loss of independence.

Watkins, Hillison, and Morecroft (2014), defined audit quality from two viewpoints, namely, auditor reputation and auditor monitoring competence on a financial statement. Auditor reputation is an assessment by others, particularly by the users of financial statement. Reputation is measured by the users' perceptions on the auditor competence and independence. Those auditors who are perceived as high in both competence and independence are considered to produce trustworthy financial statements. The second meaning of audit quality is from the viewpoint of an auditor monitoring competence on financial statements. The monitoring competence is determined by an auditor competence and independence, measured by the audited financial statement information quality. Moreover, a financial statement information quality is reflected by information accuracy, or to the extent of which information reflects the real condition (Watkin *et al.*, 2014), or ability to eliminate the bias of the information provided (Wallace, 1980; Watkins *et al.*, 2014).

Hope and Langli (2008) view audit quality as when the auditor carries out his work with higher degree of independence and objectivity on the one hand and define auditor independence as the auditor objectivity and ability to withstand client pressure on the other hand. This pressure according to them includes monetary and non-monetary issues that make auditor comply with management desire rather than his professional judgment.

Audit quality in this regard comprises the ability of an auditor to detect a breach (auditor competence) and the willingness to report such a breach (auditor independence). Lowe *et al.*, (1995), assert that lack of independence in audit engagement, increases the perception that they are less objective and therefore less likely to report a discovered misstatement. Auditor independence according to the Institute of Chartered Accountants of Nigeria (ICAN) (2014) is divided into two; independence of mind and independence in appearance which are to be observed by an auditor in passing his professional opinion. Independence of mind, according to the institute refers to the state of mind that permits the provision of an opinion without being affected by influences that compromise professional judgment, allowing an individual to act with integrity, and exercise objectivity and professional skepticism. While independence in appearance connotes the avoidance of facts and circumstances that are so significant that a reasonable informed third party, having knowledge of all relevant information, including safeguards applied, would reasonably conclude that a firm's integrity, objectivity or professional skepticism had been compromised. This study views audit quality as a state of not being controlled by the management of an entity using any means. It is the ability of an auditor to objectively discover and report errors and misstatements in financial statements including earnings management. In this research, audit quality is defined as the capability of auditor in discovering and reporting any errors in a financial statement.

One of the most important objectives of external financial reporting is to reduce agency conflicts between the firm and its various stakeholders (Healy & Palepu, 2001; Hope *et al.*, 2008). The degree to which information asymmetries are reduced by financial reports is crucially dependent on the quality of these financial reports; the purpose of an audit is to improve financial reporting quality (Boone, 2010).

2.1.3.1 Audit Firm Size

Auditors in the capital market provide their services for a valuable function of lending their credibility over the financial statements of public listed companies in an attempt to reduce the information risk. The fairness and credibility of the audit depends upon the nature of the attestation provided by the auditors (Lu & Sivaramakrishnan, 2009). For audit quality the size of the city-based audit office can be a crucial determinant to be taken into consideration along with the size of the national-level audit firm, due to the fact that the city-based offices of audit-firms serve to be semi-autonomous with their own client base. Thus, it is the local audit office which gets into direct engagement with the client-firm with their direct administration and implementation of audit operations with the deliverance of audit services and audit opinions (Choi, Kim & Zang, 2010,).

Several studies such as DeAngelo (1981); Lawrence *et al.*, (2010); Rezaei and Shabani (2014) have supported that larger audit firms provide higher quality-audit services than smaller ones. This is because larger auditors are less likely to depend on their particular clients' economic (Rezaei & Shabani, 2014). Thus, they are less likely to agree with their client pressure for reporting misstatements than small audit firms (Choi *et al.*, 2010). Further, they have higher motivation to deliver high-quality services in order to protect their brand name reputation (Rezaei *et al.*, 2014) as larger audit firms may have greater reputation losses in case of audit failures than small firms (DeAngelo, 1981). Further, big audit firms have higher technical competence and greater resources (Lawrence *et al.*, 2010). They also have more experienced and competent auditors and greater expertise than small audit firms (Francis and Yu, 2009).

Thus, the results of Choi *et al.*, (2010) conclude that audit-firm size is one of the crucial determinants of audit quality. Their suggestions seek concerns from both the regulators and the audit firms in terms of directing their attentions towards the behaviors of small audit offices as their dependency over the specific clients can be higher and are more prone to the dangers of compromising the audit quality.

2.1.3.2 Joint Audit Service

A joint audit can be defined as an audit in which financial statements are audited by two or more independent auditors (Ratzinger-Sakel & Kettunen, 2013). In a joint audit, two different audit firms form an opinion about a client's financial statements. It follows that both audit firms are

liable for their opinion. Joint audits are conducted in the same manner as single audits. However, the monitoring process between the two auditors as well as the discussion of audit findings are of particular importance as they will ordinarily result into higher audit quality (Julia & Rudolf, 2012). Debates on whether joint audits should be made mandatory have centered on the advantages and disadvantages of joint audits. The major arguments of proponents of joint audits is that it may have the potential to discourage companies from changing their auditors simply to get different auditing results (Craswell, 1988; Petty and Cuganesian, 1966; Lennox, 2000), and opponents of joint audit however, contend that it would result in additional costs (Ratzinger-Sakel et al., 2013).

The concept of joint audit refers to the participation of two or more separate and independent audit firms in the audit process of the financial statements for a single client (Zgarni, Hlioui & Zehri, (2012). In a joint audit, the planning process and audit procedures and audit work are jointly organized and divided between the two auditors to ensure there is no repetition of audit duties. A joint audit results in the issuance of a single report signed by both auditors with joint collateral responsibility for the opinion issued in that report (Zgarni et al., 2012).

Paugam and Casta (2015) define joint audit as an audit in which two or more independent auditors, from separate audit firms, are appointed to audit financial statements of an audit client, in such a way that involves developing the audit plan jointly; performing the audit work jointly; making periodic cross reviews and mutual quality controls; issuing and signing a single audit report; and bearing joint liability in case of audit failure. The concept of joint audit should be differentiated from the concept of dual audit, where two or more independent auditors from separate audit firms are appointed to audit financial statements of an audit client in a way that involves: developing the audit plan separately; performing the audit work separately; no periodic cross reviews and mutual quality controls and issuing two or more audit reports, in which every auditor is not responsible for the audit opinion expressed by the others (Alanezi, Alfaraih, Alrashaid & Albolushi, 2012; Ratzinger-Sakel et al., 2013; Jane, Lun, & Yen, 2014). Also, the concept of joint audit differs from the concept of Double Audit, where a single auditor is required to fully perform the audit work twice (Alanezi et al., 2012; Ratzinger-Sakel et al., 2013).

2.1.3.3 Audit Fee

Mahdi *et al.*, (2010) defined audit fee has the remuneration received from a client on the discharge of audit service. It is the amount charged by the auditor for the audit assignment of a client. Hoitash

et al. (2015) opined that the aggregate of audit fees are the amount of all costs covered for auditor. Lyon and Maher, (2015) pointed that there is variation in the amount of the fee, depending on auditee size and how complex the auditing process is. This is similar to the view of Turley and Willikens (2014) that there are three composite factors which contribute to the establishment of audit fees, which include complexity, Client size and associated risk. Audit fees are the fees paid to the auditors that reflect the cost of the effort conducted by the public editors and litigation risks (Choi, Kim & Zang, 2010)

Onaolapo *et al.*, (2017) explained audit fee to be the amount charged by the auditor for an audit assignment carried out, that is, amount charged by the auditor for any work done in order to express opinions on the true and fair state of affairs or position of the client's enterprise. Audit fee consists of the amount paid for the audit of financial statement and the amount paid for other non-audit services provided by the audit firm to the client's firm. Non-audit services are the services that the auditor can provide apart from normal auditing procedures, by offering different services to the clients from which he can earn extra revenues. Recently, the demand for business expert services has increased and expanded in different range of services which include: training, risk management advice, mergers and acquisition, taxation, portfolio monitoring, recruitment and human resources and corporate governance (Marsel & Ali, 2015).

2.1.3.4 Audit Experience

Chung and Monroe (2015) considered audit experience as the auditor's unique knowledge, competencies and capabilities that exist from job practices in auditing profession which lead to the enhancement of auditor's abilities to process relevant information, make a mental comparisons of alternative way out, initiate subsequent actions and also provide decision making efficiency and effectiveness through a good memory of information necessary and an accurate judgment of audit works. Musig and Ussahawanitchakit (2014) view audit experience as the skills which are obtained from audit tasks concerning relevant audit standards and accounting guidance and error specific experiences (i.e. financial misstatements), which affect audit task and audit performance. Also Carpenter, Durtschi & Gaynor, (2015) point out that experience is the act practice and feedback and can lead to knowledge acquisition.

Lehmann and Norman (2015); Intakhan and Ussahawanitchakit (2016) shows that experience is an important issue to consider because auditors' professional practices through audit experience

influenced their audit professionalism and this have significant impact on their audit efficiency and effectiveness. Various researches on experience and expertise recommend that an individual's knowledge changes as experience increases (Knapp & Knapp, 2014). In this vein, Libby and Frederick (1990) suggest that this knowledge advantage was as a result of the ability to generate more likely explanations for audit findings. This led the earlier researchers suggest that when an auditors gain experience, it's an indication that they know more about errors, they have more accurate knowledge on error, they know more occasional errors, and the causes features of errors (Cohen & Kida, 1989; Gaballa & Ning, 2011; Libby & Frederick, 2014; Intakhan *et al*, 2016).

Bonner and Lewis (2012) argued that even though experience is a good predictor of knowledge but not all types of knowledge are acquired equally by persons with a given amount of experience, likewise not all persons with similar experience in a domain are likely to have similar problem solving abilities but rather it depends on the task or client's activities and because the different types of knowledge are acquired through different specific experiences and training. Additionally, Carpenter *et al*, (2015) argued that being you have audit experience, it does not mean you have the capacity of detecting fraud but rather its individual experience in fraud detection that will give him the capability of detecting fraud. Therefore, the diversification of such audit knowledge is also fundamental to audit efficiency and audit effectiveness (Musig *et al.*, 2014). In effect, such knowledge should also play important role in internal audit effectiveness in the public sector organizations. Similarly, research on auditor experience show that specific task experience can improves auditors' judgments (Agoglia, Beaudoin & Tsakumis, 2014; Carpenter *et al.*, 2015; Chung *et al.*, 2015; Donnell, 2015) this is because auditing is a profession whose main functions rely largely on the judgments of trained experts (Ahdolmohammadi & Wright, 2015).

Furthermore, Asare *et al*, (2015) also support that client relations concerns may still influence auditors' judgments in reporting, for instance, auditors tend to interpret ambiguous standards in a way to support client-preferred accounting methods. In line with the above statement, Kaplan, Donnell and Arel (2017) noted that experience may influence auditors' judgments about information provided by management when it is in consistent with management's self-interest, in the other hand if such information from management is not consistent with management's self-interest then will view that information with less suspicion. Though Russo (2012) argued that the effect of experience on performing a task can be assessed by measuring the resulting change in the

task automatically, despite that experience auditor may have the ability of identifying the right information that will aid his judgment because they gain the experience as a result of training and field experience acquired earlier in their careers (Kaplan *et al.*, 2017).

2.1.3.5 Audit Tenure

Audit firm tenure is defined as the number of years the auditor is retained by the company (Myers *et al.*, 2003). Audit firm tenure is the length that an audit firm is engaged to a client-firm for performing audit of the financial statement (Johnson *et al.*, 2002). Audit tenure reflects the relation between auditor and audited entity. Audit tenure is one of the most controversial issues in the study of earnings management. According to Eilifsen *et al.*, (2015) audit tenure is defined as short when the same auditor has audited the financial statements of a company for two or three years and as long when the same auditor has audited the financial statements of a company for nine or more years. One of the commonly used arguments in favor of audit firm rotation is based upon the assumption that long auditor tenure may cause a relationship to be established between the auditor and the client, which in turn possibly may compromise the auditor's independence and objectivity. When the auditor's independence is compromised by a relationship between the auditor and the entity that is being audited, breaches discovered in financial statements may less likely be reported (Carmen, 2012).

Auditor Tenure is defined in this study as the length of the auditor-client relationship. A rather too long association between the auditor and his client may constitute a threat to independence as personal ties and familiarity may develop between the parties, which may lead to less vigilance on the part of the auditor and even to an obliging attitude of the latter towards the top managers of the company. Aside from this threat to independence, the audit engagement may become routine over time, and if so, the auditor will devote less effort to identifying the weaknesses of internal control and risk sources. An experimental study by Knapp (1991) tends to establish a connection between audit tenure and competence. As perceived by US audit committee members, the likelihood that the auditor will detect an anomaly increases in the first years of his mandate, and then decreases gradually, reaching its weakest level after 20 years of service. In reaction, in the US, this rotation was reduced from seven to five years by the Sarbanes-Oxley Act, 2002. In May 2002, the European Commission recommended a rotation of engagement partners every seven years. Most member

states have followed this recommendation, including the French market authority as from September 2002.

Audit tenure is one of the most controversial issues in the study of earnings management. Long auditor tenure might lead to excessive familiarity between the auditor and auditee, which can threaten auditor objectivity, resulting in less rigorous audit procedures (European Commission, 2011). Furthermore, Carcello and Nagy (2004) argue that there may be atrophy and complacency among the long tenured audit teams, such that the audit is undertaken with reduced vigour and scepticism. This could lead to poor audit quality and high level of earnings management as the auditors are more lenient towards the financial reporting of accruals. However, Casterella and Johnston (2013) reiterate that over time, recurring audit firms gain valuable knowledge about their clients. As the audit firm tenure increases, the auditors are better at evaluating the risk of material misstatements as they gain more experience and better insights into the client's operations and business strategies as well as internal controls over financial reporting. Thus, a long tenured auditor can minimize manipulations of discretionary accruals. In addition, Arrunada and Paz-Ares (1997) posit that short-term audit engagement increases audit costs and reduces the auditor's technical competence and detailed client knowledge because of a lesser degree of specialization.

2.1.2 Earnings Management

Earning is one of the major items of the financial statements that attract the attention of users of financial statements to it. Investors, creditors, analysts, governments and other users of financial statements, use earning as a basis for investment decisions making, lending, performance evaluation, etc. (Mahdavi, Hosseini & Raiesi, 2013). The main objective of firms is to maximize shareholders' value by exploiting the assets that were acquired by equity capital and debt. To raise capital, shareholders should be incentivized to invest, which only occurs if they expect positive future firm performance. It is therefore in the firm's interest to report positive earnings, positive earnings growth and to meet analysts' forecasts in order to acquire capital (Degeorge, Patel & Zackhauser, 1999). However, it is unlikely that firms are able to meet these expectations all the time, though they are unwilling to suffer stock price decreases. As a result, firms might manage earnings in order to meet shareholders' expectations and to hold equity.

Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers (Healy & Wahlen, 2011).

According to Malla and Karimi, (2007) earning management is defined as intentionally taking steps under generally accepted accounting principles (GAAP) to achieve from the reported earnings to the desired earnings. The converging of the reported earning to the desired earning is done through accounting manipulation (Malla *et al.*, 2007). Today, earnings management is one of the most debatable and interesting issues in accounting research since investors put lots of emphasis on the profit digit as one of the most important factors in the decision-making. Researchers suggest that low earnings variation and its persistency indicate the quality of earnings. However, investors can invest with more confidence in the firms with more persistent earning trend.

Ronen and Yaari (2008) also organized the different definitions of earnings management in three groups: white, gray or black. White earnings management – Beneficial - enhances the transparency of reports; Black earnings management – Pernicious - involves complete misrepresentation and fraud; Gray earnings management – Gray - includes manipulation of reports in the boundaries of compliance with bright-line standards, which could be either opportunistic or efficiency enhancing. There are also other authors that define white, gray and black earnings management. White earnings management takes advantage of flexibility in the choice of accounting treatments to signal the manager's private information on future cash flows (Beneish 2001; Sankar & Subramanyam 2001). Gray earnings management chooses an accounting treatment that is either opportunistic or economically efficient (Fields, Lys, Vincent, 2001; Scott 2006). Finally, black earnings management is the practice of using tricks to misrepresent or reduce the financial reports transparency (Levitt 1998, Healy *et al.*, 2011, Chtourou & Bedard 2013). It seems easy to distinguish earnings management, but in reality it is hard since there are accounting transactions where ethical principles and value judgments are crucial in the decision to be taken.

Bello (2010) defined earnings management as any attempt to cook/doctor or tailor financial accounting reports to a given desired level. According to him earnings management is paradoxical of accountants and relates it to the recent times corporate failures and loss of investors' confidence

on both financial reports and auditors. In this study earnings management refers to both intentional and unintentional actions that managers take which affect reported earnings and mislead accounting information users.

Ronen and Yaari (2011) defined earnings management as a set of managerial decisions that result in not reporting the true short-term, value-maximizing earnings as known to management. In their opinion, earnings management can be: Beneficial - it signals long-term value; Pernicious - it conceals short- or long-term value and Neutral - it reveals the short-term true performance. The managed earnings follow as the consequence of taking production/investment actions earlier than earnings are realized.

2.1.2.1 Discretionary Accruals

According to Dharan (2003), accruals is referred to as the difference between income from operations and cash flow from operations resulting from accounting rules and journal entries for the recognition of revenues and expenses. According to Rowchowdhury (2006) accrual is recording of revenue at the time sales takes place not when earned or when revenue/expenses are recorded in the absence of an actual cash transaction which is meant to deceive the investors. Healy (1985) classified accruals under two categories, which are discretionary and non-discretionary accruals. Discretionary accruals are adjustments to cash flows selected by the manager to affect reported income. They are also accruals that are reported by managers of a business enterprise voluntarily and not as stipulated by law or as regulated by standards. Managerial manipulation can influence financial statements not only through accounting rules, but also by discretionary accruals, more so earnings manipulations can be introduced through the acceleration of sales, the acceleration of sales can be achieved through the use of price discounts and lenient credit terms, with the intention of persuading more customers. By introducing price discounts, firms can accelerate their sales from the next year to the current year. (Rowchowdhury 2006). A firm can alter the level of accruals to obtain the desired level of earnings.

2.1.2.2 Motivations of Earnings Management

Compensation is a very important incentive for managers to manage earnings. Healy *et al.*, (2011) argued that managers would opportunistically manage net income so as to maximize their bonuses under their firms' compensation plans. His evidence shows that managers do not always use

income increasing methods. Such changes can be used to give a general upward or downward influence on net income over a period of time extending from adoption or modification of a bonus plan. Research also find out that the behavior of accruals in a bonus context, and they find that discretionary bad debt accruals are significantly income-reducing both for firm years that were very unprofitable and those that were very profitable. In summary, there is significant evidence that managers use accruals to manage earnings so as to maximize their bonus.

Debt covenant is also a very important factor which has great influence on firms' earnings management behaviors. The debt covenant hypothesis of positive accounting theory (Watts *et al.*, 1986) argues that *ceteris paribus*, the closer a firm is to violation of accounting-based debt covenants, the more likely the firm manager is to select accounting procedures that shift reported earnings from future periods to the current period.

We can find the third incentive of earnings management from the political cost hypothesis (Watts *et al.*, 1986), which argues that *ceteris paribus*, the greater the political costs faced by a firm, the more likely the manager is to choose accounting procedures that defer reported earnings from current to future periods.

According to Mahdi *et al.*, (2010) there are three main motivations which encourage the manager to manage earnings. They are: incentives related to executives, incentives associated with the company and incentives linked to investors and financial analysts. The motivation to manipulate the result may be influenced by factors related to manage himself. Indeed, the company can experience hardships when it is weak in its performance. Having planned and announced incomes different from those anticipated, managers can choose to manage their results upward to save their reputations, their jobs (sun *et al.*, 2013), and may even receive a premium and increase their chances in the job market (Fortin & Lemieux, 2011). They can also participate in the company's capital if there is a compensation system based on the result achieved. (Mard, 2004).

Ashiq and Weining (2015) studied earning management in the early years of the executive's service and affirmed that new managers increase the result to improve their ability in the market. Earning management may be influenced by endogenous variables related to the company itself. Indeed, Mard (2004) outlined four main objectives that can incite to manage earnings.

Firstly, it is used to avoid losses: Managers performing a negative result or a result close to zero, seek to avoid these losses by using earnings management. Indeed, a result equal to zero or slightly positive will be better appreciated than a slight loss. Secondly is also used to avoid declines of the result: the desire to present a boost result is an incentive to executives to manage the result. This behavior is explained by the premium assigned by the market for companies with regularly growing results (Myers & Skinner, 2002). Thirdly earning management is used to achieve earnings forecasts: this goal is an incentive for executives to manage earnings to correct forecasting errors. The use of earnings management as correcting tool forecast by manager's limit losses that can be generated (Kaszniak, 2002).

In some situations, executives apply earnings management not to disappoint investors. This behaviour is justified by the desire to save and maintain the company's good reputation by trying to realize their commitments to stakeholders. Thus, executives are compelled to engage in certain earnings management to meet investors' expectations for future growth. By using earning manipulation tool, managers hide the real value of their company in order not only to encourage investors to invest in the firm as a shareholder or as a creditor but also to influences investors about the current and future prospects of the company. Dechow, Saloan, and Sweeny (2015) confirms this idea by asserting that one of the motivations for the use of earnings management is to attract external funding with the least cost.

2.2 Theoretical Review

Various theories related to this study have been reviewed under this section, theories such as agency theory, signaling theory and theory of inspired confidence. The research thus examined the philosophy and the relevance of these theories to the study.

2.2.1 Agency Theory

This theory was propounded by Jensen and Meckling in 1976. Since then the theory has been a widely used theory in the field of management and social sciences (Ezelibe, Nwosu & Orazulike 2017). It analyses the relationship between two parties: investors (shareholders or owners) and managers. The agent (manager) undertakes to perform certain duties for the principal (shareholders) and the principal rewards the agent (Jensen *et al.*, 1976). According to this theory, agency relationship is seen as a contract under which one or more persons (the principle(s)) engage

another person (the agent) to perform services on their behalf which involves delegating some decision making authority to the agent leading to the principal incurring certain cost called the agency cost. Agency costs according to Jensen *et al.*, (1976) stems from the assumption that the two parties, agents and principals, having different interest leading to the principal- agent relationship.

The agency relationship leads to the information asymmetry problem due to the fact that managers can access information more than shareholders. To mitigate this, Jensen *et al.*, (1976) suggest that the owners establish monitoring devices to perform oversight functions. A high audit quality and being transparent enough to the investors is therefore a means of mitigating the agency problem. To maintain a high audit quality an auditor is appointed in the interests of the managers, shareholders and third parties. He is appointed to supervise the relationship that exists between them. The auditor does not have responsibility for the accounting process, but he must ensure that the audit is done properly to ensure that credible financial statements are presented to the stakeholders for effective decisions to be taken.

According to the agency theory, managers seek to maximize their personal utility to the detriment of other stakeholders. In order to reduce this behaviour and motivate them to take care of the right company management, managers are paid according to achieved result. This generates an incentive for managers to manage earnings to maximize their personal wealth. This point is supported by Jensen *et al.*, (1976) when they argued that the greater the percentage of capital held by the manager, the greater the deviation from the traditional objective of maximizing the value is low and the company is performing consequently well. However, focusing on their own interests, leaders can manage earnings to strengthen their positions by neglecting the interests of other internal and external investors which can intensify conflicts between managers and shareholders rather than mitigate it. Indeed, the divergence of interests between shareholders and managers encourages the creation of compensation contracts based on the income of the company. Thus to increase their remuneration and benefit from these contracts executives tend to manage their results upward and maximize their well-being by presenting to shareholders the results they were expecting. In addition, in order to limit expenditure and unnecessary spending of managers, shareholders proceed to allocate charges. This distribution causes pressure on the managers and

stimulates them measures to reduce their costs. Hence, leaders can use earnings management to defer some of these charges and show their good management.

Agency theory has been used to anchor several studies, implying its general acceptability and practicality. However, this theory only focuses on the agent-principal relationship and totally ignores the stakeholders in an organization, such as the – suppliers, creditors, environment where the organization operates.

2.2.2 Signaling theory

The theory of signal was developed by Ross (1977), which examined the relationship between manager's investors in the context of asymmetric information. The signal theory considers that the same information is not shared by all economic agents. Indeed, in the reality of market economies, there is a lot of imperfect information between various stakeholders within the company (Myers & Majluf, 1984). Thus managers are considered as the most informed party on the future prospects of the company because they have some privileged information that allows them to emit a signal to different investors and market participants. Initiated by Spence (1973). By having information about the expectations and future prospects of the firm, managers can use earnings management by increasing reported earnings and thus report the correct performance of the company. Deprived of this information, the market is dependent on both the behaviour of leaders and the published results to be able to formulate its own expectations. Therefore, through these accounting practices, managers may report and share private information of the future performance of the company. This leads to the alignment of market expectations with those of the managers (Sun et al., 2013). According to Xue (2004), only companies that have growing opportunities can manage their result to send signals to the market and investors. In the same sense Altamuro, Beatty and Weber (2005) reported that the use of earnings management is explained by the fact that the managers want to give relevant information about the future performance of the company.

Another theoretical approach used in the definition of voluntary disclosure process is signaling theory. Signaling theory which was developed to explain behavior in the labor markets is also used for voluntary disclosure. Signaling is a reaction to informational asymmetry in markets; in this case, companies have information that investors do not. Asymmetries can be reduced if the party with more information signals to others. In this case, managers of higher quality firms will wish to distinguish themselves from lower quality firms through voluntarily disclosures. In order to

signal successfully, managers should use credible signals (Eccles, Herz, Keegan & Philip, 2001). Signaling theory also suggests that companies with good performance use financial information reported in their annual reports to send signals to the market.

The theory reveals two types of signals, which are informational and opportunist signal. The earlier supports the idea that managers having privileged information choose to communicate this information to the market in order to adjust the values of securities and thereby reflect the real value of the company and this reduces the information asymmetry between the different actors on the capital market. According to Ahmed, Takeda and Thomas, (1999), companies with high growth prospects use earnings management to report these investment opportunities. The second type of signal, opportunist, considers that managers can use this type of signal to camouflage unprofitable investments and mislead investors in order to obtain personal gain as job security or to maximize their wealth through salary bonus based on the result. Finally, other researches consider that firms choose to reduce or increase their results to look like other firms or rather to be distinguished from others (Chalayer-Rouchon, Degeorge, & Le Nadant, 2001). So through earnings management a company sends some signals to compare itself to other companies or to the sector.

The limitation of this assumption is that it makes information available only when organizations are performing which is not adequate for decision making. With this, organizations should make sure that adequate and relevant information are made available so as to ensure the users make informed decision.

2.2.3 Theory of Inspired Confidence

The theory of inspired confidence also known as theory of rational expectation was propounded by Limperg (1932) to address both the demand and the supply for audit services. The demand for audit services is the direct consequence of the participation of third parties (interested parties of a company) in the company. These parties demand accountability from the management, in return for their investments in the company. Accountability is realized through the issuance of periodic financial reports. However, since this information provided by the management may be biased, and outside parties have no direct means of monitoring, an audit is required to assure the reliability of this information. With regard to the supply of audit assurance, Limperg (1932) suggested that the auditor should always strive to meet the public expectations.

The auditors' theory of inspired confidence offers a linkage between the users' requirement for credible and reliable financial reports and the capacity of the audit processes to meet those needs. It sees through the development of these needs of the public (stakeholders) and the audit processes over time. Developed by the Limperg Institute in Netherlands in 1985 (Limperg, 1985), the theory of inspired confidence states that the auditor, as a confidential agent, derives his broad function in society from the need for expert and independent examination as well as the need for an expert and independent judgment supported by the examinations. Thus, accountants and auditors are expected to know and realize that the public continues to expect a high rate of audit failures. This requires that the auditors must plan and perform their audit in a manner that will minimize the risk of undetected material misstatements. The accountant is under a duty to conduct his work in a manner that does not betray the confidence which he commands (Limperg, 1985).

2.3 Empirical Review

This sub-chapter covers the review of empirical studies that have investigated the relationship between audit quality and earnings management which is base according to studies in developed countries, developing countries and studies within Nigeria in order to identify existing coverage and to bring out the contribution of this study.

2.3.1. Empirical Studies in Developed Countries

Hussainey (2015) examined the impact of audit quality on earnings predictability for profitable and unprofitable firms in the United Kingdom. Data was sourced through the annual report of 631 listed firms in the United Kingdom and was analyzed using multiple regression analysis. He used the returns earnings regression model developed by Collins *et al.* (1991) and found that investors are able to better anticipate future earnings when financial statements are audited by the big four accounting firms.

Marco and Roberto (2016) studied voluntary joint audit and earnings quality: evidence from Italian SMES. The purpose of the study was to analyze the effect of a joint audit system on the quality of a firm's financial statements. The study used a sample of Italian industrial non-listed SMEs, stratified in order to fulfill certain requirements (in terms of asset value, turnover and number of employees) that make it mandatory to appoint at least one audit body (the statutory board) according to the Italian law. Logistic regression models have been used to test the research

hypotheses. The main findings was the confirmation that a joint audit system does positively affect earnings quality and the reliability of firms' financial statements. Regarding the decision to be audited by two different auditors.

In the study of Rad, Salehi and Valipour (2016) examined the impact of audit quality and ownership structure on earnings management of listed firms on Tehran Stock Exchange. Multiple linear regression model with panel data and fixed effect were used to analyzed the data obtained from annual report and accounts of one hundred (100) firms listed on Tehran Stock Exchange for the periods of five years (2009-2013). The result of the study showed that auditor tenure has a significant and negative impact on earnings management.

Alhadab and Clacher (2017) assessed the impact of audit quality on real and accrual earnings management activities of IPO firms in the United Kingdom. The data collected from the annual report of the United Kingdom IPO firms between 1998 and 2008 were analyzed using regression analysis. The study showed that high audit quality through BIG 4 constrains the use of real activities manipulations that occur via the management of discretionary expenses.

El Guindy and Basuony (2019) examined audit firm tenure and earnings management: the impact of changing accounting standards in UK firms. The study examined the association between audit firm tenure and earnings management (EM) and whether it is conditional on using the same set of accounting standards. The sample of the study comprises UK listed companies for five years by collecting data using WorldScope for financial and accounting standards data and FAME databases for audit tenure data. Discretionary accruals was used as the measure of EM. Total accruals and current accruals was measure using the cash flow statement approach. The result of the study revealed a negative association between audit firm tenure and earnings management for the pooled UK sample.

2.3.2. Empirical Studies in Developing Countries

Mahmoud, Forough and Hamid (2014) investigated the relationship between auditor tenure and the size of the audit firm with earnings management in pharmaceutical companies listed in Tehran Stock Exchange, the study was carried out in Iran. The objective of the study was to investigate the relationship between tenure and the audit firm size and earnings management. The statistical population consists of pharmaceutical companies listed in Tehran Stock Exchange and the sample

was selected to be 25 pharmaceutical companies using the systematic elimination method. The time realm of the study was 2005 to 2010. The objective of the research was applied and it was descriptive – correlational in terms of implementation and data were analyzed using multivariate regression based on panel data method. The research findings indicated that there was no relationship between auditor tenure and earnings management, but increase in the size of the audit firm reduces management flexibility in the use of discretionary accruals for earnings management.

Cahan and Sun (2014) studied the effect of audit experience on audit fees and audit quality: evidence for China. The main objective of the study is to examine the effect of audit experience on audit fee and audit quality. The study made use secondary data using regression analysis to test the hypotheses. It was found out that experience is positively associated with audit fees and negatively associated with absolute discretionary accruals. The variable used to proxy audit experience is considering the incremental effects of gender, education, engagement tenure, industry specialization and client importance.

Kim, Liu and Rhee (2014) investigated on the impact of audit firm size on earnings management. The study examines the effect of firm size on corporate earnings management. The study made use of all companies whose financial statement data are available from Compustat database for the 18-year period from 1983 to 2000. To examine the effect of firm size, all the available observations are grouped into large-, medium-, and small-sized firm groups. Documented is empirical evidence that both large and small sized firms manage earnings to avoid reporting small negative earnings or small earnings decreases. However, it was observed that firm size played differing roles in earnings management. The result of the findings was that small firms engage in more earnings management than large or medium sized firms to avoid reporting losses. On the other hand, large and medium sized firms exhibit more aggressive earnings management to avoid reporting earnings decreases than small sized firms.

In the study carried out by Yasar (2014) on big four auditors' quality and earnings management: evidence from Turkish Stock Market, data was obtained from the annual report of sampled manufacturing industry firms for the period 2003-2007 and was analyzed using univariate and multivariate regression analysis. The study showed that audit firm size does not have an impact on discretionary accruals. It also shows that there is no difference in audit quality between big four and non-big four audit firms for restriction of earnings management in Turkey.

In the study of Soliman and Ragab (2014) on audit committee effectiveness, audit quality and earnings management of listed companies in Egypt, data was collected from annual report and accounts of fifty (50) Egyptian non-financial sector firms listed on the Egyptian Stock Exchange during the periods 2007 to 2010 and was analyzed using univariate and multivariate analysis. The study indicates that audit firm size has significant negative relationship with the level of discretionary accruals.

Kitiwong (2014) investigates the relationship between earnings management audit quality with evidence from South-East Asia. Data was sourced through structured interviews and annual report of 2,148 listed firms in Indonesia, Malaysia, the Philippines, Singapore and Thailand for the periods 1992 to 2011. The results of the panel regression analysis showed that big four audit firms have significant negative effect on discretionary accruals.

Xiaoke, Yanyan, Lisheng, Yuping and Zhenyu (2015) researched on engagement audit partner experience and audit quality in China. Chinese market data was explored to examine the relationship between the experience of the engagement audit partner and audit quality. It was found that a negative association between absolute/income-increasing abnormal accruals and the audit partner experience. In addition, it was discovered that investors do care about the experience of the engagement audit partner. The earnings response coefficient is higher for firms audited by more experienced auditors. These results are robust even after controlling for audit firm characteristics. The findings were consistent with the notion that audit partner experience increases audit quality.

Ebraheem (2015) studied audit quality and earnings management: evidence from Jordan with the aim to test the association between audit quality and earnings management (EM). Audit quality was documented that accruals would reduce when the auditor is independent. The study used generalised least square regression to investigate the influence of audit quality on E.M. the sample contained 86 companies listed on the Amman stock exchange from 2007 to 2010. The cross-sectional modified Jones model was employed to measure discretionary accruals as a proxy for EM. The study revealed that there is a significantly negative association between audit quality and EM. The result inferred that EM level is significantly lower among companies using the services of independent auditors. Moreover, the study exposed that the level of EM is significantly less among companies hiring a Big 4 audit firm, as compared to companies utilizing the service of a non-Big 4 audit firm.

Piyawiboon (2015) assessed the relationship between audit quality and earnings quality of the listed firms in four (4) industrial groups in the stock exchange of Thailand for the periods of 2009 to 2013. The study used generalised least square regression to investigate the influence of audit quality on earnings quality. The result of the panel regression analysis revealed that audit firm size has a negative correlation with the discretionary accruals.

Gumanti, Nastiti, Utami and Manik (2015) carried out their study on audit quality and earnings management in Indonesian Initial public offerings. Sample firms constitute 62 firms making IPO between 2000 and 2006 and the data collected was analyzed using multiple regression analysis. The study revealed that big four audit firm constrains the extent of discretionary accruals earnings management for Indonesian IPO firms and provides more precise information that makes management have less incentive to manage earnings.

Hasan and Wan (2015) researched on non-audit services, audit firm tenure and earnings management in Malaysia. The main objective of this study is to investigate the association of auditor-provided non-audit services and audit firm tenure with earnings management in Malaysian public listed firms. Two measurements, namely, discretionary current accruals based on the performance-adjusted model developed by Ashbaugh, Lafond and Mayhew (2003) and discretionary total accruals based on the modified Jones model (1991), are employed to estimate the level of earnings management. Our sample consists of 525 companies for financial year 2009. The results suggest that longer audit firm tenure reduces earnings management. However, the magnitude of non-audit fees exacerbates earnings management.

Mahmoud (2015) investigated on the effect of joint audit on audit quality: empirical evidence from companies listed on the Egyptian Stock Exchange. The purpose of the study was to investigate the effect of joint audit on earnings conservatism. To test the hypotheses, a sample of 32 companies listed on the Egyptian stock exchange during the period 2009 through 2013. The results of the multiple regression analyses showed that companies audited by joint auditors were more conservative than companies audited by single auditors. However, there was no significant difference in levels of earnings conservatism between companies audited by joint auditors mandatorily and companies audited by joint auditors voluntarily. It was also found that no significant difference in levels of earnings conservatism between companies audited by two big4

auditors and companies audited by two non-big4 auditors, or by one big4 auditor paired with one non-big4 auditor.

Lukman, Edi and Yusri (2016) carried out a research on the effect of audit quality on earning management within manufacturing companies listed on Indonesian stock exchange with the objective to determine the effect of audit quality and earnings management. The researcher made of secondary data. Audit quality was measured by two different proxies; i.e., audit firm size and industry specialist auditors, while earnings management was measured by discretionary accruals. Meanwhile, leverage, firm size, and operating cash flow served as control variables. The sample involved in this study comprises of manufacturing companies listed on the Indonesia Stock Exchange; covering 420 firm-year observations from the fiscal years 2010 to 2013. This study applied a Multiple regression analysis in estimating the relationship between the audit quality and earning management. As hypothesized in the study, results showed that audit quality and earning management are negatively related.

Laleh and Alireza (2016) investigated on the effect of audit size on earnings management in Tehran stock exchange, which was carried out in Iran. The purpose of the study was to Investigation the effect of audit size and on earnings management in the 116 companies listed in Tehran Stock Exchange for the period 1387 to 1392 that using multiple regressions with controlling determinants earning management has been tested. The study has been applied in terms of purpose and terms of the nature after event. And a sample of 5 companies listed on the Stock Exchange for the systematic removal. It was concluded that there is a negative correlation between the size of audit firm and audit opinion with the earnings management in the companies listed in the Tehran Stock Exchange, that is, the size of audit firm and audit opinion have significantly negative impacts on the earnings management in the above mentioned companies. In other words, increasing the size of audit firm and qualified audit opinions result in reduced earnings management in the companies listed in the Tehran Stock Exchange.

Nawaiseh (2016) carried out a research on whether earnings management can be influenced by audit quality on Jordanian listed firms or not. In the course of the study secondary data was obtained from the annual report of 13 banks listed on Amman Stick Exchange (ASE) over a period of years from 2006 to 2010 and was analyzed using regression analysis. The study revealed that

there is a negative relationship between audit fee and discretionary earnings management, that is audit fee helps to reduce manipulation of accounting figures.

Steven and Mussie (2016) investigated on the relationship between audit fees and earnings quality of financial institutions. The objective of the study was to examine the relation of audit fees and earnings quality. Literature on auditing has proposed that audit fees are a proxy for audit quality. Auditors who charge higher fees might provide a higher quality audit, either related to a fee premium for specialization or as compensation for providing a higher level of effort. A contrary view might be taken; auditors who charge higher fees might be economically reliant on those fees and allow clients more latitude in reporting earnings. Overall, the findings showed that bank firms that pay relatively higher audit fees have lower earnings quality in terms of discretionary accruals.

Ashtiani, Oskou and Takor (2016) studied audit quality and earning management in Tehran stock exchange listed companies. The objective was to examine the effect of audit quality and earnings management. In the study, the relationship was examined by measuring variables such as audit fees, auditor's experience, the rotation of auditors and audit institute. We use unit root test, Jargva test, heteroscedasticity. The tool used to test the hypothesis was regression analysis. The results showed there were negative relationship between auditor's experience and abnormal operating cash, abnormal production cost and discretionary accruals items but abnormal discretionary expenses do not have effect on auditor's experience and abnormal operating cash. Audit rotation has a significant relationship with unusual production cost and has no relationship with abnormal operational cash flow, unusual discretionary costs and discretionary accrual items. Audit fee has a relationship with abnormal operational cash flow and has no relationship with unusual production costs and abnormal discretionary accrual. Finally, it was found that audit quality could affect earning management.

Lisar and Zadeh (2016), studied the effect of independent audit quality and ownership structure on earnings management in the listed companies of Tehran Stock Exchange in Iran with the objective to evaluate the effect of independent audit quality and ownership structure on earnings management. In the study, independent audit quality and ownership structure as the dependent variable and earnings management as the independent variable were tested. The results of the study indicate that the audit quality has no effect on earnings management. And shows that ownership

structure effects on earnings management. The results also show that the ownership structure does not modify the relationship between audit quality and earnings management.

Seyedeh, Hamid and Hashem (2016) studied impact of audit quality and ownership structure on earnings management of listed firms on Tehran Stock Exchange. In the study, the auditor reputation, auditor tenure, ownership concentration and institutional ownership as an indicator of audit quality and ownership structure have been used. Also, the absolute value of discretionary accruals model of modified Jones as a direct indicator of earnings management was used. The study made use of 100 firms from listed firms on Tehran Stock Exchange within the period of 5 years (2009-2013). The study was descriptive of correlation type and to test the hypotheses, multiple linear regression model with panel data and fixed effects was used. The result of the study hypotheses showed that auditor reputation, auditor tenure and institutional ownership concentration have a significant and positive impact on earnings management.

Tareq and Abdullah (2017) established a content analysis of the impact of audit quality on the earnings management: evidence from manufacturing firms in Amman stock exchange. The study aimed to investigate the audit quality on the earnings management of industrial companies listed on the Amman Stock Exchange (ASE). The study used the modified Jones model (1991) by Dechow, Saloan and Sweeny, (1995) for measuring the discretionary accruals as proxy of earnings Management. The study applied audit fees and audit firm size as proxies in measuring audit quality. A sample of (50) firms was selected, and data covering the period 2011-2015 was collected from these companies, where (225) observations were used in the analysis. The study found that there was no significant relationship between audit fees and earnings management, but there is a significant association between big4 audit firms and earnings management, which approves that audit quality has a significant effect in interpreting earnings management.

Ana (2017) examined audit quality and earnings management: evidence from Portugal and with the objective to examine if there is a relationship between the manipulation of results and the quality of the audit, based on the study of the behavior of discretionary accruals in Portuguese non-listed companies. The means of data Collection was on the SABI (Iberian Balance sheet Analysis System) database, the sample is composed of 4723 companies from 2013 to 2015. The empirical model of the study consists of a multiple linear regression in order to explain the relationship between the discretionary accruals and the audit firm size, debt, volume business and profitability,

based on the Modified Jones Model. The results suggest that there was a positive relationship between audit quality and earnings manipulation. The level of earnings management is significantly lower among companies contracting a Big 4 audit firm, as compared to companies using a non-Big 4 audit firm.

Alzoubi and Ebraheem (2017) investigated on audit quality, debt financing, and earnings management: Evidence from Jordan. The study used the cross-sectional version of the modified Jones model, in which discretionary accruals were employed as a proxy for earnings management. Generalised least squares regression was employed to examine the influence of audit quality and debt financing on earnings management using a sample comprising 72 industrial companies during the selected period from 2006 to 2012. The results suggested that audit quality (auditor tenure, audit firm size, specialisation, and independence) had a negative relationship with earnings management.

Barghathi, Collison and Crawford (2017) studied on the impact of earnings management and audit quality: stakeholders' perceptions. The study examined the perceptions of Libyan Commercial Banks' (LCBs) stakeholders regarding the role of the external auditor in relation to earnings management (EM). A total of 28 semi-structured interviews were carried out with a range of LCB stakeholders comprising preparers of financial statements, users, regulators and academics. A questionnaire survey of stakeholders which yielded 102 Responses (response rate 53%) was also carried out. The study found out that audit firm tenure has a significant impact on earnings management.

Sarah and Mohamed (2018) researched the effect of audit quality on earnings management in developing countries: the case of Egypt. The purpose of the study is to examine the effect of audit quality on earnings management in the listed firms in Egypt. In the study, OLS regression analysis was used to explore the relationship between audit quality proxies which are Audit firm size, auditor industry specialization and auditor tenure and Earnings management in listed companies during the period 2012-2016. The results of the study revealed that; auditor tenure has a significant positive relationship with earnings management, while the rest of the Hypotheses indicate that the other variables remain to have an insignificant relationship with earnings management.

Khanh and Khuong (2018) researched on audit quality, firm characteristics and real earnings management: the case of listed Vietnamese firms with the objective to examine the effect of audit

quality and firm characteristics on real earnings management of listed companies in Vietnam. The study made of multiple linear regression which makes the researcher to focus on developing the regression model that examines determinants of real earning management in Vietnam. The variable used to measure the independent variable are audit firm size, profitability, age and leverage. The proxies used to measure earnings management are abnormal levels of cash flows from operations (REM_CFO), production costs (REM_PROD) and discretionary expenses (REM_DISX). Using the measurement of real earnings management of Roychowdhury (2006), it was being found that firm size has a negative effect on real earnings management while profitability and firm age have positive effects. Notably, there is no difference between big 4 and non-big 4 in diminishing real earnings management in Vietnam. Results are based on a large sample of 1687 firm-year observations on listed companies in Vietnam. The GMM estimator to test our hypotheses.

Jamel (2018) studied joint audit and financial scandal: the case of the French context. The objective of the study was to investigate the stock market reaction of SBF 250 after the disclosure of the financial scandal in presence of joint audit. The study sample is composed of 140 French listed enterprises. The study made use of OLS regression analysis. The empirical results demonstrated that the stock market of Non Big-Four clients does not significantly react compared to the firms audited by at least one Big Four in France. Contrary to this finding, the stock market reaction of the firms audited by two Big Four was significantly reacted compared to the enterprises audited by one Big at least in France. Those results demonstrate that joint audit with at least one Non-Big encouraged and especially in the Financial scandal periods and resolve the problem associated with the audit market concentration.

Mohamed, Ali and Ekramy (2018) carried out a research on examining the effect of joint and dual audits on earnings management practices, a research being carried out in Egypt with the objective to determine the impact of the voluntary adoption of the joint external audit approach in reducing earnings management practices through accruals and real operations compared with the adoption of the dual external audit approach. The research follows a quantitative approach to collect and analyze data from companies listed on the Egyptian Stock Exchange during the period 2010-2014. 104 firm-year observations are tested in the sample. And a multiply regression analysis made used of. The findings of the empirical study show evidence that there are consistent earnings management practices in the studied sample regardless of the type of audit (joint or dual). There

is a negative association between joint audit and discretionary accruals compared to dual audit. This means that firms with joint audit are less engaged in accrual earnings management practices. In addition, large firms that adopt joint audit are less engaged in accrual earnings management. However, there is no effect of joint audit on real earnings management practices compared to dual audit. Results are consistent for firm size, profitability and leverage. Both firm profitability and leverage show positive association with earnings management practices while size did not have a significant effect on either type of practice. Finally, it is being found that firms with high (low) profitability that adopt joint audits are less (more) likely to engage in real earnings management practices. Results are of use to regulators, external auditors and investors.

2.3.3 Empirical Studies in Nigeria

Augustine (2014) studied audit firm size and cash – based earnings management of quoted companies in Nigeria, and the objective of the study was to investigate total levels of cash – based earnings management relative to the association between cash – based earnings management and audit firm size of companies in Nigeria. The study measured the normal level of real activities by focusing on three manipulation schemes namely, manipulation of sales, overproduction, and reduction in discretionary expenses. Based on a sample of 342 companies – year observations from the NSE and applying audit firm size as a measure, comprehensive multivariate analyses were conducted on archival data covering 2006 – 2011. The result showed that audit firm size exerts significant negative relationship with cash - based earnings management of quoted companies in Nigeria.

Okolie (2014) researched on audit quality and earnings response coefficient of quoted companies in Nigeria, the study sought to find out whether audit quality has any impact or relationship with earnings response coefficients of companies in Nigeria. Audit Quality was estimated using Audit Firm Size, Audit Fees, Auditor Tenure and Auditor Client Importance. Earnings Response Coefficients model was applied to measure unexpected earnings (UE) as the actual earnings disclosed minus a measure of investors’ prior expectation of earnings scaled by the market price. It is concluded that audit quality exerts significant impact on the earning response coefficient of quoted companies in Nigeria.

Augustine (2014) conducted a study on auditor tenure, auditor independence and accrual – based earnings management of quoted companies in Nigeria. The study examined the relationship and

effects of auditor tenure and auditor independence on the earnings management (measured by the amount of discretionary accruals) of companies in Nigeria. The study relies on secondary data derived from various companies' financial statements and the Nigerian Stock Exchange fact book to determine and measure the level of earnings manipulations in corporate financial statements, applying an all-inclusive multivariate analysis. The study used ordinary regression analysis to carry out its test. The empirical analysis using a total of 342 company year observations, shows that Audit tenure and auditor independence exert significant effects and exhibit significant relationship with the amount of discretionary accruals of quoted companies in Nigeria. The descriptive statistics result reveals a minimal presence of discretionary accrual management by the companies in the sample and on the average; about 94% of the companies engage their audit firms for over three years, with a considerable experience of a substantial number of audit firms in this distribution.

Aliyu, Musa and Zachariah (2015) studied the impact of audit quality on earnings management of listed deposit money banks in Nigeria, with the objective to examine the impact of audit quality on Earnings Management of listed deposit money banks in Nigeria. The correlational research design is employed in a sample of ten (10) listed deposit money banks for a period of eight (8) years (2006-2013), using secondary data. The study used the Ordinary Least Squares (OLS) regression technique of data analysis. The study found that audit quality has significant impact on the Earnings Management of listed deposit money banks in Nigeria during the period of the study. It is being found that audit firm size and joint audit services have significant negative impact on the Earnings Management of listed deposit money banks in Nigeria. Similarly, and also that auditor financial dependence has significant positive impact on Earnings Management of listed deposit money banks in Nigeria. It was recommended that listed deposit money banks should emphasize the use of big 4 audit firm and joint audit services. More so, the Central Bank of Nigeria (CBN) should increase its surveillance in the areas of auditor remunerations.

Mikoa and Kamardin (2015) investigated on impact of audit committee and audit quality on preventing earnings management in the pre- and post- Nigerian Corporate Governance code 2011 with the objective of examining the impact of audit committee and audit quality on preventing earnings management. The study made use of multiple regressions to measure the association between audit committee, audit quality and discretionary accruals. The study also employed T-test

for independent sample to compare the results of the pre- and post- code 2011 periods. The measurement of the dependent variable was discretionary accruals measured using modified Jones. The Independent variables: Audit Committee was proxied with the proportion of non-executive audit committee members to the total audit committee members. Audit Fee is measure as non-audit fee divided by audit fee paid to an auditor; Auditor's Tenure is measure as one if the auditor's tenure is greater than the sample average otherwise zero. The result of the findings reveals that audit committee, audit fee and audit tenure has a significant negative impact on earnings management

Atu and Enegebe (2016) researched on determinants of earnings management in Nigerian quoted companies with the aim of examining the determinants of earnings management using selected quoted companies in Nigeria. The study adopts a cross-sectional research design with an extensive reliance on secondary data from the financial statement of quoted company's annual report. The simple random sampling technique was employed in selecting the 30 companies for 2007-2014 financial years. Secondary data sourced from financial statements of quoted companies retrieved from the Nigeria Stock Exchange and websites of the sampled companies will be utilized for the study. The study will make use of ordinary least squares (OLS) regression analysis as the data analysis method. In this study the researcher adopted OLS regression techniques to examine how the explanatory variables (Corporate governance, firm size, audit firm type and financial performance) impact on earnings management using discretionary accruals measure. The findings indicate the existence of negative significant relationship between board size, audit firm type and earnings management, in addition, they study also found the existence of a non-significant relationship between firm size, ROA and earnings management. The recommendation is that there is the need for companies to consider the need to increase their board independence. Again companies must ensure that the auditors' they engage are credible and have a track record of delivering reports that show the actual state of affairs of a company. Finally, Financial Reporting Council should have stiffer penalty for companies caught engaging in the act of earnings management.

Zayol, Adzembe and Akaa (2017) investigated determinants of earnings management of listed oil and gas firms in Nigeria. The study objective was to examine the determinants of earnings management of listed oil and gas firms in Nigeria. Correlational research design was adopted in

order to ascertain the relationship between the identified determinants of earnings management and earnings management. A sample of seven (7) oil and gas firms was seven out of a population of fifteen (15) firms. The study covered a period of six (6) years from 2010 to 2015. Secondary data were gathered from the published annual reports of the selected firms. The data were analyzed using multiple regression analysis through Stata. Results from the analysis show that external sector specialization has positive and significant effect on earnings management of listed oil and gas firms while external audit tenure and audit committee gender have negative and significant relationship with earnings management of listed oil and gas firms in Nigeria. However, the study found that there is no significant relationship between external audit fees and earnings management of listed oil and gas firms in Nigeria.

Ibrahim (2017) investigated on the effect of audit firm size attributes on earnings quality of listed consumer goods firms in Nigeria. The objective of the study is to study investigates the effect of audit firm attributes on earnings quality of listed consumer goods firms in Nigeria. Earnings quality is the dependent variable while industry specialized auditor, audit compensation, audit tenure and audit firm type are the independent variables. Data for the study were obtained from the audited annual report of the 13 sampled consumer goods firms for a period of 8 years covering 2007 to 2014. The study employed ordinary least square regressions as tool for analysis. The result showed that industry specialized auditor and audit firm type (Big4) have significant positive influence on earnings quality of listed consumer goods firms in Nigeria, however audit tenure and audit compensation have no significance influence on earning quality of the firms. For consumer goods firms to achieve higher earnings quality and provide quality financial information for effective decision making, it is therefore recommended that they should employ the services of industry specialized auditor and big four audit firm type who have the capability of influencing the quality of earnings of the company.

Olabisi, Agbatogun, and Akinrinlola (2017) examined audit quality and earnings management among Nigerian listed deposit money banks. The study examined relationship between Audit Quality and Earnings Management in Nigerian listed deposit money banks. The study adopted a longitudinal research design and secondary data covering a period of 2005-2014 were collected. The population of the study comprised fifteen (15) deposit money banks listed on Nigerian Stock Exchange as at 2016, out of which six (6) banks were randomly selected resulting in 60

observations. Panel data technique was employed, while fixed and random effects model were used for estimation. Descriptive Statistics, Pearson correlation coefficient and simple pooled OLS regression analysis were used for analysis to determine possible link between the variables identified. The results of the study showed that a significant positive relationship existed between joint audit and earnings management, which implies that a change to joint audit from single audit increases earnings management. Also, a significant negative relationship existed between audit specialization and earnings management, which implies that every unit increase in audit specialization decreases earnings management. However, there was an insignificant negative relationship between audit tenure and earnings management.

Eriabie and Dabor (2017) made a research on audit quality and earnings management in quoted Nigerian banks, with the objective to find out the impact of audit quality on earnings management. The study used a sample of all eighteen banks quoted on the stock exchange as at December, 2010. Data was gathered for the period 2005 to 2010. The cross-sectional year by year regression analysis was performed. Audit quality is measured by using audit fees and auditor change, and abnormal loan loss provision is used to measure earnings management. Though the result was mixed, however, based on the frequency of results for the period of the study, both audit fee and auditor change were positively related to abnormal loan loss provision. It was suggested that high audit fee and change in auditor tenure will aggravate earnings management.

Mohammed and Ibrahim (2018) examined impact of audit fees on audit quality of conglomerates companies in Nigeria. The study assessed the impact of audit fees on audit quality of listed conglomerates in Nigeria over the periods of 2004 to 2015. Data for the study were collected from the annual reports and accounts of the companies. A panel data was employed specifically using, OLS and Random Effect regressions. The study observed that both audit fees and audit firm size have positive impact on company audit quality. Also, the study suggested that need for regulatory bodies in line with best practices to look critically into proper modalities for charging audit fees that is commensurate with the audit effort.

2.4 Summary and Gap Identified in the Literature

This chapter provides review on conceptual, theoretical and empirical issues relating to the research area. The empirical review showed that previous studies have provided conflicting results. The review showed that there are still remained unanswered questions. Therefore, this study

provides further evidence to fill the gaps identified in the literature. Theoretically, the body of literature reviewed on the impact of audit quality on earnings management showed that studies such as (Aliyu *et al.*, 2015; Olabisi, Agbatogun and Akinrinlola, 2017; Sarah *et al.*, 2018) employed a single theory of agency as their theoretical underpinning. This study combines agency theory and signaling theory to explain the relationship between audit quality and earnings management.

More so, on the institutional gap, most previous studies on audit quality and earnings management focused on the banking sector and insurance firms (Mahdi *et al.*, 2011; Ilaboye *et al.*, 2014; Aliyu *et al.*, 2011 and Eriabie *et al.*, 2017), while the few studies on manufacturing industry were based on single sector (such as Ibrahim, 2017; Mohammed *et al.*, 2018)

Furthermore, Conceptually, due to scanty literature available on the investigation of audit quality and earnings management, this study used audit experience as a proxy in determining audit quality on earnings management in Nigeria. Therefore, this research fills the identified gap.

2.5 Theoretical Framework

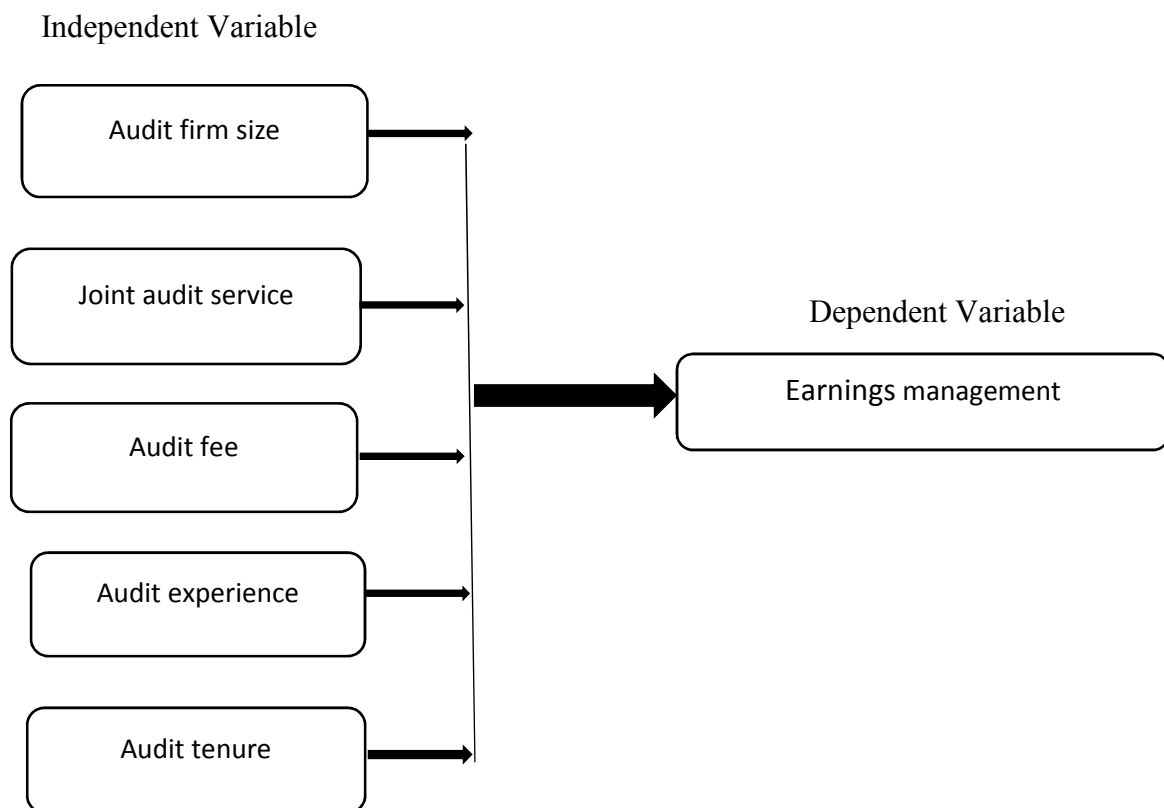
This study was guided by the agency theory and signaling theory. Agency theory tends to address the issue of information asymmetry which leads to conflicts and dissimilar interests between the principals (shareholders) and the agent (manager) which makes managers to take opportunistic behavior of manipulating the financial statement. Agency theory posits that, to prevent the managers from manipulating the accounting figures in order to mislead the stakeholders, there is need for an independent party to attest to the financial statement prepared by the management. To achieve this, high quality of audit service is required.

The agency theory perceives that audit firm size, audit fee and auditor tenure are associated with higher audit quality. The reason being that large audit firms have the necessary resources to identify and report any manipulations in the financial statement. This sends signal to the market that the financial statements prepared have credible and reliable information than those audited by the non-big four audit firms. Furthermore, large audit firms command higher audit fee in the audit market making them to be independent of their clients, thereby, providing higher audit service.

Signaling theory does not actually require higher audit quality, it merely needs send signal to the market for the investors to believe that the financial statement is free from misstatement and misrepresentation. Signaling is a reaction to informational asymmetry in markets; in this case,

companies have information that investors do not. Asymmetries can be reduced if the party with more information signals to others. Furthermore, when companies engaged in joint audit service, it sends signal to the market which is believe that when companies made use of joint audit service it likely to reduce the level of earnings management practice. Therefore, the higher the auditor’s quality and independence, the more they detect management’s manipulations in the financial statements.

Figure 2.1: Conceptual Model



Source: Author’s Conceptualization, (2019).

Based on the development of hypotheses of this study on the relationship between audit quality and earnings management, as well as their roles in the relationship, the above conceptual model illustrated research framework developed in this study. The independent variable (audit quality) was proxy with audit firm size, joint audit service, audit fee, audit experience and audit tenure and earnings management (dependable variable) was also proxy with discretionary accruals.

CHAPTER THREE

METHODOLOGY

This chapter provides discussion of the research methods and procedures employed in the study. It discusses the research design especially with respect to the choice of design, the population and sample size of the study, with the nature and source of the data collected, as well as model specification, and variable measurements. Finally, data analysis and estimation techniques was also discussed

3.1 Research Design

In order to achieve the objectives of the study, ex-post facto research design was utilized to examine the investigation of audit quality on earnings management. Ex-post facto research design was used because it deals with the data that were already in existence which can neither be manipulated nor controlled for by the researcher. The data used were already allocated and published in annual financial statements of the listed manufacturing companies in Nigeria which has both the quantitative and qualitative information needed for data analysis. It is found to be appropriate for the study.

3.2 Population of the Study

The population of the study consists of all the seventy-six (76) listed manufacturing firms on the Nigeria Stock Exchange (NSE Fact book, 2017).

Table 3.1: Population of the Study

S/N	Sector	Population
1	Construction/Real Estate	9
2	Consumer Goods	21
3	Health Care	10
4	Industrial Goods	14
5	Natural Resources	4
6	Oil and Gas	12
7	Conglomerates	6
	Total	76

3.3 Sample Size and Sampling Technique

The sample size used in the study is sixty-four (64) based on the Krejcie and Morgan (1970) sample table. Krejcie and Morgan sampling technique was adopted in this study because it ensures a satisfactory degree of representativeness and unbiasedness (Ezugu and Akimbo, 2014). Due to the unavailability of data, the study excluded nine manufacturing firms from the sample size which eventually made the total of 55 companies that was used as the sample size. The companies exempted from the sample size as a result of unavailability of data are as follows: Transactional Corporation of Nigeria Plc (TRANSCORP), 11 Plc (MOBIL), Anino International Plc (ANINO), Dn Tyre & Rubber Plc (DUNLOP), Road Nigeria Plc (ROADS), Smart Products Nigeria Plc (SMURFIT), Uacn Property Development Company Plc (UAC-PROP), Union Homes Real Estate Investment Trust (REIT), Updc Real Estate Investment Trust (UPDCREIT). In selecting the sample of the study, stratified sampling method was used coupled with random sampling techniques because the population is being divided into stratum (sector) and companies from each sector were selected randomly.

3.4 Sources and Methods of Data Collection

Secondary data were used for the study. The data used in this research were obtained from annual financial reports of the sampled companies covering a period of five (5) years ranging from 2013 to 2017. However, the data for all the variables to be used are contained in the annual report and accounts of the companies because both the dependent and independent variables are expected to be stated in the financial statement.

3.5 Data Analysis and Estimation Techniques

The study made use of panel regression method to analyze the data and the techniques of estimation is random effect model with Ordinary Least Square (OLS) regression analysis of the secondary data collected from the annual financial reports. The study made use of panel regression method because it is a combination of both cross-sectional data and time series data. The normality test was carried out through skewness, kurtosis and jarque-bera in order to test the normality distributions of the data collected. Heteroskedasticity test was done using Breusch Pagan/ Cook-Weiberg test while in testing the appropriateness of the model to be used between fixed effect and random effect, Hausman test was employed. The STATA software was used at a 5% level of significance to test the acceptance or rejection of all the hypotheses stated.

3.6 Definition and Measurement of Variables

The proxy used for independent variable (audit quality) are audit firm size, joint audit service, audit fee, auditor's experience and audit tenure. The proxy for dependent variable is discretionary accrual which is measured by modified Jones model. To estimate the extent to which a company was able to manage its earnings, the modified Jones-model was used. Dechow *et al.*, (1995) compared several models to detect earnings management and found that the modified Jones-model has the most power to do so. The study, therefore used modified Jones-Model as proposed by Dechow et al. (1995) and Karsemeijer (2012) to estimate the discretionary accruals. The formular for modified Jones model is:

$$DA_{i,t} = \beta_1(1/A_{i,t-1}) + \beta_2(\Delta REV_{i,t} - \Delta REC_{i,t}) + \beta_3(PPE_{i,t}) + \varepsilon_{i,t}$$

Where:

$DA_{i,t}$ = Discretionary accruals in year t

$A_{i,t-1}$ = Assets in year t-1

$\Delta REV_{i,t}$ = change in revenue from year t-1 to year t

$\Delta REC_{i,t}$ = change in receivables from year t-1 to year t

$PPE_{i,t}$ = property, plant and equipment (in year t)

The variables $\Delta REV_{i,t}$, $\Delta REC_{i,t}$ and $PPE_{i,t}$ are scaled by total assets in year t-1

The measurements of the variable of the study are stated below

Table 3.2: Definition and Measurement of Variables

S/N	Variables	Definition	Type	Measurement	Sources
1	$EMG_{DA,CFO}$	Earnings Management	Dependent	Measured by using discretionary accruals form the modified Jones model	Dechow et al. (1995); Karsemeijer (2012); Mohammed and Ibrahim (2018)
2	AFSIZE	Audit Firm Size	Independent	Dichotomous: '1' if company is audited by a Big4, '0' otherwise. (big four audit firm are: Ernst and Young; Deloitte; PwC; and KPMG)	Krishnan, (2003); Augustine, (2014). Nawaiseh, (2016)
3	JA	Joint Audit	Independent	Measured by dichotomous variable ("1" if an organization is audited by more than one audit firm and "0" otherwise)	Aliyu et al (2015); Olabisi et al., (2017)
4	AF	Audit Fee	Independent	Natural log total audit fees paid by a company	Gerayli et al.,(2011);Aliyu et al (2015)
5	AE	Audit Experience	Independent	Measured by age of the audit firm	Cahan and Sun (2014)
6	AT	Auditors Tenure	Independent	Length of time spent by an auditor with a company. Dummy variable, 1 for all the times spent by the same audit firm and, 0 for the year of auditor change.	Mahmoud et al., (2013); Nawaiseh (2016)

Source: Author's Compilation, (2019).

3.7 Model Specifications

To achieve the objectives of the study, the model of Tareq and Abdullah (2017), was adopted and modified. The model was presented as:

$$EM_{it} = \beta_0 + \beta_1 AFS_{i,t} + \beta_2 A.F_{i,t} + \beta_3 LEV_{i,t} + \beta_4 C.SIZE_{i,t} + \varepsilon_{i,t} \dots \dots \dots 3.2$$

Where:

EM_{it} = Earnings Management of firm i in year t

β_0 = Constant term

$AFS_{i,t}$ = Audit firm size of firm i in year t

$AF_{i,t}$ = Audit fees of firm i in year t

$CS_{i,t}$ = Company size of firm i in year t

$LEV_{i,t}$ = Financial leverage of firm i in year t

β_{1-4} = Slope value of independent variable

$\varepsilon_{i,t}$ = error term

The above model was modified and improved on for the use of this study, where two of their variables (Company Size and Financial leverage) were replaced (with Joint Audit Service, Auditor's Experience and Audit tenure) because they were not relevant in achieving the objectives of the study.

The model of the study is written as;

$$EM_{it} = \alpha + \beta_1 AFSIZE_{i,t} + \beta_2 JA_{i,t} + \beta_3 \text{Log } A.F_{i,t} + \beta_4 AE_{i,t} + \beta_5 AT_{i,t} + \varepsilon_{i,t} \dots \dots \dots 3.2$$

The abbreviations of the terms in the model are as follows:

EM_{it} = Earnings Management of firm i in year t

α = Constant term

$AFSIZE_{i,t}$ = Audit firm size of firm i in year t

$JA_{i,t}$ = Joint audit of firm i in year t

$\text{Log } A. F_{i,t}$ = Log of Audit Fee of firm i in year t

$AE_{i,t}$ = Auditors Experience of firm i in year t

$AT_{i,t}$ = Audit Tenure of firm i in year t

β_{1-5} = Slope value of independent variable

$\varepsilon_{i,t}$ = error term

***a priori* expectation**

The *a priori* expectation of the study is that $\beta_1, \beta_2, \beta_3, \beta_4$ and $\beta_5 < 0$

CHAPTER FOUR

RESULTS AND DISCUSSION OF FINDINGS

This chapter provides and discusses the results of both the descriptive (mean, standard deviation, maximum, minimum and observations), diagnostics test (Serial Correlation, Normality, Linearity, Heteroskedasticity and Multicollinearity) and inferential statistic employed in the study (Panel regression analysis technique). The hypotheses tested in the study was also discussed in this chapter.

4.1 Descriptive Statistics of Variables

This section shows the descriptive analysis and summary of the data collected through mean, standard deviation, as well as minimum and maximum values to give a snapshot of the data analyzed.

Table 4.1 shows that earnings management measured through discretionary accrual manipulation has an average value of 0.4334 with the minimum and maximum of -1.6 and 4.88 respectively, and standard deviation of 0.4247 which implies that the variable (discretionary accrual) invested is more connected around the mean. More so, the result of the table shows that audit firm size (AFS) depict an average value of 0.6400: which implies that the average of 64% of the listed manufacturing companies make use of the Big 4 firms as their auditor, with the minimum and maximum of 0 and 1 respectively, then the standard deviation of 0.4809 which means that there is a widely dispersion from the mean value.

Furthermore, the mean of joint audit (JA) investigated had an average value of 0.0182 implying that about 1.82% of listed manufacturing companies made use of a joint audit service while minimum and maximum of joint audit service as measured by dichotomous variable are 0 and 1 respectively. The standard deviation of 0.1339 which implies that joint audit service do not exhibit a consideration clustering around the mean. Also, the table shows that audit fee (AF) has an average value of 7.1770 (in millions naira), with the minimum and maximum of 6 and 9 respectively. The standard deviation of 0.6778 which is low and below the mean implies that data is widely dispersed from the mean value in the sampled firms.

Similarly, auditor's experience (AE) had a mean of 46.1460 with minimum and maximum 7 and 67 respectively, and a standard deviation of 21.3092 which is lower than the mean, this suggests that the auditor's experience investigated exhibits a considerable clustering around the mean. The auditor tenure (AT) of the listed manufacturing companies has a mean value of 0.0982, which implies that 9% of the sample size rotate their auditor during the period under study. While the minimum and maximum value of audit tenure as measured by dichotomous variable are 0 and 1 respectively, with a standard deviation of 0.2981 which is high and above the mean, suggesting that audit tenure investigated do not exhibit a considerable clustering around the mean.

Table 4.1 Descriptive Statistics

Variables	Mean	Standard deviation	Minimum Value	Maximum Value	Observation
Accrual	0.4334	0.4247	-1.6	4.88	275
AFS	0.6400	0.4809	0	1	275
JA	0.0182	0.1339	0	1	275
AF	7.1770	0.6778	6	9	275
AE	46.1460	21.3092	7	67	275
AT	0.0982	0.2981	0	1	275

Source: Auditor's Computation (2019).

4.2 Preliminary Analyses

The preliminary analyses concentrate on normality distribution test, multicollinearity test, heteroskedasticity test and Hausman in order to test the validity of the data as well as the model to be chosen in testing the hypotheses

4.2.1 Normality Distribution Test

The skewness and Kurtosis test in table 4.2 below shows the extent of departure from normality in the series. The recommended skewness and kurtosis value for a normal distribution in a series is between 0 and 3 respectively. (Wooldridge, 2000). The rule of thumb is that any value of skewness and kurtosis that falls outside ± 3 has normality distribution problem (Peck & Order, 2015). Table 4.2 showed the Kurtosis of all the variables (AFS, JA, AF, AE, AT) which did not exceed three,

an indication of thin-tailed (platykurtic) distribution. However, Skewness for JA, AF, AT showed that they were positively skewed, while AFS and AE were negatively skewed.

Table 4.2 Normality Distribution Table

Variables	Accural	AFS	JA	AF	AE	AT
Skewness	2.057	-0.587	1.252	0.454	-0.390	2.716
Kurtosis	1.910	-1.668	0.962	0.068	-1.400	1.414
Jarque-Bera	21793.92	540.33	18238.89	194.61	270.06	3290.74
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Source: Auditor's Computation (2019)

4.2.2 Test for Multicollinearly

The Variance Inflation Factor (VIF) test was used to test for multicollinearity in the variables used in the models. The multicollinearity test shows the relationship between two or more independent variables. The presence of multicollinearity among the exogenous constructs tend to increase the size of standard errors which often leads to confusing and misleading results as it distorts the estimates of regression coefficients as well as their statistical significance test (Hair, Black, Babin & Anderson, 2010).

From the Table 4.3, the Variance Inflation Factor (VIF) indicates the impact of other independent variables on the standard error of the regression coefficient. The result showed that there is absence of multicollinearity problem because it was revealed by the VIF as all values were less than the threshold of 10, and the average VIF also exceeds the value of 0.05. This follows the assumptions that there exists absence of multicollinearity problem when VIF is less than 10 (Studenmund, 2000) as multicollinearity problem arises when VIF is greater than 10 (Woodridge, 2004). The table for multicollinearity is shown in the Table 4.3 below.

Table 4.3 Test for Multicollinearity

Variable	VIF	(1/VIF)
AFS	1.17	0.854701
JA	1.15	0.869565
AF	1.15	0.869565
AE	1.04	0.961538
AT	1.01	0.990099
Mean VIF	1.10	

Source: Author's Computation, 2019

4.2.3 Test for Serial Heteroscedasticity

Table 4.4 shows the constant residual error test (heteroscedasticity test). The study employed the Breusch-Pagan-Godfrey.

The result in Table 4.4 revealed the absence of heteroscedasticity in all models of the study. The result shows that the p-value (0.7600) is greater than 5% significant level, the null hypothesis was rejected. Therefore, this model does not face any heteroscedasticity problem.

Table 4.4 Test for Heteroscedasticity

Variable	Chi^2	P-value
Model	18.35	0.7600

Source: Author's Computation, 2019

4.2.4 Hausman Test

The hausman test is a test for model specification. In panel data analysis, the hausman test helps to choose between fixed effect model or a random effect model at 5% level of significance. If less than 5% the researcher rejects the null hypothesis and accept the alternative hypothesis, while if it is greater than 5% the researcher accepts the null hypothesis and reject the alternative hypothesis. The null hypothesis means that the preferred model is random effects while the alternative hypothesis means that the model is fixed effects.

From the result of Husman test shown in table 4.5, the p-value (0.0603) is greater than 5%, therefore, the null hypothesis will be accepted which means that the random effect model is most appropriate.

Table 4.5 Hausman Test

Variable	Chi^2	P-value
Model	5.71	0.0603

Source: Author's Computation, 2019

4.3 Restatement and Test of Hypotheses

Table 4.6 was used to provide answers to the research questions raised and also to test the hypotheses formulated in chapter one.

The result in table 4.6 shows the linear relationship between audit quality (proxied by audit firm size, joint audit, auditor financial dependent, auditors' experience and audit tenure) and earnings management (proxied by discretionary accrual) of the listed manufacturing firms in Nigeria for the periods of 2013 to 2017, with the use of panel regression analysis. The table 4.6 shows that the model is fitted as evidenced by the F-Statistics of 5.81 which is significant at 1% level of significance as indicated by p-value of 0.0032. The results also reveals that the independent variables of the model explained around 41% of the variations in the dependent variable of listed manufacturing companies in Nigeria, from the coefficient of determinations (R^2 value of 0.4095). while the remaining 59% are caused by other independent variable not included in the model.

Table 4.6 Regression Table

Variables	Coefficient	Std error	t-value	p-value
AFS	-0.3238	0.0726	-4.46	0.002***
JA	-1.1757	0.2773	-4.24	0.000***
AF	-0.3409	0.0539	-6.33	0.001***
AE	-0.0021	0.0015	-1.40	0.063*
AT	0.1156	0.0393	2.94	0.044**
Cons	-0.5337	0.1788	-2.98	0.000***
F-stat	5.81			0.0032***
R^2	0.4095			
Adjusted R^2	0.321			

*, **, *** : denotes Significant at 10%, 5% and 1% level respectively.

() : denotes P-value, while the value denotes Coefficients

Source: Author's Computation, (2019).

4.3.1 Restatement and Test of Hypothesis

Restatement and Test of Hypothesis one

H₀₁: Audit firm size has no significant effect on the earnings management of the listed manufacturing companies in Nigeria.

The result in Table 4.6 reveals that audit firm size (AFS) has a negative effect on earnings management (discretionary accrual) of the selected manufacturing companies in Nigeria as indicated by coefficient (-0.3238) which is significant at 5% level of significance with p-value (0.002). The null hypothesis was rejected, which states that: audit firm size has no significant effect on the earnings management of the listed manufacturing companies in Nigeria. Therefore, alternative hypothesis which state that audit firm size has significant effect on the earnings management of the listed manufacturing companies in Nigeria was accepted. Which implies that the larger the audit firm the lower the earnings manipulation. This shows that over 32% of the sample listed manufacturing companies in Nigeria were audited by large audit firm (Big 4) during the period of the study. it reduces the earnings manipulation practice by 32% in the listed manufacturing firms in Nigeria.

4.3.2 Restatement and Test of Hypothesis two

H₀₂: There is no significant relationship between joint audit service and earnings management of the listed manufacturing companies in Nigeria.

Based on the result shown in Table 4.6 above, the findings reveal that joint audit service exhibit a negative significant influence on earnings management practices of listed manufacturing companies in Nigeria as indicated by the coefficient of (-1.1757) and p-value of (0.000) at 5% level of significant. Thereby, providing basis to rejecting the null hypothesis which state that here is no significant relationship between joint audit service and earnings management of the listed manufacturing companies in Nigeria because the p-value is less than the level of significant and accept the alternative hypothesis which also state that there is significant relationship between joint audit service and earnings management of the listed manufacturing companies in Nigeria. The result implies that a joint audit service is an influential determinant of earnings management in the

selected listed manufacturing companies in Nigeria. That is, if a company engage in a joint audit service it reduces the level of earnings manipulation.

4.3.3 Restatement and Test of Hypothesis three

H₀₃: Audit fee has no significant impact on the earnings management of the listed manufacturing companies in Nigeria.

The result in the Table 4.6 indicate that audit fee (AF) has a negative effect on earnings management practices of the listed manufacturing companies in Nigeria as indicated with the coefficient of -0.3409 with the p-value (0.001) at 5% level of significant, this implies that p-value is less than the 5% level of significant, it thereby lead to the rejection of null hypothesis which state that audit fee has no significant impact on the earnings management of the listed manufacturing companies in Nigeria and then accept the alternative hypothesis which also state that auditor financial dependence has significant impact on the earnings management of the listed manufacturing companies in Nigeria. This also implies that every N1 (1 Naira) increase in audit fee will lead to 34% reductions in earnings manipulation practice of the manufacturing firms in Nigeria.

4.3.4 Restatement and Test of Hypothesis four

H₀₄: There is no significant relationship between audit experience and earnings management of the listed manufacturing companies in Nigeria.

Furthermore, the result of the random effect model regression in Table 4.6 above shows that auditor's experience has an insignificant negative influence on earnings management among the listed manufacturing companies in Nigeria. This was indicated by the coefficient of -0.0021 with a p-value of 0.063 at 5% level of significant, which implies that the null hypothesis which state that there is no significant relationship between auditor's experience and earnings management of the listed manufacturing companies in Nigeria will be accepted due to the fact that the p-value is greater than the 5% level of significant and then the alternative hypothesis which state that there is significant relationship between audit experience and earnings management of the listed manufacturing companies in Nigeria will be rejected. This implies that the auditors age of

establishment do not affect the level of earnings management of the listed manufacturing companies in Nigeria.

4.3.5 Restatement and Test of Hypothesis five

H₀₅: Audit tenure has no significant effect on the earnings management of the listed manufacturing companies in Nigeria.

Based on the result shown above in Table 4.6, it indicated that audit tenure (AT) has a positive significant effect on earnings management of listed manufacturing firms in Nigeria as indicated by coefficient (0.1156) with p-value of 0.044 at 5% level of significant. This indicate that the null hypothesis which states that audit tenure has no significant effect on the earnings management of the listed manufacturing companies in Nigeria was rejected, which lead to the acceptance of alternative hypothesis which states audit tenure has significant effect on the earnings management of the listed manufacturing companies in Nigeria. this implies that a long relation between the external auditor and the client's management will lead to 11% increase in earnings manipulation practice which means that longer auditor tenure will result in lower independence and objectivity of auditors.

4.4 Discussion and Implications of Findings

From the empirical test and the result in Table 4.6, the study revealed that audit firm size (measured by the Big 4 firms and non-big 4) has a significant negative relationship with earnings management. However, it provides support to the hypothesis one (H₀₁) on the effect of audit firm size on earning management of the listed manufacturing companies. This implies that audit firm size provides a strong negative effect on earnings management. A significant increase in audit firm size will lead to a reduction in earnings management which is in line with the *a-priori* expectation that audit firm size should reduce the level of earnings management practice in listed manufacturing companies in Nigeria. The results of this study indicate that companies which are audited by Big 4 auditors generally engage in less earnings management than firms audited by non-Big 4. It means that Big 4 auditors in Nigeria might provide high audit quality than non-Big 4 auditors because the Big 4 audit firms in Nigeria is believed to adopt high quality control system, such as audit guidelines, working papers and other technical resources, from their mother companies which makes the chances of detecting earnings management easier. On the contrary, if

a company engages in the use of non-big 4 audit firm, it could increase the level of earnings management because there might be a lack of financial resource to spend on the training of their staffs and also the non-big 4 audit firms is believed not to have high technical competence compared to that of the Big four which might increase the chances of earnings management.

The result is in line with the assumption of the agency theory as it suggests that large audit firms would be more independent and objective in audit exercise and thereby, have higher chances of discovering and reporting earnings management employed by the managers. Therefore, when financial statement is audited by big four firms, it would reduce the level of earnings management practice in the financial statement. The findings was predominantly consistent with the work of Mahmoud *et al.*, (2014); Augustine (2014); Ebrahim (2015); Aliyu *et al.*, (2015); Lukman *et al.*, (2016); Tareq *et al.*, (2017); Alzoubi *et al.*, (2017); Khanah *et al.*, (2018) which found that audit firm size has negative significant relationship to earnings management, which implies that the larger the audit firm, the lower the earnings manipulation. However, the result contradicts the result of Kim *et al.*, (2014); Ana (2017); Ibrahim (2017) and Muhammed (2018) which shows that audit firm size has a significant positive relationship, which implies that the larger the audit firm size, the greater the chances of earnings management of the listed manufacturing companies.

From Table 4.6 also, the study found out that joint audit service has significant negative relationship on level at which earnings management are being manipulated by the listed manufacturing companies in Nigeria, as indicated by the coefficient of -1.1757 with the p-value of 0.000 which implies that companies that engage in joint audit are less involved with earnings manipulation. The result also corroborates the *a-priori* expectation as the researcher expects that a company involved in joint audit service will engage in less earnings manipulation practice because the audit firms will have the opportunity for mutual consultation, opportunity in sharing their experience with each other, also there will be better audit quality which all have the chances of reducing earnings management practice of manufacturing companies in Nigeria. The finding of this study corroborate the findings of Aliyu *et al.* (2015); Jamel (2018); Mohamed (2018) where they found significant negative relationship between joint audit service and earnings management. However, contrarily, Marco (2016), and Olabisi *et al.*, (2018) found that joint audit service increases the level of earnings management. The result was supported with the assumption of the signaling theory as it asserted by the passing of information to the market that the financial

statement is free from financial misrepresentation due to the fact that the financial information was audited by two audit firms.

Similarly, the statistical result in Table 4.6 revealed that there is significant negative relationship between audit fees and earnings management of listed manufacturing companies in Nigeria as indicated by coefficient (-0.3409) with p-value (0.001). This implies that as a company increases the auditor's remuneration by N1 (1 Naira), the earnings management reduces by 34%. This conform by the argument of the agency theory which stipulates that auditors should not be financially dependent on the fees (audit and non-audit service fee) from any client. Auditors should only rely on the monitoring fee, if not, it makes the auditor less likely to bow to pressure from clients in the event of discovering accounting irregularities. The result reveals that when auditors are adequately remunerated, they would use quality and more experienced staff, employ high technology and increase the number of hours of audit work since they know they will still have better profit at the end of the audit assignment, thereby, leading to higher chances of detecting and reporting earnings management. The result also implies that lower audit fee paid to the auditors increases the chances to which managers engage in earnings management due to low audit services rendered. This corroborates with the researchers' *a-prior* expectation, the researcher is expecting audit fee to reduce the level of earnings manipulation practice of listed manufacturing companies in Nigeria. Also, the result also goes in line with the findings of Miko *et al.*, 2015; Nawaiseh 2016 and Steven *et al.*, 2016 as they found out that audit fee has a negative influence on earnings management of listed manufacturing companies. In contrast, Eriable *et al.*, (2015), Aliyu *et al.*, (2015) and Muhammed *et al.*, (2018) found that audit fee aggregate earnings management.

Furthermore, the Table 4.6 revealed an insignificant negative effect between audit experience and earnings management practice, which means audit experience has no relationship to do with the level of earnings management practice in the manufacturing companies. However, this is not in line with the *a-prior* expectation which is auditors' experience is expected to reduce the level of earnings management practice. Some prior studies such as Xiaoke *et al.*, (2015); Herda and Martins (2016); Nuraisya and Chariri (2016) also found no significant relationship between auditors' experience and earnings management of manufacturing companies in Nigeria. In addition, previous researchers such as Cahan *et al.*, (2014); Ashiani *et al.*, (2016) contradicts the result of this study, where they reveal that auditors experience has a significant negative effect on

earnings management of a manufacturing company, that is, the more the age of an audit firm the less the chance of engaging in earnings management practice.

Finally, from the empirical result in Table 4.6, the study showed that audit tenure has a significant positive relationship on earnings management of selected listed manufacturing companies, with the coefficient (0.1156) and p-value (0.044) which implies that the longer the period an audit firm spends with the client, the more the auditors independence is compromised and it is likely to be the greater chances of not discovering earnings management due to the over familiarity between the audit firm and the client which makes the auditor act in favour of the management which eventually lower audit quality. However, the result is in line with the argument of agency theory against long audit tenure. The theory assumes that an auditor/ audit firm, who is an intermediary between the shareholders and the management, should not be a close relationship or long term relationship with the client firm, that is the management to prevent the agency problem that usually arise between the principal and the agent, because it could create familiarity threat. The study do not concur with the *a-priori* expectation which is, the audit tenure is expected to reduce the level of earnings management practices, this is because as the auditor-client relationship lengthens, the auditor may develop close relationship with the client and there is likelihood for the auditor to act in favor of management, thereby, resulting in reduced objectivity and lower audit quality. This finding confirms the position of regulators around the world, particularly US SEC that, independence is compromised through long-term auditor tenure, thereby, making auditors less likely to report a discovered misstatement in the financial statements. The result of the study concurs with the Augustine (2014); Tyokoso *et al.*, (2015); Seyedeh *et al.*, (2016); Eriable *et al.*, (2017) and Sarah *et al.*, (2018) as they found out that audit tenure as a significant positive relationship with earnings management of the selected sample but the result is not in line with Hasan *et al.*, (2015); Alzoubi *et al.*, (2017); Zayol *et al.*, (2017); Olabisi *et al.*, (2017); Medhat *et al.*, (2018) and El Guindy *et al.*, (2019) as their study reveals that audit tenure has a significant negative effect on earnings management practice.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The fall of high profile giant companies at the dawn of the century (Enron, WorldCom) raised significant criticism on the auditing profession. More so, audit failures such as in the case of Enron Corporation, WorldCom Corporation, Global Crossing, ImClone Systems Incorporation and Tyco International, Cadbury Nig. Plc, Lever Brother Plc and so on, have raised concerns on the auditors' ability in discharging their duties because the management have engaged in the manipulations of figures which the auditors are unable to detect, which lead to the purpose of this study to examine the impact of audit quality on earnings management of listed manufacturing companies in Nigeria. The Company and Allied Matters Act (CAMA) of 2004 in Nigeria demands that publicly quoted companies should appoint independent external auditor to carry out the audit of their annual reports and accounts to provide reasonable assurance that the audited financial statements are free of any material misstatements. The importance of the audit of financial statements is to reduce the risk of making decisions by the stakeholders on incorrect financial information or numbers.

Five specific objectives were developed to proffer answers to the research questions and they include: to examine the effect of audit firm size on earnings management of the listed manufacturing companies in Nigeria; to assess the influence of joint audit on earnings management of the listed manufacturing companies in Nigeria; to investigate the impact of auditor financial dependence on earnings management of the listed manufacturing companies in Nigeria; to determine the impact of audit experience on earnings management of the listed manufacturing company in Nigeria; and to ascertain the level at which audit tenure affect earnings management of the listed manufacturing company in Nigeria. the study covers the scope of five years period from 2013 to 2017 of the listed manufacturing companies.

There were different literatures that was review on audit quality and earnings management. This was divided into four sub chapters; the conceptual review, theoretical review, empirical review and the gaps in the literatures. The study examines the various concept of earnings management, motivations of earnings management and the concept of audit and audit quality. Also the theory underpinning this study is the agency theory and signaling theory. The empirical findings of the

previous researchers were reviewed and divided into studies from foreign countries and studies in Nigeria. The chapter also reveals a number of gaps in the extant literatures reviews.

The study adopted ex-post facto research design. The population of the study comprised of all the listed manufacturing companies as at 31st December, 2018. As at that date, there were seventy-six (76) listed manufacturing companies on the floor of Nigeria Stock Exchange (NSE) spanning across seven (7) sectors. The sample size of sixty-four (64) companies which was determined by using Krejcie and Morgan (1970) sample size determining table, the researcher excluded nine (9) companies due to the unavailability of data. The data was source from the financial annual report of the listed manufacturing companies which was analyze through descriptive and inferential statistics. The hypotheses formulated were tested using panel regression analysis. The study adopted the model of Tareq *et al.*, (2017) which was modified and extended in order to include the variables used in the study and to attain the objectives of the study. Audit quality (independent variable) was measured through audit firm size, joint audit service, audit financial dependence, auditor's experience and audit tenure while earnings management (dependent variable) was measured through discretionary accrual.

Furthermore, from the findings of the first hypothesis, there was a significant negative relationship between audit firm size and earnings management, which implies that if a company engages the services of a big audit firm, it has the chance to reduce the level of earnings management practice. Likewise, joint audit service also has a significant negative impact on earnings management, which means that companies that engage in joint audit service might have the chance of low earnings management practice in the sampled manufacturing companies. More so, audit fee also has a significant negative effect on earnings management, which implies that an increase in audit fee might reduce the level of earnings management practice of listed manufacturing companies in Nigeria. in addition, audit tenure has a contrary result which is that audit tenure has a significant positive relationship with earnings management, that is, the more years an external auditor used in auditing a firm, the greater the chance of increasing earnings management. However, auditor's experience is insignificant with earnings management practice, which implies that the age of an audit firm has nothing to do with the level of earnings management practice of listed manufacturing companies in Nigeria.

5.2 Conclusion

Based on the empirical results from the analyses, the study concluded that audit firm size has a significant negative relationship with earnings management which means the larger the audit firm size the lesser the chance of earnings management practices. More so, joint audit service has a significant negative relationship with earnings management, that is, if a company engaged in joint audit service it reduces the chances of earnings management.

In addition, audit fee has a significant negative influence on earnings management practice which means the more audit fee is increase, it increases the chance of discovering of earnings management practice by the management. This assures the stakeholders that the financial statement can be rely upon due to the fact that the financial statements are free from manipulation of figures. Furthermore, auditor's experience has no significant relationship with earnings management, which means, age of an audit firm does not have any relationship with earnings management. Finally, audit tenor has a significant positive influence on earnings management of the listed manufacturing companies. This implies that longer auditor- client relationship challenges the independence of an auditor which tends to increase the level of earnings management practice.

5.3 Recommendations

Based on the findings, the study recommends that for a financial statement to be free from financial misrepresentation;

- I. Based on the findings which shows that audit firm size has a negative significant influence on earnings management of listed manufacturing companies, this study recommends that the management should emphasize on making use of large audit firms (the big 4) to audit their financial statement to gain greater trust between shareholders and creditors because it increases the chance of discovering earnings management practice. In addition, audit firms are to emphasize more on high professional standards to maintain competitiveness.
- II. More so, it was found that joint audit service has a negative significant relationship with earnings management, the study recommends that listed manufacturing companies in Nigeria should emphasize on the use of joint audit services because, companies that engaged in joint audit service experience low level of earnings management practice.

- III. Similarly, the findings revealed that audit fee as well has a negative significant impact on earnings management, the study therefore recommended that the management should not have a fixed remuneration for external auditors, it should be reviewed continually. In addition, it is also recommended that separate audit firm should be employed to provide non-audit services to a client's firm
- IV. In addition, it was found that audit experience has no significant influence on earnings management, the study recommends that the regulatory bodies should issue a framework which will state the minimum age that an audit firm will be before it can audit the financial statement of an organization.
- V. Lastly, the findings showed that audit tenure has a positive significant relationship with earnings management, the study recommended that the present audit firm tenure policy (that a firm can use the same auditor for the maximum period of ten years) should not be increased beyond the ten years. Moreover, the regulatory bodies should issue a guideline that will reduce the 10 years tenure of an auditor, as well as giving room for rotation of auditors because it was found that long audit tenure increase earnings management.

5.4 Contribution to Knowledge

The study has investigated the impact of audit quality on earnings management of the listed manufacturing companies in Nigeria and have examined various variables that can influence audit quality. However, based on the literature reviewed, it was discovered that none of the studies has investigated auditor's experience as a determinant of audit quality in Nigeria.

Previous academic researchers have assessed the impact of audit quality on earnings management in different sectors such as banking sector, insurance sector and even some sector of the listed manufacturing sector. To the extent of the literature searched, it was discovered that none of these studies has examined the audit quality on earnings management making use of all the sectors of the listed manufacturing companies which is what makes this study to be unique.

5.5 Limitations and Delimitation to the Study

The study was confronted with the challenge of lack of availability of data, which led to dropping of some companies from the study because of the omission of some years in the data base. The lack of literature on auditor's experience on earnings management in Nigeria, made the study to

focus on literature relating to auditor's experience in foreign countries for the study. However, in spite of these limitations, the objectives of the study were actualized and the findings of the study are useful for future research.

5.6 Suggestion for Further Studies

In order to improve on the study based on the limitation and delimitations identified in the study, the findings suggest the following for future researchers:

- i. Future research could consider other Audit quality proxies rather than those used in this study, that might have a greater impact on audit quality and consequently on earnings management like auditor's opinion in its audit report. Audit quality proxies used in this research, explain a small percentage of the variations in earnings management.
- ii. Considering the sample size used in the study, the sample size could therefore be increased, where both manufacturing and non-manufacturing companies could be captured.
- iii. Furthermore, the study made use of modify jones model to calculate discretionary accrual, other researchers can make use of other models.
- iv. Lastly, further studies should consider making use of primary data such as questionnaires and interviews as a research method.

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APPENDIX 1		
S/N	COMPANY	SECTOR
1	Chellarams	Conglomerate
2	A.G. Leventis	Conglomerate
3	SCOA Nig PLC	Conglomerate
4	John Holt PLC	Conglomerate
5	Skye Shelter	Construction
6	Arbico	Construction
7	Julius Berger	Construction
8	Unilever Nig	Consumer
9	Cadbury Nig	Consumer
10	Dangote Sugar	Consumer
11	Flour Mills Of Nigeria	Consumer
12	Guinness Nig	Consumer
13	Nascon Allied	Consumer
14	Nestle Nig	Consumer
15	Nigeria Breweries	Consumer
16	Pz Cussons	Consumer
17	Vitafoam Nig	Consumer
18	Menchols plc	Consumer
19	Golden Guinea Brew	Consumer
20	International Brewries	Consumer
21	Honeywell Flour	Consumer
22	Union Diacon Salt	Consumer
23	Dangote Flour	Consumer
24	Evans Medical	Healthcare
25	Glaxosmithkline Nig	Healthcare
26	May & Baker Nig	Healthcare
27	Morison Industries	Healthcare
28	Neimeth Int Pharm	Healthcare

29	Pharma-Deko	Healthcare
30	Fidscon	Healthcare
31	Union Diagnostical	Healthcare
32	Avon Crowncaps & Containers	Industrial
33	Berger Paints Nig	Industrial
34	Beta Glass Company	Industrial
35	Cement Co Of Northern Nig	Industrial
36	Cutix	Industrial
37	Dn Meyer	Industrial
38	Greif Nig	Industrial
39	Lafarge Cement Wapco Nig	Industrial
40	Premier Paints	Industrial
41	First Alumminium Nig	Industrial
42	Dangote Cement	Industrial
43	Chemical & Allied Product	Industrial
44	Eterna PLC	Oil and Gas
45	MRS Oil	Oil and Gas
46	FORTE OIL	Oil and Gas
47	JAPPAUL OIL	Oil and Gas
48	OANDO	Oil and Gas
49	SEPLAT	Oil and Gas
50	CONOIL	Oil and Gas
51	TOTAL	Oil and Gas
52	Aluminium Extrusion Indus	Resources
53	B.O.C Gases Nig	Resources
54	Multiverse	Resources
55	Thomas Wyatt	Resources

APPENDIX 11

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ACCRUAL	275	-1.6000	4.8800	.433422	.4246818	2.057	.147	1.910	.293
L									
AFS	275	.00	1.00	.6400	.48088	-.587	.147	-1.668	.293
JA	275	.0	1.0	.018	.1339	1.252	.147	0.962	.293
AF	275	6.0	9.0	7.177	.6778	.454	.147	.068	.293
AAE	274	7.00	67.00	46.1460	21.30918	-.390	.147	-1.400	.293
AT	275	.0	1.0	.098	.2981	2.716	.147	1.414	.293
Valid N (listwise)	274								

Jarque-Bera test for normality accrual afs ja af aae at

Variables	chi2	Prob>chi2
Accrual	21793.92	0.0000
afs	540.33	0.0000
ja	18238.89	0.0000
af	194.61	0.0000
aae	270.06	0.0000
at	3290.74	0.0000

```
. xtset id year
    panel variable: id (strongly balanced)
    time variable: year, 2013 to 2017
    delta: 1 unit
```

```
. summarize accrual afs ja af aae at
```

Variable	Obs	Mean	Std. Dev.	Min	Max
Accrual	275	.4334218	.4246818	-1.6	4.88
afs	275	.6400000	.4808751	0	1
ja	275	.0181818	.1338521	0	1
af	275	7.177018	.6778136	6	9
aae	275	46.14599	21.30918	7	67
at	275	.0981818	.2981028	0	1

```
. reg accrual afs ja af aae at
```

Source	SS	df	MS	Number of obs =	275
				F(5, 269) =	1.79
Model	1.59110091	5	.318220182	Prob > F =	0.1157
Residual	47.7223702	268	.178068546	R-squared =	0.323
				Adj R-squared =	0.142
Total	49.3134711	273	.180635425	Root MSE =	.42198

accrual	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
afs	-.112804	.0569025	-1.98	0.048	.0007712 .2248367
ja	-.6878525	.2043306	-3.37	0.003	-.5901499 .2144449
af	-.4451192	.0406692	-10.94	0.002	-.0349526 .125191
aae	-.0004806	.0012233	-0.39	0.695	-.0019278 .0028891
at	.3251864	.03584	9.07	0.024	-.1438201 .194193
_cons	-.717481	.2853828	-2.51	0.001	-.5443964 .5793585

```
. estimates store pooled
```


. vif

Variable	VIF	1/VIF
af	1.17	0.854701
ja	1.15	0.869565
afs	1.15	0.869565
aae	1.04	0.961538
at	1.01	0.992882
Mean VIF	1.10	

. estimates store multicollinearity

. xtreg accrual afs ja af aae at, re

Random-effects GLS regression	Number of obs =	275
Group variable: id	Number of groups =	55
R-sq: within = 0.4095	Obs per group: min =	5
between = 0.732	avg =	5.0
overall = 0.321	max =	5
	Wald chi2(5) =	5.81
corr(u_i, X) = 0 (assumed)	Prob > chi2 =	0.0032

accrual	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
afs	-.3238046	.072625	-4.46	0.002	-.0185378	.2661469
ja	-1.1756684	.2773217	-4.24	0.000	-.719209	.3678722
af	-.3409063	.0538663	-6.33	0.001	-.0646697	.1464823
aae	-.0020641	.00148	-1.40	0.063	-.0022594	.0035422
at	.1155822	.0393391	2.94	.044	-.1399196	.171084
_cons	-.5336688	.1787843	-2.98	0.000	-.7087347	.7760724
sigma_u	.19558543					
sigma_e	.38030578					
rho	.20916653	(fraction of variance due to u_i)				

. estimates store random

```
. xttest0
```

Breusch and Pagan Lagrangian multiplier test for random effects

$$\text{accrual}[id,t] = Xb + u[id] + e[id,t]$$

Estimated results:

```
      |   Var   sd = sqrt(Var)
-----+-----
accrual | .1806354   .4250123
      e | .1446325   .3803058
      u | .0382537   .1955854
```

Test: $\text{Var}(u) = 0$

```
      chibar2(01) = 18.35
      Prob > chibar2 = 0.7600
```

```
. estimates store bresuch
```

```
. xtreg accrual afs ja aae at af, fe
```

note: ja omitted because of collinearity

```
Fixed-effects (within) regression      Number of obs   =   275
Group variable: id                     Number of groups =    55
R-sq: within = 0.105                   Obs per group: min =    5
      between = 0.524                   avg =    5.0
      overall = 0.248                   max =    5
```

```
corr(u_i, Xb) = -0.1569                F(4,215)        =    8.57
                                          Prob > F         =    0.0054
```

```
-----+-----
accrual |   Coef. Std. Err.   t  P>|t|   [95% Conf. Interval]
-----+-----
      afs | .2105609 .1577841   1.33 0.183  -.1004409 .5215626
      ja | -2.11668 .889753  -1.26 0.001  -25.70042 -6.532939
      aae | .00107 .0024521   0.44 0.663  -.0037633 .0059032
      at | .0101721 .082461   0.12 0.902  -.1523634 .1727075
      af | -.011805 .1747236  -0.07 0.946  -.3561956 .3325855
      _cons | .334464 1.240582   0.27 0.788  -2.110796 2.779724
```

```
-----+-----
sigma_u | .2542647
sigma_e | .38030578
rho | .30891439 (fraction of variance due to u_i)
```

```
F test that all u_i=0: F(54, 215) = 2.13      Prob > F = 0.0001
```

```
. estimates store fixed
```

```
. hausman fixed random
```

```
---- Coefficients ----  
| (b) (B) (b-B) sqrt(diag(V_b-V_B))  
| fixed random Difference S.E.  
-----+-----  
afs | .2105609 .3238046 .1238046 .1400765  
aae | .00107 .0306414 -.0295714 .0019551  
at | .0101721 .1155822 -.1054650 .0224747  
af | -.011805 .3409063 -.3527113 .166213  
-----+-----
```

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

```
chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)  
= 5.71  
Prob>chi2 = 0.0603
```

```
. estimates store hausman
```

APPENDIX 111

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Note: N is Population Size; S is Sample Size

Source: Krejcie & Morgan, 1970