THE DEVELOPMENT OF AUDITOR INDEPENDENCE DIMENSIONS: NIGERIAN STAKEHOLDERS' PERSPECTIVE

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ABSTRACT

Past studies on auditor independence (AI) generally focused on factors influencing AI by examining individual or group of factors posited to impact AI using various proxies of AI. Since regulatory frameworks define AI along two dimensions (fact and appearance), the use of proxies such as non-audit fees ratio, audit to total fees ratio or client importance is insufficient, because of their inability to capture both dimensions of AI. The study investigated the concept of AI and developed a measure for AI based on Nigerian stakeholders' perceptions. The first phase investigated the constituents of AI and how they interdependently measure AI. Data was collected from 233 stakeholders comprising practising accountants, bank loan officers, members of the corporate governance body, Financial Reporting Council officers, officers of the Federal Inland Revenue Service and shareholders, using disproportionate stratified sampling. Results from exploratory and confirmatory factor analysis showed that the AI measure consisted of nine constructs (perceived objectivity, perceived integrity, perceived professional skepticism, self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation). The second phase examined the applicability of the measure among financial directors of listed companies. Data collected from 62 financial directors of listed companies in Lagos was analyzed using Partial Least Squares Structural Equation Modelling. Results showed that the measure was valid, reliable and applicable in Nigeria. The study contributes to by proposing and operationalizing a holistic measure for AI. It also confirms the existence of a hierarchical model explaining AI in terms of its two dimensions. (Indpendence in fact and appearance) as measured by nine constructs. The study contributes theoretically, methodologically and practically to the body of knowledge and has implications to regulators, auditors and other researchers. It will benefit regulatory and professional bodies in assessing and structuring auditor independence standards, provides an assessment tool for auditors and an avenue for further research for academics.

Keywords: Independence in Fact, Independence in Appearance, Threats Avoidance, Safeguards Implementation, Auditor Independence

ABSTRAK

Kajian lepas mengenai kebebasan juruaudit (KJ) secara umumnya tertumpu kepada faktor-faktor yang mempengaruhi KJ dengan menyelidiki faktor individu atau kumpulan yang diandaikan memberi kesan terhadap KJ melalui pelbagai proksi. Disebabkan rangka kerja kawal selia mengenal pasti KJ dalam dua dimensi (hakikat dan rupa), penggunaan proksi seperti nisbah yuran bukan audit, nisbah audit kepada jumlah yuran atau kepentingan pelanggan tidak mencukupi kerana ia tidak berupaya menggambarkan kedua-dua dimensi ini. Kajian ini menyiasat konsep KJ dan membangunkan penilaiannya berdasarkan persepsi pihak berkepentingan di Nigeria. Fasa pertama menyiasat konstituen KJ dan bagaimana ia menilai KJ. Data dikumpul menerusi 233 pihak berkepentingan daripada pengamal perakaunan, pegawai pinjaman bank, ahli-ahli badan tadbir urus korporat, pegawai-pegawai Majlis Laporan Kewangan, pegawai-pegawai Persekutuan Perkhidmatan Hasil Dalam Negeri dan pemegang saham menggunakan persampelan berstrata tidak seimbang. Keputusan analisis faktor penerokaan dan pengesahan menunjukkan penilaian KJ terdiri daripada sembilan konstruk (anggapan objektiviti, anggapan integriti, anggapan keraguan profesional, pengelakan ancaman demi kepentingan kendiri, pengelakan ancaman melalui cermin kendiri, pengelakan ancaman kebiasaan, pengelakan ancaman ugutan, pengelakan ancaman sokongan dan perlindungan pelaksanaan). Fasa kedua menyiasat kebolehgunaan penilaian di kalangan pengarah kewangan syarikat yang tersenarai. Data daripada 62 pengarah kewangan syarikat yang tersenarai di Lagos dianalisis menggunakan Model Persamaan Struktur Separa Kuasa Dua Terkecil (*Partial Least Squares Structural Equation Modelling)*. Hasil kajian menunjukkan penilaian KJ adalah sah, boleh dipercayai serta boleh digunakan di Nigeria. Kajian ini menyumbang kepada khazanah ilmu dengan mencadangkan dan mengoperasikan penilaian KJ yang holistik. Ia juga mengesahkan kewujudan model hierarki yang menjelaskan KJ dari dua dimensi (hakikat dan rupa) seperti dinyatakan oleh sembilan konstruk. Kajian ini menyumbang secara teoritikal, metodologi dan praktikal terhadap khazanah ilmu serta memberi kesan kepada pembuat undang-undang, juruaudit dan penyelidik. Ia bermanfaat kepada pembuat undang-undang dan badan profesional dalam menilai dan menstruktur standard kebebasan juruaudit, sebagai alat pengukuran juruaudit dan menyediakan landasan bagi ahli akademik menjalankan penyelidikan lanjutan.

Kata kunci: Kebebasan Sebenar, Kebebasan dalam Penampilan, Pengelakan Ancaman, Pelaksanaan Perlindungan, Kebebasan Juruaudit

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LIST OF ABBREVIATIONS

AI	Auditor Independence
AICPA	American Institute of Certified Public Accountants
AMOS	Analysis of Moment Structures
ANAN	Association of National Accountants of Nigeria
ATA	Advocacy Threat Avoidance
AVE	Average Variance Extracted
CAMA	Company and Allied Matters Act
EFA	Exploratory Factor Analysis
FIRS	Federal Inland Revenue Service
FRCN	Financial Reporting Council of Nigeria
FTA	Familiarity Threat Avoidance
IAS	International Auditing Standards
ICAN	Institute of Chartered Accountants of Nigeria
IFAC	International Federation of Accountants
IIA	Independence in Appearance
IIF	Independence in Fact
ITA	Intimidation Threat Avoidance
IOD	Institute of Directors
NAS	Non-audit Services
PAF	Principal Axis Factoring
PAI	Perceived Auditor Independence
PCA	Principal Component Analysis

PI	Perceived Integrity
PLS	Partial Least Squares
PPS	Perceived Professional Skepticism
PO	Perceived Objectivity
Q^2	Construct Cross-Validated Redundancy
R^2	R-squared Values
SAS	Statements of Accounting Standards
SEC	Security and Exchange Commission
SEM	Structural Equation Modelling
SIA	Safeguards Implementation Assessment
SITA	Self-interest Threat Avoidance
SRTA	Self-review Threat Avoidance
SOX	Sarbenese Oxley Act
SPSS	Statistical Package for Social Sciences
USA	United States of America
UK	United Kingdom

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The relevance of the audit function stems from the need to enhance the credibility and reliability of financial reports by providing reasonable and objective assurance that the financial reports reflect the true state of affairs of a business. Thus the professional codes require auditors to be independent both in fact and appearance in the conduct of audit assignments. Because independence in fact is difficult to observe, shareholders and other users of financial statements assess the auditor's appearance of objectivity by considering whether circumstances that impair Audit Independence (AI) exist. These may include existence of financial interests, business or employment relationships, length of engagement, provision of Non Audit services (NAS) client importance or gift relations.

Financial markets, shareholders, potential investors, creditors and analysts rely heavily on audited financial reports to make investment decisions. Without such trust and perceived integrity, audit reports become valueless to decision makers (Alleyne, Devonish & Alleyne, 2006). Quick and Rasmussen (2009) contend that perceptions of independence significantly influence capital market efficiency. This is because if auditors are perceived to lack independence, shareholders will demand higher returns due to higher risks borne which inadvertently increases cost of capital, deters investments and overall disrupts capital market efficiency.

AI has been described as the cornerstone of auditing which is fundamental in adding value to corporate financial reporting (Mautz & Sharaf, 1964; Previts & Merino, 1998). This goes to show that the term independence is very fundamental in auditing (both internal and external) and is sacred in the accountancy profession. The International Federation of Accountants (IFAC) has identified two types of independence; independence in fact (IIF) and independence in appearance (IIA) which auditors are expected to maintain when carrying out audit assignments. While IIF is the objective state of mind and integrity with which the auditor approaches the audit work, IIA refers to a situation whereby the auditor presents himself in such a way as to avoid insinuation from informed third parties having relevant knowledge of facts to conclude that the auditor is not objective (IFAC, 2012). This means that the auditor should be independent by maintaining objectivity and integrity and always be seen as independent by all stakeholders.

AI has gained prominence from regulatory bodies and academic scholars in the wake of high profile corporate failures. Indeed the frequency, diversity, magnitude and effects of such failures associated among other factors, with audit failures across the world has raised concerns for regulating the auditing practice by restructuring independence frameworks and monitoring compliance to AI requirements in order to improve audit quality and restore stakeholders' confidences. The risk of AI impairment is enormous in both developed and developing economies. Even though smaller accounting firms are generally more prone to compromising AI (Teoh &

Wong, 1993; Carcello & Nagy, 2004), impairment however cuts across all types of firms.

A review of some collapses shows AI impairment was and still is a major concern. For instance, in 2000, SEC in the USA documented over 8,000 breaches of AI requirements among the Big 5 accounting firms. In addition, the staggering frequencies of corporate restatements brings to fore the need for commitment to AI principles (Fardella, Hollander-Blumoff, Fleischer, Fukuyama & Klosterman, 2000). Enron was the first major scandal that resulted in the eroding confidence in auditors and credibility of financial statements. Although Enron suffered from corporate governance lapses, the independence of auditors was questioned because they received substantial audit and non-audit service fees of up to 55 million dollars, more than half of which were from NAS alone in 2001 (Brown, 2005). Providing this magnitude of NAS presented a self-interest threat that may have made the auditors compromise their independence and not report management fraud of up to 152 million dollars when the company was reporting losses.

Apart from that, many of the audit firms' employees regularly took up appointment with Enron, which presented self-review and familiarity threats capable of undermining their independence since they had affiliations that threatened audit firm independence. In 2001, Australia too witnessed the collapse of HIH Insurance Ltd, which was audited and provided consultancy services by Arthur Andersen. Apart from the dearth of corporate governance, the engagement firm also failed to alert

shareholders of HIH Insurance's negative reserves subsisting since July 1998. The audit firm failed in applying professional skepticism and rigor to evaluate the client's internal control. The company finally wound up in August 2001 with a loss ranging between 3.6 to 5.3 billion Australian dollars (Mackerras, 2003) and the auditors were found to have personal affiliations with the client since three former partners were serving on the client board and as such threatened firm independence (Owen, 2003). The WorldCom collapse in 2002 resulted in the auditors, Arthur Andersen indictment for not taking adequate steps in detecting irregularities, which they ordinarily should have done, including a loan of 366 million dollars granted to the managing director in the face of 28 billion dollars outstanding loans (Banyard, 2002).

Then there was the collapse of Parmalat in Italy, which saw 36,000 workers lose their jobs and 135,000 investors lose their investments. The company had been audited by three firms; Hodgson Landau Brands, Grant Thornton and finally Deloitte & Touché. Though Deloitte & Touché took over from Grant Thornton after a mandatory rotation rule in 1999, Grant Thornton was retained as subcontractor to audit other Parmalat off shore subsidiaries (Melis, 2005). Both auditors faced an indictment in a class action lawsuit and fined, Deloitte 149 million dollars to Parmalat and 8.5 million dollars as settlement while Grant Thornton was fined 6.5 million dollars for the settlement (Stempel, 2009).

AI impairment is also a serious challenge facing regulatory authorities, professional accounting bodies and Government in Nigeria. Nigeria has had its fair share of corporate collapses and bank failures such as African Petroleum, Savannah Bank, African International Bank, Union Dicon Salt, Lever Brothers and more recently, Cadbury Nigeria Plc. Though most of the failures were attributed to frauds, corporate governance mismanagement, and poor regulatory enforcement control (Okike, 2009; Olatunde & Lauwo, 2010; ROSC, 2004), the failure of auditors to report such mismanagements and frauds also implicates the auditors in abetting such failures (Faboyede & Mukoro, 2012).

Furthermore, some failures directly resulted from compromised audits (Bakre, 2007; Ajibolade, 2008) which eventually led to corporate collapse. For example, in March 2006 a reputable accounting firm Akintola Williams Deloitte faced an indictment for facilitating fraud and financial misstatements of Afribank Nigeria Plc and conniving with the board of directors of Cadbury Nigeria Plc in overstating the company's accounts amounting to 15 billion Naira (111.11 million dollars)[1]. The Nigerian economy was also reported to have lost more than 6 billion Naira (42.86 million dollars) from 1990-1994 to fraud resulting from failed banks, most of them having reputable auditors who could have risen alarms (Bakre, 2007). Apart from the structural reforms that followed the banking distress in 2005, the Central bank of Nigeria (CBN) in 2010 had to bail out 10 commercial banks with 1.73 trillion Naira (11.5 billion dollars) and transfer their ownership to Asset Management Company of

1. The Nigerian currency is Naira and the prevailing exchange rate of N140 to the US dollar (N140 = US$1) as cited in Bakre (2007) was used.

Nigeria (AMCON). This shows the enormous cost to the investors, depositors and the Nigerian economy at large of lost funds and of huge bailout funds (for banks) at the expense of other developmental projects. Abubakar (2011) provides evidence that the presence of professional codes alone does not positively ensure AI in Nigeria as firms still employ unethical practices such as lobbying to secure audit engagements.

In general, the corporate collapses have had significant effect on the capital market, public confidence, value of financial reports, and the audit function and auditor reputation. Improving AI by strengthening the legal, regulatory, governance cultures to ensure close monitoring, and compliance to standards and independence frameworks can help in preventing corporate failures. One way of doing this is by regularly monitoring compliance to independence standards through a comprehensive way of measuring AI. There are different opinions on how AI is measured. Prior studies have documented direct measures such as Non-audit service fees to total fees (NAS fee ratio), magnitude of audit fees (audit fee ratio) and client importance as measured by total income from any one client compared to total firm income. The NAS fee ratio measures the ratio of NAS fees to total fees or NAS fees to audit fees to ascertain the weight of NAS compared to audit fees and total firm income. The higher the NAS fee ratio, the more dependent the auditor is. Some regulatory frameworks provide a benchmark for NAS fee ratio. For instance, The Sarbanes Oxley Act 2002 provided that auditors should not provide NAS that is more than 5% of their total annual remuneration unless the client audit committee

permits such. The UK Auditing Practice Board Ethical Standards considers audit firms economically dependent on their clients when total income (audit and consulting fees) from such clients and their subsidiaries is up to 10% of the total firm income. Total fees ranging between 10% and 15% require safeguards as disclosure by engagement partner to ethics partner and governance and an arrangement of an independent external quality control review (APB, 2010; 39).

The Malaysian Institute of Accountants in 2002 established a 20% threshold of NAS fee ratio in relation to total annual fees for two or more consecutive years (Che Ahmad, Shafie & Yusof, 2006). Some audit committees use these thresholds to limit the purchase of NAS from incumbent auditor since both audit and NAS fees are disclosed in the Annual Accounts. Additionally, Kinney and Libby (2002) contend that AI be threatened by high magnitude of audit fees too, because high audit fees can also make an auditor economically dependent on the client to sustain such fees. However, fees can only influence AI if the auditor's client base is not diversified (Arrunada, 1999). Alternatively, other studies measure NAS as the relative importance of a client, defined by the weights of NAS and audit fees (total fees) across all auditor clients. Chung and Kallapur (2003) assert that this measures the magnitude of economic dependence of auditors on clients as well as the significance of the client to the auditor and thus provides a better measure of AI.

Furthermore, AI is examined in relation to audit quality using earnings surrogates as the level of discretionary or abnormal accruals and the propensity to meet or beat

earnings target. Studies using these measures focus on whether or not NAS provision or audit fees are associated with an increased likelihood of high discretionary accruals or meeting/beating earnings targets. Discretionary accruals are estimated using the Jones model, the modified Jones model, Cross sectional model or performance adjusted income decreasing/increasing accruals. Again, AI is proxied by different measures of NAS as NAS to audit fees, NAS to total fees or total fees from client in relation to total income from all other clients. The studies present mixed results; while some find no significant association between NAS, audit fees and total fees to going concern reports or discretionary accruals (DeFond, Raghunandan, & Subramanyam, 2002; Chung & Kallapur, 2003), others provide evidence that provision of NAS or high audit fees are associated with higher earnings management (Frankel, Johnson & Nelson, 2002; Larcker & Richardson, 2004).

However, Dechow, Sloan, and Sweeney (1995) and Hribar and Collins (2002) argue that using discretionary accruals as proxy for audit quality may be the reason for the inconsistent findings because they are indirect measures and as such are not influenced by the auditor and are problematic in measurement estimation. Healy (1996) also argues that the modified Jones model of discretionary accruals does not also incorporate business changes. The magnitude of NAS in relation to earning response coefficient (ERC) has been investigated to ascertain investors' perception of risk when incumbent auditors provided NAS. The findings of these studies still

remain mixed and inconclusive possibly because of the varying proxy measures of NAS fee ratio and client relative importance to auditor and earnings surprises.

There are a few studies on AI and audit quality in Nigeria. Mgbame, Eragbhe and Osazuwa (2012) examined the relation between audit tenure measured by the number of engagement years and audit quality as proxied by audit firm size and found a negative relationship. Oladipupo and Izedonmi (2011) examined the propensity of issuing unqualified audit reports in relation to auditor's independence. The study measured AI by magnitude of total audit fees paid to audit firms and found a positive but insignificant relationship between AI and type of audit report. Also, Erah and Izedonmi (2012) and Adeyemi and Olowookere (2012) used a five point likert scale to measure perceptions of stakeholders on NAS provision and found a negative effect on AI in Nigeria. The studies buttress the need for regulatory controls and monitoring of AI to continuosly assess PAI.

Taken together, the various perspectives from which AI is measured create subjectivity and may be responsible for the inconsistent findings on AI.In the light of the subjectivity and inconsistencies in measures and findings, the need to investigate stakeholders' perceptions and develop a basis for measuring and monitoring AI especially in developing economy like Nigeria becomes very important. This study aims at overcoming this research challenge.

1.2 Problem Statement

Most studies on auditor independence assert that the reliability and credibility of financial reports depend largely on stakeholders' assessment of perceived auditor independence (PAI). Yet prior studies on perceptions of AI have yielded mixed results across business and socio-economic environments. For example, Irmawan, Hudaib and Haniffa (2013) find that auditors and users in Indonesia differ with respect to their perceptions of AI as auditors were more concerned about indirect financial interest, role conflict and auditor litigation while users were more concerned about personal relationship and audit quality from restricted audit fees as threatening auditor independence.

In Barbados, Alleyne *et al.,* (2006) found perceived audit independence (PAI) was negatively affected by economic dependence, NAS provision, audit market competition, firm size, length of tenure and size and closeness of Barbadian society, and enhanced by presence of audit committees, auditor rotation, audit risks resulting from poor quality audit, regulations with respect to auditor change and auditors' rights. However, in Bahrain, Al-Ajmi and Saudagaran (2011) found that auditors, bank loan officers and financial analyst shared similar views when classifying threatening and enhancing factor. In Nigeria, Adeyemi and Akinniyi (2011) found that lengthy audit tenures, large audit fees, audit firm size and joint provision of audit and non-audit services threatened auditor independence and large audit fees was found to be the most significant threatening factor.

In sum, the study argues that various countries have differing business cultures, social norms and development of accounting practices that influence perceptions of AI. Hence, the need to analyze AI from different countries' contexts is very important because this will provide more knowledge from a different socio-economic context (Beattie, Brandt and Fearnley, 1999; Sucher & Kosmala-Maclullich, 2004; Irmawan, *et al.*, 2013). As such, the results from one country may not hold true for other countries having different socio-economic set ups. In this regard, this study seeks to examine the concept of auditor independence as perceived by Nigerian stakeholders and propose a basis for measuring PAI in Nigeria.

Similarly, despite the stricter regulatory response to corporate collapses of the early 21st century in the United States, the chairman of the Public Company Accounting Oversight Board (PCAOB) in March 2011 noted that their annual inspections showed that auditors did not approach their audit with the required objectivity, integrity and professional skepticism the assignments deserved (Tepalagul & Lin, 2015). In Nigeria, Okpara (2011) reports that auditors certify accounts as true and fair while ignoring their many defects because penalties are minor and enforcement is poor. These assertions are indications that rules alone do not ensure compliance to independence guidelines. Thus, a means of measuring auditor independence will provide a basis for evaluating and monitoring compliance to independence guidelines. This is also in line with Srivasta, Mock and Turner (2009) that there is a critical need for developing a measure to assess auditor independence risk.

Moreover, the auditor-client interaction involves various dependence-interdependence relationships. According to Shaub (2003), the level of auditor client dependence influences how the auditor moves along a continuum from rational to emotional trust, which directly influences his ability to report fairly on financial statements. One way of guarding against the likelihood of becoming emotionally sympathetic to clients is by developing a comprehensive way of measuring auditor's independence. This will provide a means of annual evaluation based on yearly changes and will help the auditor guard against independence compromises (Shaub, 2003). It will also provide a means for regulatory bodies to monitor auditor independence.

Furthermore, even though auditor independence has received much scholarly attention spanning over three decades, the direction of research has generally been archival, eperimental and perceptual studies. Archival and experimental studies (e.g. Li, 2009; Ahadiat, 2011; Al-Thuneibat, Al-Issa & Baker, 2011) focus on evaluating the impact of AI (using NAS fee ratios, magnitude of audit fees or client importance) on audit quality (using likelihood of issuing a going concern opinion, discretionary accruals, meeting or beating forecasts and earnings quality). Even though these studies use real life data, relying on proxies as measures presents various limitations to the research findings. For example, Beattie, Fearnley and Hines (2013) identify three fundamental drawbacks of the proxy measures used. Firstly, identifying valid and reliable proxy measures is difficult. Secondly, there is always the risk of omitted

variables that may influence results and thirdly, establishing a causal link between the factors investigated is not easy to establish.

Additionally, some studies have attributed the inconsistent and conflicting results to the various proxy measures used. For instance, Beattie and Fearnley (2002) assert that the measurement and validity of these measures are sometimes questionable because they suffer estimation inadequacies. Infact, some studies (e.g Larcker & Richardson, 2004; Bamber & Bamber, 2009) call for the development of more concise structural models or instruments from a sophisticated selection of variables by combining various indicators into a valid measure. These studies raise the fundamental need for proposing a measure for auditor independence.

Moreover, the perceptual studies (e.g. Alleyne, Devonish & Alleyne, 2006; Al-Ajmi & Saudagaran, 20011, Beattie *et al.*, 2013, Tepalagul & Lin, 2015) examine the impact of limited factors affecting auditor independence whether positively or negatively. Although their results help in directing regulatory attention to specific factors affecting or enhancing auditor objectivity, they fail to address what auditor independence is or how it may be measured. This is very important, as empirical evidences (e.g. Bamber & Iyer, 2007; Abubakar, 2011; Tepalagul & Lin, 2015) have shown that rules, professional codes and notions of ethical compliance to maintain independence do not deter auditors from compromising independence. Hence developing a measure will provide a comprehensive means of evaluating and monitoring auditor independence.

In addition, the corporate collapses in Nigeria have raised doubts regarding the objectivity of auditors and have led to an increasing demand for accountability and monitoring of professional accountants (Adeyemi & Olamide, 2011). Moreso, many studies have called for the need to identify reliable frameworks for assessing independence in fact and appearance (Akpom & Dimkpah, 2013). Adeyeye, Adeyemi and Otusanya (2010) also noted the necessity of monitoring compliance to independence frameworks in order for the audit profession to retain its credibility. Adeyemi and Olamide (2011) examined the effects of corporate failures on auditing and concluded that there is an urgent need for improving regulatory frameworks in order to restore confidence of stakeholders and the Nigerian capital market. In this regard, a comprehensive measure of auditor independence is not only timely but also necessary to fill the research gap and enhance monitoring of auditors.

Furthermore, there is a general perception among some scholars and other stakeholders in Nigeria that auditors put their independence in jeopardy by the manner with which they lobby for audit assignments and solicit other consultancy jobs (Abubakar, 2011). Furthermore, professional bodies are accused of not doing enough to reprimand members that were involved in ignoring material misstatements and frauds (Bakre, 2007; Olatunde & Lauwo, 2010). Some studies (Okike, 2004; Report on the Observance of Standards and Codes ROSC, 2004) have also shown that some shareholders believe auditors are no longer representing their interest as they connive with client management against shareholders. This negative perception has given rise to an upsurge of shareholders associations in Nigeria and an increased

involvement of such associations in decision-making. This trend according to Okike (2007) shows growing shareholders' dissatisfaction with the role of auditors as professional watchdogs and requires serious attention to salvage the image of the profession. Thus, a comprehensive study on stakeholders' perceptions of auditor independence is necessary in order to empirically refute or justify arbitrary statements.

Similarly, Okpara (2011) contends that auditors certify accounts as true and fair ignoring their many defects possibly because penalties are minor and enforcement is lax. In this regard, a comprehensive study on PAI will also provide a basis of measuring and monitoring PAI in Nigeria. There are a few studies in Nigeria on AI and most of them focus on examining relations between few factors influencing AI. For instance, Adeyemi and Akinniyi (2011) examined the perceptions of auditors, shareholders, accounting lecturers, stockbrokers and listed company managers on statutory auditors' independence and found that large audit fees, provision of NAS, lengthy audit tenures and size of audit firm significantly influence AI.

Another study by Adeyemi and Okpala (2011) examined the impact of AI on financial reporting by surveying auditors, shareholders, brokers, analysts, regulators, managers and lecturers and found that audit quality significantly influenced financial reporting. Adeyemi and Olowookere (2012) and Erah and Izedonmi (2012) investigated investors perception of NAS and AI and found that NAS significantly influenced perception of AI and called for regulatory supervision of auditors and

imbibing a system that will continually assess auditors' standing with stakeholders in order to sustain public confidence in financial reports. This study defers from prior studies by examining the dimensions of AI and proposing a measure for auditor independence based on stakeholders' assessments. There is no comprehensive instrument presently in Nigeria for measuring PAI, which is why many people make assertions arbitrarily. Since assessing users' perception of auditor independence is a critical issue and an empirical question to regulators and other stakeholders (Alleyne *et al.*, 2006), this study extends prior studies by examining the dimensions of AI and developing a AI measure that will provide a means of measuring and monitoring AI in Nigeria.

1.3 Research Questions

In line with the discussion above on the need to examine stakeholders' perceptions of auditor independence and provide a basis for measuring PAI in Nigeria, the study seeks to answer the following research questions:

1. What are the constituents of the dimensions of AI from the perspectives of Nigerian stakeholders?
2. How do these dimensions in (1) interdependently measure the AI?
3. How applicable is the AI measure in determining the independence of Nigerian auditors?

1.4 Research Objectives

Consistent with the research questions raised, the main objective of this study is to gain an understanding and develop a measure for the concept of AI in Nigeria. To achieve this main objective, the study seeks to achieve the following specific objectives:

1. To examine the constituents of the dimensions of AI from Nigerian stakeholders' perspective.
2. To evaluate how the dimensions in (1) interdependently measure AI.
3. To examine the applicability of the instrument established in (1) and (2) among financial directors of listed companies in Nigeria.

1.5 Scope of the Study

The study focuses on examining Nigerian stakeholders' perceptions of AI based on which it proposes a measure for AI. In this respect, the study targets informed stakeholders/users of financial statements. Hence, target respondents considered include practicing auditors, shareholders, officers of the Financial Reporting Council of Nigeria (FRCN), bank loan officers, members of corporate governance body and officers of the Federal Inland Revenue Service (FIRS). Their views are important in evaluating AI because they are informed stakeholders who are also familiar with the independence concept and make decisions on audited financial reports (Adeyemi & Akinniyi, 2011).

It however excludes auditors of Non-Listed Companies. This is because listed companies differ from Non-Listed Companies in terms market share, size and auditor type. Auditors of Listed Companies in Nigeria are either the big four or midtier non-big four firms. The study selects them because studies have shown that auditor size and type are surrogates for perceived audit quality (DeAngelo, 1981; Krishnan, 2005). Additionally, Francis and Yu (2009) and Choi, Kim, Kim and Zhang (2010) report that large audit firms provide better audit services compared to small audit firms and have more experience and expertise in identifying material problems should they exist. The study excludes internal auditors for various reasons. Firsly, internal auditors are engaged by their organizations and as such more likely to support decisions that are in line with their employers and disregard independence policies (Brody & Lowe, 2000). Similarly, Ahmad and Taylor (2009) report that commitment to professional independence has been an age-old challenge for internal auditors due to role conflict and ambiguity of the internal audit function.

The general scope of the study will cover the dimensions of AI as defined by IFAC and the component items which makeup such dimensions. Hence, the measure can be adapted for other countries having similar cultures. However, Irmawan *et al.*, (2013) observed that countries differ along regulatory, socio-economic, political and cultural lines in terms of accounting and auditing practices. As such, each environment presents its own unique features. Therefore, customizing measures to suit environmental reality will present a more meaningful assessment. In line with

this, this study focuses specifically on stakeholders' assessment of auditor independence in the Nigerian environment.

1.6 Significance of the Study

As earlier discussed, this study will focus on examining stakeholders' perception of AI and propose a measure based on stakeholders' perceptions of auditor independence in Nigeria. According to Irmawan *et al.,* (2013) independence perceptions differ across countries due to differences in social interactions involved in auditing and environmental peculiarities. As such, contextual factors within countries may define how citizens and other professionals perceive certain relationships. Most perceptual studies on AI have been carried out in the US, UK and Asia, with very few in Sub-Saharan Africa. Thus, examining Nigerian stakeholders' perceptions of AI in the light of recent financial reporting developments will contribute to the body of knowledge.

In Nigeria for example, comprehensive studies on perceptions of stakeholders about AI are lacking, especially after the restructuring of the code of corporate governance 2011 and the establishment of the Financial Reporting Council of Nigeria in 2011. Furthermore, the absence of a comprehensive basis to measure PAI of auditors of listed companies in Nigeria motivates this study. This is because developing measures involve the integration of a large body of information into a summary assessment of topical issues under consideration (Jacobs, Smith & Goddard, 2004).

The study is expects to make significant theoretical and practical contributions to knowledge as discussed below.

1.6.1 Theoretical Contributions to the Area of AI

The difficulty to directly evaluate and assess an auditor's state of mind makes independence in appearance very important to regulators, researchers and other stakeholders of the financial reporting process. Prior research efforts have examined perceptions of various users about individual or group of factors influencing auditor independence in both developed and developing countries. For example, Beattie, Fearnley and Brandt (1999) investigated the perceptions of Finance directors, audit practitioners and financial journalists about auditor independence in the UK and found that audit practitioners were less concerned about independence threats compared to other users. In particular, economic dependence and NAS provision significantly threatens PAI while existence of audit committee enhances PAI. Similarly, Alleyne *et al.*, (2006) study showed that in Barbados, PAI was threatened by economic dependence on client, NAS provision, audit market competition, firm size, length of tenure and size and closeness of Barbadian society. The existence of audit committee, audit partner rotation, audit risks, regulatory rights, requirements of auditor change and auditor rights to attend and be heard at meetings enhance PAI.

Al-Ajmi and Saudagaran (2011) also investigated the perceptions of auditors, bank loan officers and financial analysts about auditor independence in Bahrain using a set of 41 economic and environmental factors and found the three groups shared similar

strategy in classifying threatening and enhancing factors even though auditors perceived more threats to AI compared to loan officers and financial journalists. Factors found to threaten PAI included NAS provision, economic dependence on client, client financial condition, auditor size, director influence on appointment and remuneration of auditors, flexibility of accounting standards, audit market competition, size and closeness of Bahraini society and time and costs of auditor change. Factors perceived to enhance PAI included audit risks associated with poor quality audit, regulatory rights and requirements relating to auditor changes, regulation on auditor appointment and remuneration and disclosing financial and non-financial relationships between auditor and client.

In Malaysia, Abu Bakar, Abdul Rahman and Abdul Rashid (2005) found that bank loan officers perceived audit firm size, highly competitive audit markets, lengthy tenures, large size of audit fees, and provision of managerial services and the absence of an audit committee significantly threatening auditor independence, with audit firm size being the most significant factor threatening AI. Similarly, Johari, Sanusi, Abdul Rahman and Omar (2013) examined whether auditor independence as measured by self-interest, self-review and familiarity threats influenced auditors ethical judgments in Malaysia. All the three types of threats have a significant positive effect on auditors' ethical judgments.

Irmawan *et al.,* (2013) examined perceptions of AI in Indonesia and found that auditors had lower confidence on auditor independence compared to users in

situations involving crossing over to client firm, NAS provision, auditor litigation and circumstances involving indirect financial interest. Users however perceived more threats to auditor independence from personal relationships with political figures and client restriction of audit fees. In Nigeria, Adeyemi and Akinniyi (2011) investigated the correlation between non-audit fees, audit tenure and perceptions of AI. They found that among the factors threatening AI as lengthy audit tenures, NAS provision and large audit fees, the most significant factor perceived to undermine auditor independence was large audit fees. This study will be one of the first studies to comprehensively examine stakeholder perceptions in Nigeria in the light of current regulatory frameworks and propose a PAI measure that will provide a more comprehensive and empirical method of measuring PAI of auditors of listed companies in Nigeria.

The development of a PAI instrument will also contribute significantly to the body of knowledge from both academic and methodological perspectives. Academically, the proposed PAI measure will provide a basis for examining stakeholders' perceptions of AI, which generally follows an exploratory perspective of factors influencing PAI (See Beattie *et al.,* 1999; Alleyne *et al.,* 2006; Al-Ajmi & Saudagaran, 2011; Irmawan *et al.,* 2013). Secondly, the instrument for measuring PAI is also a methodological contribution to knowledge because presently there is no instrument comprising the two fundamental dimensions of AI. Hence, sourcing items from literature to make up this instrument and operationalizing the PAI measure is also a novel contribution to knowledge as other instruments for measuring latent

variables have also been developed that have gained widespread acceptability and usage. For example, Parasuraman, Zeithaml and Berry (1985) developed the SERVQUAL instrument to measure service quality based on rigorous exploratory studies. Similarly, Kaptein (2008) used exploratory and confirmatory analysis to develop and validate a measure of unethical behavior in the work place.

Furthermore, the PAI instrument will facilitate easy assessment of auditors' perceived independence in Nigeria. Since actual independence is difficult to observe and measure, most prior studies examine appearances of independence by examining perceptions of informed users such as investors, accountants, creditors, auditors, regulators and shareholders using subjective proxies as NAS fee ratio, audit fee ratio, going concern opinions, level of discretionary accruals and level of client importance to determine PAI. This has resulted in conflicting results due to the different proxies used in measuring AI.

Additionally, the PAI measure will provide a means of measuring and monitoring PAI, levels of auditors of listed companies in Nigeria overtime because perceptions of AI are very important and reflect the confidence stakeholders have on audit reports. Moreover, previous studies on PAI are from the developed countries with some in Asia and very few in Africa. A study of this nature will also be relevant to Nigeria given the country's different socio-economic, political and structural diversities.

1.6.2 Practical and Managerial Contributions

This study expects to contribute to the Nigerian regulatory framework in many respects. Firstly, the results of the study will provide a better understanding of how Nigerian stakeholders' perceive auditor independence that could also be applicable to other developing countries having similar socio-economic and cultural environments. Secondly, the results could inform regulators such as the Financial Reporting Council and professional accounting bodies such as the Institute of Chartered Accountants of Nigeria and Association of National Accountants of Nigeria and policy makers on how to structure AI frameworks and standards to enhance capital market efficiency.

Thirdly, the PAI measure expects to provide government, regulators (e.g. FRCN) and recognized accountancy professional bodies (ICAN and ANAN) with a means of measuring and monitoring PAI, which will inform the structure and level of regulatory response/policies. As the presence of professional codes alone does not ensure compliance, regulatory bodies need a consistent mechanism of monitoring perceptions of AI because perceptions have a significant influence on credibility of financial reports. The measure will also provide empirical evidence to guide AI standards and policies (DeFond & Francis, 2005). The instrument will also be very useful in restructuring existing regulatory frameworks, especially with the establishment of Financial Reporting Council of Nigeria and the issuance of SEC's new Code of Corporate Governance for companies in 2011. It will also provide an

avenue for further research as other researchers may wish to validate and test the PAI measure in various settings using various samples for improvement.

1.7 Assumptions of the Study

The study investigates stakeholders' perceptions of AI and proposes a PAI measure for AI. In this regard, the study makes the following assumptions:

1. Stakeholders who are the target respondents are consist of informed users who have knowledge about auditor independence and the circumstances that may impair audit independence.
2. The study follows IFAC's categorization of audit independence into Fact and Appearance and indicators considered rely on the IFAC's threats/safeguard approach to assessing auditor independence.
3. Other factors influencing auditor independence, which may not be applicable in Nigerian environment, are outside this study's focus and are therefore not considered.

1.8 Organization of the Study

The study consists of five chapters. This chapter introduced the study, discussed the background of study and highlighted the issues associated with auditor independence. Following this, the problem statement identified the uniqueness of stakeholder perceptions being dependent on business and socio-economic environments as well as problems of existing AI measures and the need for developing a PAI measure. This provides the basis for the research questions and

objectives. The chapter also discussed the scope of the study, significance of the study, study assumptions and organization of study.

Chapter two reviews prior research on audit independence (AI), perceptual studies and measurement of AI, conceptual approach to AI and AI regulatory frameworks in some developed countries in general and Nigeria in particular. Chapter three discusses the methodology employed in conducting the study. This includes the research framework, underpinning theories, hypothesis development and research design, which covers data collection and sampling procedures, measurement of variables and data analysis techniques.

Chapter four presents and analyzes data collected for the study and is followed by research findings. Based on the results from exploratory and confirmatory factor analysis, the PAI measure is established. Finally, the applicability of the PAI instrument is examined from a sample of financial directors of listed companies. Chapter five presents the discussion, summary, conclusions and recommendations based on the research findings and discussions. References and appendices of the study follow this.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Following the background issues raised about perceptions of auditor independence (AI) and problems of measuring AI, this chapter reviews relevant literature to provide an understanding of prior research efforts on auditor independence (AI). This will include defining the AI concept, a review of perceptual studies on AI and past measures of AI, review of major AI regulatory frameworks, Nigerian regulatory framework on AI and the dimensions of AI.

2.2 Auditor Independence

The concept of auditor independence (AI) has been the topic of much debate by researchers in response to high corporate collapses evidenced both in the developed and developing countries. The regulatory frameworks establish new regulations on independence standards for professional accountants and auditors. AI has been subject to much ambiguity about its definition. Even though there is a common understanding of what auditor independence means, most scholars and independence frameworks define it from a negative perspective, focusing largely on independence compromises rather than what independence is. According to Knechel, Krishnan, Pevzner, Shefchik, and Velury (2013), this is because a lack of independence is more easily observed than the presence of independence.

It has been described as an elusive concept that is difficult to define and problematic (Duff, 2004), difficult to prove and easy to challenge (Mednick, 1990). It is a central issue in the audit expectation gap with reference to auditors' and users interpretation of AI (Godsell, 1993; Joint Committee on Public Accounts and Audit, 2002). Yet, despite the misconceptions about AI, Carmicheal (1999) argues that an official definition of AI existed right from the time GAAS were proposed in 1947, which now falls under AU Sec 220 of the American Institute of Certified Public Accountants' (AICPA) auditing standards. Essentially, the standard requires that an auditor not be biased with respect to his clients since this will introduce partiality and erode the dependability of audit reports despite technical proficiency.

Additionally, AI requires intellectual honesty and judicial impartiality necessary for fairness to not only shareholders and management but to creditors and other users of audited financial reports (Carmicheal, 1999). This indicates that AI is synonymous with an objective approach without bias or favor, fairness and impartiality as well as upholding integrity by being intellectually honest. According to some studies (Mayhew & Pike, 2004; Anandarajan, Kleinman & Palmon, 2008), the origin of independence problems arise from the ambiguity associated with who the ultimate employer of the auditor is i.e. the party responsible for hiring, remunerating and terminating audit engagements. AI is also as an important aspect of audit quality that determines the willingness and ability of auditors to correct/report material misstatements in financial statements (DeAngelo, 1981). Some studies (e.g. Mansouri, Pirayesh & Salehi, 2009; Jamal & Saunders, 2011) assert that auditor

independence is positively related, or equals to audit competence and quality. This is because when auditors are independent, they are able to exercise unbiased judgment and provide quality audits due to the absence of ties with the client.

However, AI does not necessitate an auditor to be free of all factors that may affect his ability to give unbiased opinions. It however emphasizes freedom from factors that increase the likelihood of compromising audit opinions (McGrath, Siegel, Dunfee, Glazer & Jaenicke, 2001). Elliot and Jacobson (1998) identify three ways to evaluate whether an auditor's interest poses an unacceptable risk resulting in material bias. Firstly, by relying on what a reasonable individual can conclude in the light of prevailing facts and circumstances (reasonable or prudent person concept), secondly by applying the regulators approach which considers academic, professional and legal contributions in making judgments and thirdly by assessing investor perceptions as a basis for AI regulations. Thus the auditor is compelled to make personal assessment of his objectivity in relation to pressures and other factors likely to compromise his ability for making unbiased judgments (independence in fact) and the effects of client relationships in the eyes of well informed investors and other users of financial statements (independence in appearance).

Similarly, others assert that AI is the auditor's ability to resist management pressures by taking an unbiased viewpoint in conducting an audit, evaluating results and issuing audit reports while maintaining professional integrity and objectivity (Arens, Loebbecke, Iskandar, Susela, Isa, & Boh, 1999; Gay & Simnett, 2003). According to

Pany and Reckers (1980), this has been the fundamental concept underlying auditing practices from the time companies gained legal entity separating ownership from control. Underlying the audit stewardship is the requirement for the auditor to act with integrity, objectivity, impartiality and independence in the conduct of an audit engagement (Abu Bakar, *et al.,* 2005). Scholars argue that lack of AI was an underpinning factor of the corporate collapses in the United States, Australia and Italy (Law, 2008).

According to the International Federation of Accountants (IFAC) IIF denotes "the state of mind that permits the provision of an opinion without being affected by influences that compromise professional judgments, allowing an individual to act with integrity, objectivity and professional skepticism. IIA implies the avoidance of facts and circumstances that are so significant a reasonable and informed third party, having knowledge of all relevant information, including any safeguards applied, would conclude a firm, or a member of the assurance team's integrity, objectivity or professional skepticism has been compromised" (IFAC, 2012). This study defines AI in line with IFAC definition as approaching an audit with integrity, objectivity and professional skepticism and avoiding any situation that might inform material biasness or make informed third parties doubt an auditor's independence in the audit report.

The significance of AI to credible financial reporting has resulted in the establishment of various professional and regulatory bodies such as International

Federation of Accountants (IFAC), Australian Accounting Professional & Ethical Standards Board Limited and the Institute of Chartered Accountants of England and Wales (ICAEW), which regulate and enforce AI standards (Al-Ajmi & Saudagaran, 2011). More recent regulations include Sarbanes Oxley Act (SOX, 2001), Corporate Law Economic Reform Program (CLERP, 2004), Financial Reporting Council (FRC) and International Financial Reporting Standards (IFRS). Although some scholars argue that such regulatory reforms will be undermined by special interests and are therefore not adequate (Moore, Tetlock, Tanlu & Bazerman, 2006), such reforms become necessary due to inherent flaws in audit regulation (Bazerman, Moore, Tetlock & Tanlu 2006) and provide the benchmark for guiding audit practices (Nelson, 2006). In Nigeria, the Financial Reporting Council (FRCN) is charged among other duties, with the issuance, regulation and monitoring of auditing standards and practices as well as the safeguarding of AI, alongside the professional bodies (Association of National Accountants of Nigeria and Institute of Chartered Accountants of Nigeria).

2.3 Prior Perceptual Studies on Auditor Independence

The need to examine perceptions of auditors and other informed users about auditor independence became apparent due to the difficulty faced by researchers in directly measuring auditors' state of mind. Many studies have and are still been carried out to assess auditors and/or other informed users perceptions of auditor independence. This is because stakeholder perceptions differ across countries and business environments. According to some studies, (Beattie *et al.*, 1999; Sucher & Kosmala-

Maclullich, 2004; Irmawan *et al.*, 2013), the differences in perceptions result from country specific characteristics such as organizational cultures, societal and individual values, political and socio-economic structures.

Prior research efforts have focused on individual or group factors across a variety of users ranging from finance directors, financial analysts, investors, stockbrokers, loan officers, regulators and even auditors themselves. Research efforts have however yielded conflicting results. For example, Patel and Psaros (2000) examined the perceptions of external auditors' independence from a cross-cultural perspective. The study investigated 298 final year accounting undergraduate students from United Kingdom, Australia, India and Malaysia using a repeated measure design in eight scenarios. The study measures culture in terms of independent and interdependent construal of selfhood, which account for differences in acculturation among people. Findings indicate that students from UK and Australia had greater similarities concerning their perceptions of auditor independence compared to those from India and Malaysia. In particular, British and Australian students consider client importance to auditor to be very influential in undermining AI while the Indian students did not perceive provision of non-audit services as threatening AI. This suggests that perceptions differ across various countries depending on environmental realities.

Abu Bakar *et al.*, (2005) also examined the perceptions of 86 Malaysian loan officers' perceptions about factors influencing auditor independence. Their findings

showed that audit firms operating in highly competitive markets, small audit firms, audit firms in lengthy tenures, large audit fees, firms providing non-audit services and the absence of audit committees were highly perceived as lacking independence, with the size of the audit firm being the most significant factor influencing auditor independence. Another study by Kumar, Shanmugam and Zakariya (2008) examined the perceptions of 33 Government Linked Company shareholders about NAS provision and its influence on perceptions of AI. Using dominance analysis, the study results revealed bookkeeping and management function as the two significant factors impairing auditor independence. The study also found that the risk of impairment from management functions doubled when compared with human resource services and five times that for advisory services.

Similarly, Muhamad-Sori, Karbhari and Mohamad (2010) investigated the perceptions of audit managers, loan officers and public listed companies' perceptions of AI when auditors provided attest and non-audit services and how service types influenced PAI. Results from the survey and interviews of the 287 respondents indicate that while joint provision of NAS and attest services were perceived as undermining PAI, AI would not be undermined where a separate department of the audit firm provided such services. While auditors were mainly concerned about accounting/bookkeeping, internal audit services and managerial functions, loan officers perceived more threats from asset valuation, information systems design and implementation, corporate finance services, treasury management and reporting on

initial public offers. Managers worried more about tax planning and compliance services, secretarial and management functions.

Nieschwietz and Woolley (2009) examined the perceptions of 96 stakeholders comprising 28 CPA's, 32 loan officers and 36 members of the public about the effectiveness of SOX provisions in enhancing auditor independence. The study results indicate that even though SOX provisions enhanced perceptions of auditor independence among all the three groups, auditors' perceptions of SOX efficacy were less confident compared to other users indicating the existence of an expectation gap between auditors and users. Similarly Dart (2011) examined UK investors' perceptions of auditor independence in three independence threatening relationships: joint provision of attest and non-audit services, auditor's economic dependence on client and lengthy engagement relationships. The study also investigated whether there were differences concerning their accounting qualification, investor type and gender. Results from the survey of 113 institutional and 254 private investors revealed that both groups of investors perceived non-audit service provision and economic dependence on client as threatening AI. However, private investors were more concerned about lengthy tenures than institutional investors were. Non-parametric tests results also show that there were no differences in perceptions concerning investors' gender but they differed in respect of possessing accounting qualification and investor type.

Irmawan *et al.*, (2013) investigated the perceptions of 45 auditors (big four and non-big four) and 110 informed users (finance directors, internal auditors, academics, government officers, credit managers and investment analysts) about auditor independence. They also interviewed a top government adviser on the issue of auditor independence in Indonesia. Results from the study indicate the existence of a perception gap between auditors and users. Auditors had lower confidence in situations involving auditors taking up employment with client, non-audit service provision, auditor litigation and indirect financial interest from shareholdings. Users however perceived more threats to auditor independence from personal relationship with political figures and client restriction of audit fees resulting in poor audit quality.

Similarly, Sahnoun and Zarai (2011) examined the effect of auditor independence (as proxied by auditor tenure) and expertise (as proxied by specialization, auditor experience and firm size) on auditor-client negotiation outcomes using 53 Tunisian firms. The findings showed no significant relationship between auditor tenure and negotiation outcomes but a significant and positive relationship between auditor experience and client agreement with auditor on financial reporting issues. This suggests that auditor industry experience enhances auditor independence and mitigates client management pressure on reporting decisions. The study also found no significant relationship between client importance and client size with negotiation outcomes. In China, Hung-Chan and Wu (2011) found audit firms that were involved in multi-mergers were more likely to issue their clients modified audit opinions after

the mergers compared to those involved in single mergers, which had no significant change in issuing opinions. This suggests that improving auditor independence is not associated with an increase in audit firm size but is rather a function of the size of public clientele where in the quasi rents are more likely to mitigate auditor malfeasance.

There are very few studies on auditor independence in Nigeria. Adeyemi and Okpala (2011) investigated the perceptions of auditors and other users (shareholders, brokers, analysts, regulators, management and academics) about the impact of audit independence on financial reporting. Findings show a significant and positive relationship between audit independence and quality of financial reporting. Adeyemi and Akinniyi (2011) also examined stakeholders' perceptions of auditors' independence in Nigeria using a cross sectional survey of users comprising auditing lecturers, auditors, stock brokers, shareholders and managers. The results show that while lengthy audit tenures, non-audit service provision, large audit fees and audit firm size were perceived as threats to auditor independence, large audit fees was perceived as the most significant threat.

In addition, another study by Adeyemi and Olowookere (2012) examined the investors' perceptions of non-audit service and auditor independence in Nigeria and found that joint provision of audit and non-audit services to client significantly threatens auditor independence. The study recommends auditors to continually evaluate their standing among the various stakeholders and take necessary measures

to improve appearances of independence where stakeholder perceptions of them are low as a decline in stakeholder perceptions will result in a loss of confidence in audit reports and distrust in capital market investment.

In sum, although many perceptual studies find non-audit service a threat to AI, a few studies indicate that the threat depends on type of service provided. For instance, Okaro and Okafor (2014) investigated the perception of professional accountants in Nigeria regarding NAS provision and AI. The findings show respondents felt joint provision of NAS and attest services significantly impaired AI but outright prohibition of NAS services for incumbent auditors was costly. Respondents felt prohibition along service types such as bookkeeping, internal audit and valuation services would benefit both the auditor and client. Mishra, Raghunandan and Rama (2005) found US investors perceived more threats from tax and other services than assurance related services and voted against ratifying auditors who had provided such services.

Church and Zhang (2011) used two experiments to examine users' perception of NAS provision. The findings indicate that decision context influenced users perception of AI. Specifically, NAS provision was perceived as detrimental only when outcomes are bad, whereas good outcomes result in NAS being perceived as beneficial. In another experimental study, Beck, Fuller, Muriel and Reid (2013) examined whether disclosure of additional information about audit fees influenced investors' perception of auditor and audit characteristics. Using varying ranges of

audit fees relative to industry average, respondents were asked to rate auditor independence, auditor effort, financial statement error, audit quality and business risk. The results suggest that supplimentary disclosures of audit fees significantly influenced investors' perceptions of audit and auditor characteristics. The presentation of fees as low, average or high resulted in investors rating perceived audit quality and auditor effort as low, average or high respectively. However, when there was no disclosure of fee ranges, investors rated auditor quality and effort averagely. Contrary to this, investors perceived a decline in independence when no information was provided. Wher information was available, independence was rated as low, average or high when fees disclosed were high, average or low respectively.

However, Quick and Warming-Rasmussen (2009) study found that apart from accounting and forensic services, German investors were greatly concerned about auditor's independence when other services were provided while in Malaysia, Muhamad-Sori, *et al.,* (2010) showed that Independence concerns about non-audit service provision would be alleviated when a separate department of the audit firm provided such services. In the US, Hill and Booker (2007) examined the perceptions of state board members regarding AI when non-big four auditors provide internal and external audit services in non-public entities. Results show about half of board member respondents would not permit both engagements for the same auditor. Specifically, board members perceive joint attest and internal audit service provision as problematic for non-public entities only when same personnel perform both

services. If there is separation of internal and attest personnel, the threat was considered mitigated.

Other studies report that the frequency of the service (whether recurring or non-recurring) matter. For instance, Abdul Wahab, Gist and Abdul Majid (2014) report that audit related NAS and recurring tax services reduce the likelihood of financial restatements in Malaysia while politically connected firms were more likely to restate their financial reports. Furthermore, Alexander and Hay (2013) found auditors in New Zealand did not reduce fees for either recurring or non-recurring services. In adition, companies purchasing joint audit and NAS services were larger and more comlex than those purchasing only audit while those purchasing tax services do so on recurrently.

In addition, the impact of other factors such as length of audit tenure, client importance and size of audit firm on PAI has also been conflicting relative to the environment. While some studies (e.g. Abu Bakar *et al.*, 2005; Al-Ajmi & Saudagaran, 2011; Adeyemi & Akinniyi, 2011) found they undermined PAI, others did not (Reynolds & Francis, 2000; Francis & Yu, 2009). This further strengthens the argument that perceptions of AI are unique to individual environments.

2.4 Past Measures of Auditor Independence

Prior research has documented various ways of measuring AI. Because of non-audit services' apparent influence on independence in appearance, many studies

investigated the influence of NAS or joint provision of NAS and audit services by examining NAS fees in relation to audit fees or NAS fees to total fees as a measure of firm's independence. The rationale is that the greater the magnitude of NAS fees against audit fees or total fees, the greater the perceptions of auditor dependence on their clients. For example, Quick & Warming-Rasmussen (2009) investigated the impact of joint NAS and attest services (using NAS fee ratio to total firm fees) and found that joint provision significantly impaired AI. The perception of 33 Government Linked Company shareholders towards NAS provision in Malaysia also indicated NAS impaired AI (Kumar, Shanmugam & Zakariya, 2008). Ahadiat (2011) also used NAS fees to total fees in a 10-year longitudinal study examining the association of NAS with audit opinions. The study found auditors were more hesitant in qualifying audit reports of companies that they provided NAS.

Additionally, DeFond, Raghunandan & Subramanyam (2002) used the NAS fee ratio to total fees in assessing the association of NAS to going concern reports and found no significant association. Gore, Pope and Singh (2001) found evidence that high magnitude of NAS relative to audit fees were associated with higher negative unexpected accruals for clients of large audit firms. Similarly, Kinney, Palmrose and Scholz (2004) used NAS fees to total fees to investigate the effects of restatements on AI and found a significant positive association between audit fees, unspecified NAS fees and restatements. However, Kinney and Libby (2002) assert that the magnitude of audit fees may also adversely affect AI just as high NAS could.

The use of NAS fees to total fees has been criticized for its inability to capture overall economic dependence. For instance, some studies (e.g. Asbaugh, LaFond & Mayhew, 2003; Chung & Kallapur, 2003) used NAS fees and total fees (sum of NAS and audit fees) to investigate the relation between discretionary accruals, unexpected accruals and earnings benchmark on AI. Both studies found no significant association between fee ratio and total fees and biased financial reporting which implies that auditors earning higher fees do not necessarily violate AI. However, there is a general limitation about using earnings management proxies in measuring audit quality. Dechow, Sloan and Sweeney (1995) and Healy and Wahlen (1999) argue that unexpected accruals are noisy proxies of earnings management, are not directly associated with the auditor, are difficult to estimate and have low explanatory power.

Studies also examine AI in relation to audit quality proxies as the issuance of modified reports by investigating whether audit fees, NAS fees or total fees, size of firm in relation to client or audit committee influence were associated with the likelihood of issuing modified reports. The findings are mixed and inconclusive. For example, Li (2009) investigated the association between going concern reports and fees (NAS, audit and total fees) and the effect of client importance on reporting decisions in distressed companies. The findings show no significant association between all fees and going concern reports in 2001 but a positive association between audit and total fees and issuance of going concern reports for big clients whereas NAS still remains unassociated with going concern report. Defond,

Raghunandan, and Subramanyam (2002) also find no significant association between audit fees and NAS fees and audit opinion in US distressed companies.

Additionally, Basioudis, Papakonstantinou and Geiger (2008) find high levels of total fees were significantly associated with modified reports but when partitioned, clients paying higher audit fees were more likely to receive modified reports. In addition, those paying high NAS fees were less likely to receive modified reports indicating that high NAS fees are more detrimental to AI than audit fees. Geiger and Rama (2003) however find audit fees positively associated with modified reports where as NAS fees were not. Robinson (2008) investigated the influence of tax service provision on AI impairment among bankrupt firms as proxied by going concern opinions. Findings are consistent with knowledge spillover arguments by indicating a significant positive correlation between levels of tax service fees and the likelihood of issuing a warranted going concern opinion prior to bankruptcy filing. The mixed results may result from measurement problems of possible omission of relevant factors in analysis or differing company circumstances. For instance, Beattie & Fearnley (2002) noted that Defond, Raghunandan and Subramanyam's (2002) study omitted other mitigating factors as client status, additional funding alternative or management plans that characterize reporting for distressed companies.

Some studies have considered audit firm size as a proxy for independence and audit quality. DeAngelo (1981) argued that larger auditors had more clients and less incentives to compromise their independence and as such are more independent and

provided better quality audit than smaller firms implying that perceived AI was inversely related to audit fees resulting from retaining anyone client. Many perceptual studies on AI also find that respondents associate audit firm size with firm independence and better audit quality. For example, Muhamad-Sori and Karbhari (2006) investigated the perceptions of senior managers, auditors and loan officers' in Malaysia concerning audit firm size and AI and found that larger audit firms were considered more independent in resisting management pressure, more competent and risk averse to litigation and had more incentive to be independent.

However, some studies find large firms also consent to client adjustment. For instance, Wright (1983) examined the effect of firm size in relation to independence judgments under economic dependence situations and found significant differences in disclosure preferences between local firms that favored disclosure and bigger national firms that favored adjustment. National auditors also showed lower consensus compared to local auditors. In addition, Eisenberg and Macey (2004) examined major accounting firms of large clients to assess whether large audit firms differentiated their services and find no evidence of such quality differentials.

The literature also considers length of audit tenure as an indicator of perceived auditor independence. Some regulatory bodies in various countries concur with this view and impose mandatory firm or partner rotation. Empirical studies indicate that lengthy audit engagements result in too much familiarity thereby eroding auditor objectivity. For example, Anis (2014) investigated the perceptions of 83 Egyptian

big size and non-big size auditors about the effects of mandatory auditor rotation on audit quality. The results show a negative relationship between lengthy tenures and audit quality as well as between client-specific knowledge and mandatory rotation of auditors. The negative effect is more so for audit firms that were economically dependent on their client. The study also shows a positive relationship between AI and mandatory auditor rotation while industry specialization mitigated the negative impact of rotation on audit quality.

Similarly, Meyer, Rigsby and Boone (2006) examined association between firm tenure and audit quality and find that lengthy auditor-client relationship influenced auditor decisions of issuing qualified opinions. Davis, Soo and Trompeter (2002) also found a significant negative relationship between firm tenure and discretionary accruals and a significant positive relationship between audit tenure and forecast errors suggesting auditors in lengthy tenures tolerate clients' aggressive policies. Al-Thuneibat, Al-Issa and Baker (2011) report that equity risk premium increases with audit firm tenure increase suggesting that there is an increase in perceived risk as auditor tenure lengthens. A few other studies (Johnson, Khurana & Reynolds, 2002; Gul, Jaggi & Krishnan, 2007; Lim & Tan, 2010; Daugherty, Dickins, Hatfield & Higgs, 2013) find lengthy tenure improves independence and audit quality.

Competition in the audit market is also a factor that influences perceived independence. Stakeholders were more likely to perceive auditors as independent when competition is low because when competition is high, auditors may resort to

unwholesome practices to secure engagements. For example, Mohamed-Sori, Ramadili and Karbhari (2009) found that competition among firms or lowballing practices do not influence AI perceptions in Malaysia although fee negotiations undermined AI in smaller firms. However, Shockley (1981) provides evidence of lower perceptions of independence when audit firms operated in highly competitive markets, provided MAS and were small firms. Conversely, a few other studies (e.g. Lee & Gu, 1998; Craswell & Francis, 1999) have found that competitive audit fee discounting does not impair AI.

The presence of Audit committees (AC) considerably influences perceived AI. This is because an AC controls the appointment, remuneration, retention and oversees auditors, which enhance PAI. For instance, Hoitash & Hoitash (2009) find that strong audit committees maintain high assurance levels, were less likely to dismiss auditors, demanded higher audit quality and allowed fewer NAS. Piot (2004) also provides evidence that independent audit committees negatively correlate with insider directors, which mitigate agency conflicts and improve financial reporting while Abbott *et al.,* (2003) find that audit committees safeguard PAI by limiting the magnitude of NAS provided by the auditor. Mohamad-Sori *et al.,* (2009) also provide evidence that loan officers in Malaysia perceived audit committees as safeguarding AI. Stakeholders also measure PAI by auditors' acceptance of gifts and discount arrangements. They consider auditors who accept gifts from their clients or discount arrangements as biased and lack objectivity. Pany and Reckers (1980) also report that users perceive a significant compromise of AI if auditors accept gifts.

However, Law (2010) found that cultural tolerance of gift in Hong Kong did not influence negative perceptions of AI.

The strength and enforcement of regulation also influences PAI because of its impact in enhancing PAI. This includes regulation on audit engagement and auditor change, audit risk and flexibility of accounting standards (Beattie *et al.,* 1999). For instance, Nieschwietz and Woolley (2009) found that SOX provisions significantly influenced PAI of CPA's, loan officers and the public. Meuwissen, Moers, Peek, and Vanstraelen (2004) also find that strictness in AI regulation was associated with higher AI and audit quality. Similarly, Hollingsworth and Li (2012) investigated investors' perception of auditor economic dependence in the post SOX era. Client importance was measured by NAS fees, audit fees and total fees to audit office revenues. The results show a significant decrease in the relation between NAS fees and total fees and cost of equity following SOX, suggesting that investors concerns about economic dependence effects on AI have been largely alleviated following heightened regualation (SOX)

In addition, Clout, Chapple and Gandhi (2013) examined the impact of AI regulation reforms (Corporate Law economic Reform programme 9) in Australia on emerging and established firms over the period 2003-2005. AI was measured as change in audit fee ratio and earnings quality in the light of recent corporate governance mechanisms. Their results show an enhancement of earnings quality only for established firms post CLERP 9 reform. The results also suggest a high association

between corporate governance mechanisms (board independence and board financial skill) and earnings quality. Additionally, Cano-Rodriguez (2010) and Van Tendeloo and Vanstraelen (2008) provide evidence that strong legal systems made auditors increase effort and audit quality and also served as deterrents to aggressive policies.

With respect to auditor change, Robinson and Owens-Jackson (2009) find an inverse relationship between independent audit committees and auditor changes suggesting firms with effective independent audit committees were less likely to change auditors despite negative opinion. Similarly, some studies (Beattie *et al.,* 1999; Alleyne *et al.,* 2006; Al-Ajmi & Saudagaran, 2011) find that existence of audit committee, audit risk, audit partner rotation, auditor change regulation and audit engagement regulation enhance PAI. In sum, the studies indicate that most economic factors (such as NAS, competition, lengthy tenures and client importance) are perceived as threatening factors while regulatory factors (such as audit committees, audit risks, audit partner rotation and auditor engagement and change regulation) are perceived as enhancing PAI.

2.5 Major Regulatory Frameworks on Auditor Independence

The accounting profession in many countries is regulated by professional bodies and Accounting Standards Boards which ensure compliance to professional code of conduct and independence rules/standards, qualification of members, monitoring as well as enforcing disciplinary actions on erring members. In the case of AI, most

countries have regulatory frameworks defining independence regulations and guidelines that guide auditing practices.

Most countries adopt a principle or rule-based approach to regulation. Under the rule-based approach, tight rules with little degree of flexibility regulate auditing practices. The United States of America (USA) regulatory framework is an example of a rule based framework because the Security and Exchange Commission (SEC) and American Institute of Certified Public Accountants (AICPA) allow only a small degree of flexibility (Islam, Karim & Zijl, 2005). The principle-based approach provides independence guidance from a conceptual framework built upon fundamental principles and code of ethics. Notable for the adoption of this approach are the United Kingdom (UK), Australia (AU) International Federation of Accountants (IFAC), New Zealand (NZ) and European Union (EU) and the Institute of Chartered Accountants of England and Wales (ICAEW).

Generally, most frameworks consider AI synonymous with objectivity and define the fundamental basis of auditing practice. All professional accountancy bodies require their members to be objective and independent by maintaining impartiality, intellectual honesty, and fairness, resisting biases, prejudice or conflict of interest that may compromise their independence in the conduct of their audit engagements. This is because their opinion adds value to the credibility and reliability of financial statements they report on. The regulatory frameworks on AI distinguish between Independence in Appearance (IIA) and Independence in Fact (IIF) or Independence

of mind. All the regulatory frameworks acknowledge that IIF is a state of the mind that cannot be easily observed and can only be ascertained based on a circumstantial breach as audit failure (Beattie & Fearnley, 2002). The frameworks also acknowledge that IIA relies on beliefs/perceptions of reasonable or informed users of financial statements. Table 2.1 below summarizes the differences and similarities of the Frameworks with respect to definition of AI

2.5.1 Regulations on Provision of Non-audit Services

Over the years, financial reporting has been influenced by dramatic changes in the business environment, which has resulted in the demand for increased sophistication and expertise of professional accountants. According to Islam, Karim and Zijl (2005) auditors have responded by specializing in the provision of various financial services that compliment audit services such as internal audit, training, IT and financial systems services, risk management, legal & litigation services, recruitment and human resources, mergers & acquisitions, taxation and risk management, bookkeeping and transaction support services and portfolio management. Provision of these services by an incumbent auditor places the auditor in a contractual relationship with the client management who is also audited. Many studies have argued that providing audit and NAS by same auditor increases economic bond and the relationship between audit firm and client thereby increasing the chances that firms will succumb to client pressure in making professional decisions (Frankel, Johnson & Nelson, 2002; Law, 2010; Beattie & Fearnley, 2002).

Table 2.1

Major Regulatory Frameworks and their definitions of Auditor Independence

IFAC Code (2012) This code is applicable to the 173 IFAC Professional member bodies and Associates across 129 countries (for example Albania, Argentina, Austria, Bahamas, Bahrain, Barbados, Belgium, Cameroon, Canada, Chile, China, Denmark, Dominican Republic, Egypt, France, Germany, Ghana, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Jordan, Kenya, Korea, Luxembourg, Malawi, Malaysia, Mexico, Namibia, Nepal, Nigeria, Norway, Pakistan, Philippines, Poland, Saudi Arabia, Sierra Leone, Singapore, Slovenia, South Africa)	**Independence of mind** The state of mind that permits the expression of a conclusion without being affected by influences that compromise professional judgment, thereby allowing an individual to act with integrity and exercise objectivity and professional skepticism (IFAC,290.6a; AU, 290.6, ICAEW, 290.6)	**Comment** AI does not imply absolute independence as the auditor-client interaction entails existence of a financial and or economic relationship at an acceptable level that is, and can be perceived to be objective.
	Independence of appearance The avoidance of facts and circumstances that are so significant that a reasonable and informed third party would be likely to conclude, weighing all the specific facts and circumstances, that a firm's or a member of the audit team's, integrity, objectivity or professional skepticism has been compromised. (IFAC, 290.6b; AU, 260; ICAEW, 290.6).	
Australia Code (2010) This code is applicable to Professional accountants practicing in Australia.		
ICAEW Code (2011) This code is applicable to Professional accountants practicing in England and Wales.		
AICPA (2012) This code is applicable to Professional accountants practicing in America.	**Independence of mind** The state of mind that permits the performance of an attest service without being affected by influences that compromise professional judgment, thereby allowing an individual to act with integrity and exercise objectivity and professional skepticism. (AICPA, 101.06a).	AI requires continuous assessment of auditor-client relationship as well as public responsibility.
	Independence in appearance The avoidance of circumstances that would cause a reasonable and informed third party, having knowledge of all relevant information, including safeguards applied, to reasonably conclude that the integrity, objectivity, or professional skepticism of a firm or a member of the attest engagement team had been compromised. (AICPA, 101.06b)	Auditors are expected to be independent and be seen to be independent by maintaining objectivity and avoiding conflict of interest in the conduct of their work.

Sources: Islam, Karim & Zijl, 2005; Code of ethics of IFAC, 2012; AICPA Code, 2012; AU Code, 2010.

The provision of NAS raises a real or perceived threat to AI by bringing about four main threats to AI; threats of self-interest, self-review, advocacy and familiarity (Beattie & Fearnley, 2002). However, others studies have shown that providing both services increases contractual and spillover effect which improves audit quality (Ashbaugh, LaFond & Mayhew, 2003; Kinney, Palmrose & Scholz, 2003). In response to this contentious issue, majority of the regulatory frameworks provide guidelines for assessing the independence threats posed by provision of NAS and application of safeguards to circumvent or reduce such threats to acceptable levels (Beattie & Fearnley, 2002; Muhamad Sori, Karbhari & Mohamad, 2010**)**. The US framework out rightly bans the provision of some NAS, while permitting others subject to the approval of Audit Committees. Table 2.2 shows the response of the various frameworks to NAS provision.

Table 2.2
Regulations on provision of Non-Audit Services (NAS

Regulatory Framework	Position of NAS	Comment
IFAC/ICAEW	IFAC permits auditors on audit engagements to provide tax services and prohibits auditors exercising management authority, determination of client implementation of auditor's recommendations, reporting in management capacity to client governance body. It allows under exceptionally limited circumstances client asset custody, Supervision of client employees in normal activity, Preparing accounting records and financial statements for public interest entities and legal services but allows valuation services (where immaterial). It recommends evaluation of threats and safeguards when providing internal audit services, IT services & financial IT systems, temporary staff duties, litigation support recruitment and HR services and corporate finance. The framework was silent on Actuarial and broker services.	The framework does not offer a specific guideline for actuarial and broker services which means auditors are allowed to exercise their professional judgment when offering those services. NAS that place the auditor in managerial capacity are strictly prohibited and auditors are advised to exercise caution by using professional judgment in determining whether there are adequate safeguards to reduce threats/risk to acceptable levels.
AU	AU permits auditors on audit engagements to provide tax services and prohibits auditors from exercising management authority, determination of client implementation of auditor's recommendations, reporting in management role to client governance body. It allows under exceptionally limited circumstances client asset custody, Supervision of client employees in normal activity, Preparing accounting records and financial statements for public interest entities and legal services but allows valuation services (where immaterial). It recommends evaluation of threats and safeguards when providing internal audit services, IT services & financial IT systems, temporary staff duties, litigation support recruitment and HR services and corporate finance. The framework was silent on Actuarial and broker services.	AU prohibits acting in management capacity and even allows valuation services where values are immaterial, tax services and a host of other NAS by just relying on professional judgment to determine if threats were acceptable.
SEC (USA)	SEC prohibits auditors on audit engagements exercising management authority, legal services, recruitment & HR, broker/dealer services and actuarial services but is silent on client asset custody, Supervision of client employees in normal activity, taxation, temporary staff assignment, litigation support and corporate finance. It permits under exceptionally limited circumstances preparation of accounting records and financial statements for public interest entities, valuation and expert services, internal audit and IT.	SEC has most stringent rules by placing many restrictions on internal audit services. It prohibits a lot of NAS as bookkeeping, exercising management capacity, legal & recruitment services broker/dealer & actuarial services.

Source: (Beattie & Fearnley, 2002).

In comparing the AI framework, they are very similar mainly because most of them adopted the more flexible principle based IFAC framework, which recognizes the need for professional judgment in measuring the relative risk of independence impairment arising from the provision of some NAS. The US framework on the other hand is based on SEC rules that are more rigid and prohibit many services giving no room for exercising professional judgment. Generally, however, most of the frameworks prohibit mainly services that have a direct influence on auditor objectivity and independence such as acting in managerial capacity, making managerial decisions, performing management functions or acting on behalf of the client. However, there are still some services which have no particular guidance because they have not been covered by the frameworks such as broker-dealer, actuarial and corporate finance in some frameworks (IFAC/ICAEW and AU) or temporary staff replacement and client asset custody in the case of SEC.

2.5.2 Regulations on Economic Dependence

According to Blay (2005), the debate on joint provision of NAS and audit services centers on the effects of increased auditor economic dependence on client. This is because when auditors derive a major part of their income from particular clients, they are more likely to pursue sustaining that relationship and accommodate client decisions even when they are not in the interest of stakeholders. Additionally, Krishnan, Sami & Zhang (2005) find auditor economic dependence negatively influences stakeholder PAI. Against this background, some regulatory frameworks provide guidelines in dealing with economic dependence resulting from joint

provision of audit and NAS (Beattie & Fearnley, 2002). The UK provides a benchmark of income generated from a listed company to not exceed 10% of total firm income generated. Other frameworks as IFAC, AU require economic dependence to be assessed based on recurring fees while the EC considers a five-year average to determine economic dependence but is not specific about a benchmark. The SEC (US) requires disclosure of economic dependence in financial statements.

In most countries, attest and non-audit services are jointly provided, most often dominated by the big four accounting firms. For example, The UK audit market in 2010 was characterized by a high concentration of the big four firms (Price Waterhouse Coopers, KPMG, Deloitte and Ernst & Young) which accounted for 99% of audit fees that were paid by FTSE 350 (Competition Commission, 2011). At the end of 2011 financial year, their audit income ranged from £444 million to £909 million compared to the largest mid-tier firm's income of £134.44million (Accountancy Age, 2012). Accounting firms have also continued to seek and earn more from the consulting services than from audit services. For instance, Deloitte, Ernst & Young and KPMG made £517, £370 and £859 million respectively from consulting services only in 2011. Table 2.3 below extracted from Accountancy Age shows the earnings of the big four audit firms for the year ended 2011.

Table 2.3
NAS and audit income of Big four and largest mid-tier firm in UK

Audit firm	UK fee income (£m)	No. of Partners	Audit Income(£m)	Tax Income (£m)	Consultancy (£m)	Corporate Finance (£m)
PWC	2,461	863	909	645	-	-
Deloitte	2,098	991	652	534	517	395
KPMG	1,707	602	456	392	859	224
Ernst & Young	1,465	549	444	372	370	279
GrantThornton (Mid-tier)	387	203	134.44	91.71	-	35.23

Source: Accountancy Age top 50, 2011.

Table 2.3 shows that Deloitte, KPMG and Ernst & Young have considerably increased their consulting incomes, with KPMG having the largest share of £859 million. Compared to its audit fee income of £456 million, KPMG's total NAS including consulting (£859), tax (£392) and corporate finance services (£224) equals £1.475billion. Even in the US that follows the rule based Sarbanes Oxley (SOX) which bans the provision of certain NAS services and requires disclosure of economic dependence, the big four firms dominated the audit market in 2011 with Deloitte having the highest revenue ($10.938bn dollars) compared to the largest mid-tier RMS/ McGladrey & Pullen ($1.378bn dollars).

Table 2.4
NAS and audit income of Big four and largest Mid-tier firm in the US

Audit firm	Revenue ($m)	No. of Partners	Audit & Accounting Income (%)	Tax Income (%)	MAS (%)	Others (%)
Deloitte	10, 938	2, 883	34	21	41	4
PWC	8, 034	2, 204	51	30	19	0
Ernst & Young	7, 100	2, 300	42	32	20	6
KPMG	4, 889	1, 759	46	26	28	0
RMS/McGladrey & Pullen (Mid-tier)	1, 378.87	742	43	35	21	1

Source: Accounting today top 100, 2011.

The preference for providing NAS including taxation, management advisory and other services instead of audit attest services is also evident here as audit firms generate 49% to 66% of their revenue from provision of NAS despite strict regulations on such services. In Australia, the story is no different. The big four dominate the audit market generating substantial revenues from Non Audit Services while still engaging in attest functions. There is no regulation limiting the extent of economic dependence as in the UK. Table 2.5 extracted from BRW top 100 firms shows the performance of top five firms and their performance in the financial year ended 2011.

Table 2.5
NAS income of the top 5 firms in Australia, 2011

Audit firm	Revenue ($m)	No. of Partners	Growth Areas	Growth %
PWC	1,429,360,000	441	Private client	30
			Business advisory	30
			Risk advisory	24
KPMG	1,064,000,000	395	Business advisory & Mgt consulting	20
			Risk advisory	26
			Transaction & Restructuring	9
Ernst& Young	1,052,620,000	396	Business advisory	29
			Tax services	13.9
			Transactions	13.5
Deloitte	935,000,000	509	Business advisory	28
			Tax advisory	-
			Risk advisory	-

Source: Accounting 100 BRW top 100 firms, 2011.

Table 2.5 shows that in 2011, the audit firms witnessed a substantial growth in provision of NAS especially in consulting, advisory and tax services.

2.5.3 Regulations in relation to Gift and Hospitality

Gifts and hospitality have been considered to undermine actual and/or perceived AI. All the frameworks recognize that accepting gifts and hospitality may create self-interest, familiarity or intimidation threats to objectivity and therefore decision to accept should be based on the triviality, consequence or material significance from the eyes of reasonable informed third parties and the ability to eliminate or reduce such threats to acceptable levels.

2.5.4 Regulation in relation to Auditor Tenure

The influence of long audit tenures has been the subject of much scholarly and regulatory debate in recent times. While many studies contend that long audit tenures

result in the auditor developing close relationship ties with their clients over time which may compromise their objectivity in contesting client policies or increasing audit effort (Geiger & Raghunandan, 2002; Chi & Huang, 2005; Al-Thuneibat *et al.* 2011), many others argue that lengthy tenures provide auditors opportunity to examine and critically understand client operations thereby improving audit quality and market efficiency (Carcello & Nagy, 2004; Ghosh & Moon, 2005). Many countries as South Korea (6years), Spain (9years), Brazil (5years) and France (6 years) have already made audit rotation mandatory, while Italy demands rotation every 9 years, subject to companies putting up contract bids every three years (Harris & Whisenant, 2012).

In the US, the Sarbanes Oxley Act imposed a 5 year mandatory audit partner rotation (Sec 203) after which the concurring partner takes a 5 year time out, while those having decision making responsibilities on the engagement team rotate after 7years, with a two year time out before resuming such particular engagements. In August, 2011, the US Public Company Accounting Oversight Board (PCOB) issued a concept release on ways of improving AI, objectivity and professional skepticism which included questions on the benefits of SOX partner rotation, mandatory firm rotation and the possibility of instituting a 10 year mandatory rotation period.

The UK has a five-year audit rotation rule while the EU eight directives maintain a seven-year rule (Holm & Zaman, 2012). IFAC and AU code limit audit of public interest entities by key partners to a 7 year period with a 2 year cooling off period

(Sec 290.151) while key partners having direct influence on audit quality may exceptionally be extended another year as long as independence threats are limited to acceptable levels (Sec 290.152). However, Sec 290.155 of both codes allow a key audit partner on a Public interest entity audit, having the necessary knowledge and experience, as permitted (exempted) by an independent regulator, and having specified alternative independent external reviews, to audit as key partner for more than 7 years. In analyzing the significance of threats associated with lengthy tenures, Sec 290.153 call for examining the length of partner-client association, the partner's role on the audit team, and the extent, nature and frequency of the partner's interaction with client management or governance team. Safeguards to be applied may include partner rotation off the audit team, terminating partner's association with client or regular independent external and/or internal quality reviews.

2.6 Nigerian Regulatory Framework on Auditor Independence

Statutory and regulatory frameworks regulate auditing in Nigeria. The statutory framework, which provides the legal backing for the practice of auditing in the public and private sector, is the Companies and Allied Matters Act (CAMA) 1990 as amended (2004). Section 357 of CAMA provides for the appointment and/or reappointment of the auditor by shareholders at AGM while allowing directors to appoint only the first auditor, or fill a casual vacancy until an AGM appoints an auditor. Section 358 requires an auditor to be a member of the Association of National Accountants of Nigeria (ANAN) or the Institute of Chartered Accountants of Nigeria (ICAN) and lists the categories of individuals who cannot be appointed as

auditors (because of financial ties, family ties, body corporate or employees of company).

Sections 359 and 360 specify the duties of the auditor in reporting a true and fair view of the state of the company's affairs to shareholders. Section 361 provides for the remuneration of the auditor to be fixed by the Shareholders at an AGM or by the directors in the case of initial auditors or a casual vacancy while Sections 362 and 364 require the removal of an auditor to be based on ordinary or special resolutions by the shareholders. Sections 365 and 366 allow the auditor to resign from his appointment and the conditions under which this can be done. Sections 367 and 369 enumerate the powers of the auditor in seeking reliable and complete information necessary for him to make an opinion while Section 368 specifies the liabilities of the auditor in respect of negligence. These provisions were made to protect the auditor in the conduct of his audit assignment. However, CAMA has not specifically defined and addressed the concept of auditor independence (Abubakar, 2011).

The regulatory framework is dependent on institutions, which have been given statutory power to regulate the practice of Auditing. In Nigeria, this responsibility rests with:

1. Financial Reporting Council of Nigeria (FRCN), which replaces the Nigerian Accounting Standards Board (NASB).
2. The professional bodies: the Institute of Chartered Accountants of Nigeria (ICAN) and Association of National Accountants of Nigeria (ANAN).

3. The Security and Exchange Commission which provides the Code of Corporate Governance for Public companies.

The NASB now replaced by the Financial Reporting Council (FRCN) 2011 was responsible for the provision of accounting standards (SAS) which provided accounting guidelines and standards for preparers and users of financial statements. The FRCN was established on 3rd June, 2011 and charged with the responsibility of registering professional accountants engaged in financial reporting, developing and publishing financial reporting codes and standards as well as monitoring compliance with local and IFAC financial reporting requirements (Section 8). Section 46 of the FRCN Act addresses AI. Generally, the Act charges professional accountants to carry out their functions independently by adhering to the Council's Code of Conduct and Ethics and avoiding activities that are likely to impair AI. Where a conflict of interest is determined, the act requires disclosure of the nature of such conflict to the entity and FRCN in order to ascertain the extent of conflict and whether or not the engagement should be continued (Section 47). In addition, the council will subject professional accountants auditing more than 20 public interest entities to annual quality reviews while all other audit firms will be reviewed every three years (Section 61).

ICAN and ANAN are the two professional accountancy bodies that have been given legal power to license auditing and accounting practices in Nigeria. Each professional body provides guidelines for training, qualification, ethical conduct and

discipline of its members. ICAN is a member of IFAC while ANAN is currently an associate member. ICAN code of professional conduct on AI, which is in line with IFAC code states that a member must be objective, independent of mind and in appearance whereby he is able to give honest, unbiased opinion. ICAN's guidelines in relation to AI are adopted from IFAC code and covers fees, personal relationships, financial interest, conflict of interest and effect of gift and hospitality on members' objectivity as well as the safeguards to be applied to reduce threats to acceptable levels. Until November 2012, ANAN charged its members to comply with its own code of professional conduct for Certified National Accountants. With the attainment of IFAC associate member status, ANAN now directs its members to conform to IFAC code of conduct on auditing practices and AI in particular.

The CAMA, FRCN, ANAN and ICAN do not restrict the provision of NAS, Joint provision of NAS and attest services and auditor tenure. In 2006, The Central Bank of Nigeria (CBN) regulated the prohibited bank auditors from providing some NAS (internal audit services, bookkeeping and valuation services) in addition to attest services (Ujah, 2006). The CBN noted that the services were banned based on four fundamental principles of AI:

1. Auditors can not have conflicting or mutual interests with their attest clients
2. Auditors can not play a managerial role or serve as an employee of attest client
3. Auditors can not audit their own work
4. Auditors can not act on behalf of their client

Moreover, Section 359 (3 & 4) of CAMA and Section 30(1-4) of SEC code of corporate governance require public companies to establish audit committees. In addition, the Institute of Chartered Accountants of Nigeria (ICAN) and Association of National Accountants of Nigeria (ANAN) monitor the activities of their practicing members through Peer and Quality Assurance Reviews. For instance, the ICAN committee on public practice comprising experienced chartered accountants working through an adhoc technical committee, monitors compliance to standards, regulations and professional ethics and reports to as well as makes recommendations to the institute's council in order to enhance quality assurance services of practitioners.

In the case of ANAN, The Quality Assurance Review Team (AQART) and Peer Review Team (PRT) comprising experienced fellows and members monitor practicing members' compliance to ethical codes and standards as well as meet international standards. This includes evaluating quality control measures and reporting, firm adherence to regulatory and legal requirements, upholding firm independence and reporting integrity. The oversight concludes by issuing an assessment report on the reviewed firm upon which the association reprimands, warns or in serious cases, suspends firms/withdraws practicing licenses. However, the review teams are required to conduct this exercise at least once in five years, except in situations requiring recurrent reviews. Both professional bodies have investigative and disciplinary processes such as Accountants' investigating Panel

and Accountants disciplinary tribunal for disciplining of erring members operating alongside legal authorities.

The Security and Exchange Commission (SEC) which operates under supervision of the ministry of Finance regulates the activities and operation of the capital market. They ensure the efficient mobilization of capital for investment involving public companies, governments, investors and other market participants through the enforcement of corporate governance practices. The 2003 Code of Corporate governance for public companies was reviewed in 2011 to align it with best international practices and this saw the introduction of a new code of corporate governance. In ensuring external auditor independence, the code specifically provided for the rotation of auditors of public companies after a 10 year engagement period, with a seven year cooling off period before any reappointment (Sec 33.1 and 33.2). However, the code remains largely optional for private companies who are only encouraged to adopt its principles.

In general, the restructuring of the corporate governance codes for public companies and banks and establishment of the financial reporting council in 2011 following the banking crises and corporate failures provides the platform for updating research efforts on stakeholder perceptions of AI in Nigeria.

2.7 Dimensions of Auditor Independence

The IFAC, AICPA, SOX, EC and AU in line with GAAS have identified two dimensions of AI; independence in fact/mind (IIF) and independence in appearance (IIA). SAS 1.220 provides that

> "*To be independent, the auditor must be intellectually honest: to be recognized as independent, he must be free from any obligation to or interest in the client, its management, or its owners. Independent auditors should not only be independent in fact: they should avoid situations that may lead outsiders to doubt their independence*".

SEC (2000) considers an auditor's independence impaired either when the accountant is not independent in fact, or when in light of all relevant facts and circumstances, a reasonable investor would conclude that the auditor would not be capable of acting without bias. This implies that a violation of either independence in fact or appearance is evidence of impaired independence (Dopuch, King, & Schwartz, 2003). The AICPA Special Committee on Assurance Services defines AI as the absence of interests (financial or otherwise) which create an unacceptable risk of material bias with regards to financial statements reliability.

The Independence Standards Board (ISB) framework for AI defines AI as freedom from the factors which may compromise or reasonably be expected to compromise an auditor's ability to render fair and objective opinions. Beattie and Fearnley (2002) summarized the various definitions of independence (objectivity) from regulatory frameworks of Australia, UK, USA (SEC), Canada, IFAC and EC Recommendation and concluded that all the frameworks differentiated between Independence in fact

(of the mind) and Independence in appearance (perceptions). They contend that appearance of independence failures and prima facie evidences of lack of independence in fact undermine credibility of audits and financial reports which destabilizes the financial markets. They emphasize the significance of independence in appearance since independence in fact is difficult to observe. Kueppers and Sullivan (2010) buttress the need to enhance investor confidence by providing reasonable (not absolute) assurance of the fairness of company financial statements by exercising professional skepticism in assessing audit evidence.

Taken together, the studies indicate that total AI is hardly achievable given the social, professional, legal, economic and financial ramifications of relationships between auditor and their clients. The need to establish acceptable levels for AI then becomes paramount (Kleinman & Palmon, 2001). Elliot and Jacobson (1998) also argue that AI entails costs such as compliance costs, quality control and safeguards, compensation for lost opportunities resulting from obeying prohibitions, incremental service cost of clients deprived of service providers' scale economics and scope which reaches an optimal level when capital market costs and AI costs are at equilibrium. Beyond this point, they contend that additional AI is not cost effective to the capital market and economy considering the impact of other factors as the accounting system, effective ACs and external auditor.

An auditor owes a fiduciary duty to stakeholders to be independent, objective and honest by providing them with reasonable assurance that financial reports are true

and fair. Stakeholders include shareholders, creditors, governments, business and financial community, investors and the client (AICPA, Sec 53.01). Because stakeholders have divergent interests, auditors need to have integrity and be objective in rendering fair opinions. Literature has documented the controversy over the relative importance of appearances in determining AI and its inclusion in AI framework. For instance, some scholars (e.g. Wallmann, 1996; Elliot & Jacobson, 1998) consider factual independence superior and posit that difficulties in measuring independence appearances, lack of consensus on factors and relationships affecting AI as well as whose perceptions constitute reasonable perceptions relegates the significance and inclusion of perceptions in AI frameworks.

Yet others (e.g. Carmicheal, 1999; Dopuch, King & Schwartz, 2003) argue that the difficulties of measuring an auditor's mental state of mind as implied by factual independence necessitate the need for evaluating stakeholders' assessment of AI. Furthermore, auditors add justified credibility to financial reports whether or not material misstatements are detected since audits represent significant assurances of the reliability of accounting information thereby enhancing its credibility (Carmicheal, 1999). However, all the regulatory frameworks require auditors to possess both forms of AI in the conduct of their duties.

2.8 Independence in Fact/Mind (IIF)

The IIF domain entails acting with integrity, objectivity and professional skepticism in the conduct of audit assignment (Chapple & Koh, 2007). Integrity is defined as

maintaining an honest character, client confidentiality, due care and upholding the public trust above personal gains. According to Sec 54.03 of the AICPA, (2012) integrity is measured based on what is right or wrong and auditors should test all decisions on this bench mark to determine appropriateness. Objectivity entails that auditors should be free from conflicts of interest by being impartial, honest and not subordinate professional judgment to client in the conduct of an audit function. Sec 55 of AICPA charges auditors to maintain objectivity and independence by continuously assessing client relationships with public responsibility. Professional skepticism entails the auditor approaching his work with due care, an inquisitive mind and not knowingly misrepresent facts or subordinate professional judgment to client policies. Rule 102 of AICPA states that intentional misrepresentation could occur when the auditor makes or permits misleading entries, fails to correct material misstatements in the financial reports or signs and permits material misstatements or misleading information.

2.8.1 Perceived Objectivity

Objectivity entails not compromising professional judgments because of undue influence or subordination of judgment, avoiding bias, conflict of interest or intentional misrepresentation of facts (IFAC, 120.1). Maintaining objectivity implies being free from conflict of interest, being impartial, being intellectually honest and independent in thought (Brown, Stocks & Wilder, 2007). Objectivity has also been described as the ability to differentiate facts from beliefs or assertions. By being objective, auditors focus more on facts that can be substantiated rather than beliefs or

management assertions (Internal auditor, 2010). There is a paucity of research on the concept of objectivity. According to Brown *et al.,* (2007), this may be due to the difficulty of operationalizing and measuring objectivity as a concept. Yet despite this inadequacy, professional codes require auditors to be objective and seen to be objective in order to attain and sustain public trust.

Objectivity has been measured using the Certified Public Accountant Characteristic Questionnaire (CPACQ) instrument. For example, Brown *et al.*, (2007) used the instrument to examine auditors and public perception behavior and found that informed users rated exemplary auditor behavior lower than the auditors and placed less reliance on audited financial statements while less informed users rated auditor behavior higher. In the performance evaluation literature, Goodson and McGee (1991) examined perceptions of objectivity with regards to performance appraisal. Their study focused on the type of goal development and appraisal activities that were likely to enhance employee perceived objectivity of the appraisal used. Perceived objectivity was measured by two items; subjectivity and politics influencing performance over a five point scale. Results showed perceived objectivity was significantly and positively related to performance management and individual participation in goal setting was positively related to perceived objectivity. Their measure of perceived objectivity was however based on only exploratory study which they acknowledged needed strengthening and therefore required greater empirical validation and support

2.8.2 Perceived Integrity

Prior studies define integrity in various contexts. It has been described as fairness and moral character which leads to trust and reduces uncertainty (Lind, 2001), honesty, fairness and justice (Colquitt, Scott & LePine, 2007), a virtue which reduces socially unacceptable behaviours (Gefen & Straub, 2004), the extent to which a service provider is believed to adhere to moral and ethical principles (Akter & D'Ambra, 2011) and ".. a belief that a strong sense of justice is perceived to the extent that a party's actions are adjudged with his or her words" (Mayer, Davis and Schoorman, 1995). According to the AICPA (110.1), integrity involves being straightforward, fair dealing, honesty and truthfulness in professional relationships and maintaining client confidentiality. It involves not being associated with materially false or misleading statements, recklessly furnished information and alterations or omissions of material information that will be misleading (AICPA, 110.2). In the event of a possible association with misrepresentations, a modified report on the matter is required from the auditor. According to Brown *et al.*, (2007), acting with integrity entails acting with all honesty and fair dealing, observing ethical and technical standards, client confidentiality and resisting subordination of judgment or circumvention of standards.

Studies show integrity is significantly relates to AI. For instance, Libby and Thorne (2007) developed a measure of auditor's virtue and found that integrity was one of the most important non-instrumental auditor virtues. The others were honesty, independence and objectivity. Fan, Woodbine and Scully (2012) also provide

support that Chinese auditors were greatly concerned about AI as measured by integrity, objectivity, independence and resisting client pressure. Akter and D'Ambra (2011) examined integrity as one of the components of trustworthiness in mobile health information service using a reflective hierarchical model. Integrity was measured by four items from Gefen (2002). Their results showed that even though all four factors (ability, benevolence, integrity and predictability) were perceived as significant, users perceived ability and integrity as the most important factors as quality of service provided was considered very important. However, integrity as a concept has not received much scholarly attention. Brown *et al.,* (2007) assert that this may be due to the difficulty in defining and measuring the concept. Nevertheless, auditors are required to be and should appear to be professionals of high integrity so that informed users perceive their reports as credible and reliable.

2.8.3 Perceived Professional Skepticism

The Statement of Accounting Standards (SAS) 1 indicates that professional skepticism is a precursor to exercising due care and skill and explains it as an attitude which imbibes a questionning mind and a thorough assessment of audit evidence. Similarly, the International Standards on Auditing (ISA, 240) define professional skepticism as approaching an audit with an enquiring mind and critically assessing audit evidence. SAS 99 of the AICPA (2002) also specifically charges an auditor to exercise professional skepticism by considering the likelihood that material misstatements may be present in the financial reports. This may entail an auditor soliciting further information by confronting directors where the level of

trust between them are low and the auditor suspects there is a likelihood of fraud, material errors or misstatements. Furthermore, exercising high level of skepticism results in performing additional tests to obtain additional audit evidence and reduce auditor perceptions of material misstatements in the accounts (Shaub & Lawrence, 1996). This means that the auditor has to balance trust with skeptic reasoning to maintain an appropriate level of skepticism during the attest function.

Literature examines professional skepticism from two perspectives in literature; Neutrality perspective and the Presumptive perspective (Nelson, 2009). The proponents of neutrality view (e.g. Hurtt, 2010) emphasize approaching audit with an open mind by assuming neither dishonesty nor complete trust on management representations thereby focusing on gathering and objectively evaluating audit evidence from a more confirmatory perspective. Those of the Presumptive view (e.g. Shaub, 1996; Turner, 2001; Nelson, 2009) direct auditors to consider the possibility of the existence of material misstatements consistently throughout the audit, notwithstanding perceptions of management honesty or integrity.

Despite the importance of professional skepticism to auditor independence, only few studies examine the association between professional skepticism and auditor independence (Hurtt *et al.*, 2013). Prior studies have indicated that there is a direct relationship between professional skepticism level exhibited and uncertainty level of audit. For instance, Nelson (2009) developed a model that shows audit evidence, knowledge, traits and incentives influence skeptical judgments or actions. Endrawes

and Monroe (2010) studied professional skepticism among Egyptian and Australian auditors and found that professional skepticism relate to non-confrontational procedures in Egypt while Australian auditors were more confrontational in seeking audit evidence. Grenier's (2010) dual process model of professional skepticism and Hurtt's (2010) trait skepticism scale provide an explanation for the concept of professional skepticism. Conversely, Fukukawa and Mock (2011) employed the belief and ambiguity assessment to test audit assertions and framing as a measure of professional skepticism and found that assertion framing significantly influences professional skepticism in the form of questioning mind as compared to suspension of judgment.

Grenier (2010) measured professional skepticism based on target (audit evidence or judgment) and form of processing (automatic or controlled) and provides evidence that auditor industry specialization interacts with professional skepticism target (both audit evidence and self-critique) to influence professional judgments and justify auditor beliefs. However, limiting skepticism to self-critique and audit evidence may not always suffice as other conditions may hamper approach to audit evidence and self-critique decisions. For instance, Malmendier and Tate (2005) found evidence that overconfidence may sometimes make people ignore self-criticism and caution. Hurtt (2010) developed and tested a scale measuring trait skepticism that evaluates six characteristics of skeptical auditors; a questioning mind, suspension of judgment, searching for knowledge, interpersonal understanding, self-esteem and autonomy. However, only consistent use of the scale could guarantee its validity. Furthermore,

in testing the instrument, the study examined auditors from only one firm. It may be that firm culture may condition their reasoning and response to the scale, which may not be obtainable elsewhere.

2.9 Independence in Appearance (IIA)

Independence in appearance (IIA) is concerned with informed users' perception of auditor objectivity based on circumstances surrounding the conduct of the audit function. These include employment relationship with client, material direct or indirect financial interest in client, contingent or unpaid fees, cumulative effect of many relationship, business relationship or cooperative arrangement with client or family relationship with client. Others are providing litigation services for client, assumption of management responsibilities or providing some non-audit services (NAS) that place auditor in advocacy or self-review position such as internal audit services provision. The AICPA independence standards in the wake of corporate collapses, also maintain that the significance of audit opinions is for restoring confidence by adding justified credibility to financial reports that are management representations. This emphasis on credibility further validates the importance of independence in appearance in regulatory frameworks.

Independence in appearance is also vital to the effectiveness of capital markets because perceptions about impaired objectivity and integrity will engender high risks and negative cost of capital, which will undermine market effectiveness, and value of audit function (Carmicheal, 1999). Thus, either actual or perceived evidences of

impairment circumstances can impair AI. Nevertheless, since enhancing reliability and credibility of financial reports are important AI objectives, regulators develop AI frameworks based on views of interested parties/stakeholders, informed/reasonable users of financial reports and harmonizing stakeholder's views with board's informed judgments (Sutton, 1997).

The International Federation of Accountants (IFAC) defines independence in appearance as the avoidance of circumstances which a reasonable informed user, having all relevant knowledge including safeguards applied, will conclude that an auditor's objectivity has been compromised (IFAC, 2012). In other words, auditors should avoid any relationships and circumstances that threaten AI or manage the threats to acceptable levels to assure objective reporting. This also means that users of financial information need to understand and assess the nature and significance of those threats in order to make informed and reliable decisions. Auditors are also required to make adequate assessment of threats to their objectivity and apply safeguards to reduce the threats to acceptable levels at which they may not compromise objectivity. In 1997, the establishment of the Independence Standards Board (ISB) in the US resulted in the development of independence standards for auditors and providing a conceptual framework for evaluating AI.

The ISB's conceptual approach in evaluating auditor independence appears to be the one of the most comprehensive approach to AI (Shaub, 2004; Al-Eissa, 2009) and consequently found acceptance by many regulatory frameworks. Many studies have

also adopted the threat-safeguard approach to examine auditor independence. For instance, Srivasta, Mock and Turner (2009) used the framework approach based on threats and safeguards to develop analytical formula for assessing AI risk using Bayesian and Belief based theories. Al-Eissa (2009) also used the threat-safeguard approach to investigate the perceptions of users and auditors about NAS influence on auditor independence. Shaub (2004) used the threat-safeguard approach to identify the potential components of an auditor independence measure. This study builds on these studies by using the framework as a basis for stakeholders to evaluate the independence of their auditors. This is because the framework provides a platform to identify, classify and assess independence risk circumstances and the application of safeguards to mitigate the risks (Al-Eissa, 2009). In other words, stakeholders can use the framework to evaluate how effectively auditors are able to avoid independence threats or reduce them to acceptable levels that may no longer compromise auditor independence.

The framework approach requires the evaluation of five major threats to AI such as self-interest, self-review, client advocacy, intimidation and familiarity/trust threats in line with applicable safeguards to ensure the elimination or reduction of threats to acceptable levels. Section 200.4 of IFAC (2012) provides that self-interest threats could arise from direct or indirect material financial interest in client, provision of non-audit services, economic dependence on client, loan to or from client, contingent fees or unpaid fees, business relations with client and prior or potential employment with client. The self-review threat emanates from circumstances where auditors are

placed in position to review their own work (e.g. by providing joint assurance and certain non-audit services) or were former client employees (Section 200.5). Client advocacy threat arises from promoting client interest as shares, advocating for client by providing litigation services or acting on behalf of client in dispute resolution with third parties (Section 200.6). Section 200.7 provides that familiarity threat arises from circumstances as having close family ties with client employees, family member is in influential position in the client company, or an influential client officer was a former partner, lengthy audit tenures or acceptance of material gift and hospitality from client. Intimidation threat emanates from threatened client dismissal, threatened litigation, client pressure to reduce extent of audit work to reduce fees, greater client expertise in matters or partner promotion depending on acceptance of client policies (Section 200.8).

2.9.1 Self-Interest Threats Avoidance

Prior studies report various factors that pose a self-interest threat to auditor independence. In reviewing the studies, this study will categorize the literature according to the threat examined i.e. provision of non-audit services, loan to or from client, unpaid fees, contingent fees, economic dependence on client, business relationships and influence of prior or potential employment relationships.

2.9.1.1 Provision of Non-audit Services (NAS)

NAS otherwise known as Management advisory services (MAS) range from book keeping, risk management consulting services, internal audit services, information

systems design, tax consultancy and legal advice, mergers and acquisitions, recruitment and human resources, public offering and portfolio management, transaction support and follow up, information system development, corporate governance and litigation services (Arens, Elder & Beasley, 2008; Beattie & Fearnley, 2002). There are many controversies regarding the influence of NAS on auditor independence. While some studies fail to find evidence that NAS actually impairs independence in fact (DeFond, Raghunandan, & Subramanyam, 2002; Ashbaugh, LaFond, & Mayhew, 2003; Larcker & Richardson, 2004) many others have indicated that NAS have a negative influence on appearances of independence (Frankel *et al.,* 2002; Krishnan, Sami, & Zhang, 2005; Krishnamurthy, Zhou, & Zhou, 2006).

Still other studies (e.g. Lowe, Geiger & Pany, 1999; Swanger & Chewning Jnr, 2001) find that non-audit services such as internal audit could be outsourced to external auditor as long as staff conducting the external and internal audit is separate. Supporting a negative effect on auditor independence, the Sarbanes Oxley Act (SOX) banned the provision of certain NAS as bookkeeping, valuation and appraisal, actuarial services, human resources, legal services and systems design, internal audit services, broker/dealer services (Salehi & Moradi, 2010) and required approval of other NAS by audit committees of companies (kinney, Palmrose & Scholz, 2004). According to Frankel *et al.,* (2002), provision of NAS could compromise independence in 2 ways; the possible loss of an audit fee may make an auditor to willingly accept management's accounting policies and there might be reluctance in

criticizing its consulting division. Muhamad-Sori *et al.*, (2010) argue that provision of both audit and NAS by incumbent auditors tilts their allegiance to sustaining economic gains from additional services rather than resisting client pressure and upholding AI. In such cases, an unintentional bond is forms between the client and the auditor, a bond that has economic significance to the auditor. The implied trust in this relationship may lead to compromising objective audit and review of financial statements (Fearnley & Beattie, 2004; Law, 2008).

Quick and Warming-Rasmussen (2009) investigated the impact of joint provision of NAS by surveying 98 academic investment club members perception of independence in Germany. NAS measures are consulting fees ratio to total audit firm fees. The findings reveal that provision of audit and most NAS by audit staff from separate departments significantly impaired independence, except the provision of accounting information system services. In addition, though the law permits human resource services, the study found it impaired independence.

Similarly, Muhamad-Sori *et al.,* (2010) examined the effects of joint provision of audit and different types of NAS on PAI of 93 auditors, 87 loan officers and 107 managers of public listed companies in Malaysia. They investigated whether segregation of duties between audit and consulting staff influenced PAI and whether there were significant differences across the groups using postal questionnaires and interviews. The findings revealed that joint provision of audit and NAS significantly threatens AI although this threat was not perceived when other departments rather

than audit department provided NAS and when NAS provision was strictly limited to non-audit clients. Respondents also advocated for auditor's selection of one type of service (audit or NAS) since full disclosure of NAS safeguarded AI. There were also significant differences in perceptions across the groups, as auditors did not perceive NAS impaired AI and felt banning NAS provision was uncalled for while loan officers advocated for segregation of duties and called for the banning of certain services. Kumar *et al.,* (2008) also measured the perception of 33 Government Linked Company shareholders towards provision of NAS and its impact on auditor independence in Malaysia. Using dominance analysis, the findings revealed bookkeeping and management function as the two significant factors impairing auditor independence. The study found the risk of impairment from management functions doubled when compared with human resource services and five times that for advisory services.

Similarly, Ahadiat (2011) investigated the association between audit opinions and the provision of NAS in UK and Australia through a comparative longitudinal study of 76 listed companies over a 10-year period. NAS measures are the ratio of NAS fees to total fees while audit opinion measures are qualified or unqualified for client firms that had or had not received going concern reports. The findings reveal that the potential for AI impairment exist when greater levels of NAS were provided to the British and Australian companies making users of financial statements conclude that auditors become hesitant to qualify audit reports of the companies in which they undertake greater level of NAS. However, the study is limited in its categorization of

qualified and unqualified companies because auditing practices differ among firms due to client peculiarities and as such, differences in rates of audit qualification may exist.

Despite the negative relationships found between NAS and PAI, majority of studies fail to find compelling evidences of independence impairment (Defond and Francis, 2005) and thus ascribe only a possibility of impairment. Indeed, other studies infer that NAS augment audit services and the synergy there from enhances independence. Advocates for the provision of NAS argue that auditors gain additional insight into the client's business thereby improving audit efficiency and quality as well as strengthening auditor's position due to cumulative synergies. The client may also gain from lower consulting risk and transaction cost from their auditor (Ashbaugh, LaFond & Mayhew, 2003; Kinney, Palmrose & Scholz, 2003). Moreover, the versatilities and economic significance of NAS suggests denying firms to render these services may not be in the best interest of auditors and the profession. Total prohibition of joint audit and NAS was therefore uncalled for as greater transparency, disclosures of conflict management in relation to NAS provision as well as audit committees enhance AI (Beattie & Fearnley, 2004).

DeFond *et al.,* (2002) investigated the effect of NAS fees on AI in relation to auditor's issuing going concern opinions. NAS measures are fee ratio relative to total audit fees and audit quality by going concern opinions. Using a sample of 944 distressed firms including 86 with first-time going concern modifications, the study

employed logistic regression to test the relationship between NAS fees and going concern reports on AI. The study results show no significant association between NAS fees (as measured by fee ratio) and auditor's propensity to issue a going concern opinion suggesting that concerns about NAS impairing AI are unfounded. The results further infer that auditors are even more likely to issue going concern opinions to clients who pay higher fees (more conservative) as market based incentives for maintaining AI effectively counter economic dependence effects of AI impairment.

Other studies compared capital market perceptions with audit and NAS fees to examine the justification for banning some NAS. Ghosh, Kallapur and Moon (2009) investigated the relationship between audit, NAS fees and capital market perceptions and AI using earnings response coefficient (ERC) as a measure of investors' perception of audit quality. The study examined clients of big five audit firms on audit and non-audit fee data while controlling for other determinants of ERCs over a six-year period using 21, 797 firm year observations. NAS was measured as ratio of consulting fees relative to total fees (FEE RATIO), client importance was measured as income from client relative to total income from all clients (CLIENT IMP) and level of earnings response coefficient (ERC) as a measure of perceived audit quality. The findings reveal that NAS fee ratio is not significantly associated with ERC while client importance was significantly negatively associated with ERC. This implies that investors perceived client importance as compromising independence and not NAS fee ratio even though when separated, only audit fees negatively relates to ERC

suggesting that investors were more concerned about independence impairment when audit fees (not NAS fees) increased. The regressions results also show that ERC does not vary among small and large firms in terms of NAS fee ratio but holds true for middle-sized firms.

In sum, there is still no conclusive evidence that AI is impaired by provision of NAS judging from the fact that market researches focus on perceptions on independence in fact, which may not necessarily apply to independence in appearance (Ashbaugh, 2004). Colbert, Murray and Nieschwietz (2011) assert that the divergent findings arising from studies on Independence in Fact (IIF) and Independence in appearance (IIA) with respect to NAS provision result because NAS may not affect IIF whereas they affect perceptions of AI (IIA). They add that there may also be methodological issues that affect findings.

Experimental studies on NAS effects on AI conducted under controlled situations report evidences of independence impairment even though such outcomes may have been marred by demand effects and as a result lack external validity (Colbert *et al.,* 2011). Other studies have also shown higher audit effort and fees when NAS are purchased which also support claims that NAS actually improves audit quality. Since perceptions of other users tend to support NAS undermining independence (in appearance), what is not known is whether these perceptions are just negative and not a factual independence problem or if AI really is compromised (Francis, 2006). This calls for further empirical investigation.

2.9.1.2 Business Relations

Most regulatory frameworks (e.g. IFAC, AICPA, SOX, ICAEW, and ICAA) prohibit business relations between auditors and their clients because of the conflict of interest that may arise which may threaten auditor independence. For instance, Lowe and Pany (1996) investigated perceptions of financial statement users on auditor independence when auditors had business relations with their clients, separated consulting and attest services and material engagements. Their results show that existence and type of business relation did not influence user perceptions as long as they were immaterial while material business relations and degree of staff segregation influenced perceptions. The study supports their earlier findings (1995) that users favored staff segregation of attest and consulting services and perceived material engagements and loan decisions as impairing auditor independence.

2.9.1.3 Employment Relationships

Employment relations could arise from auditors accepting client employment or auditors having close family working in influential positions in their client company. Clients' hiring former or prospective auditors is a common practice in the corporate world. Such practice generally referred to as the revolving door syndrome is prevalent because auditors are especially qualified and have gained considerable knowledge about the client firm, its peculiarities, reporting processes and business strategies (Beasley, Carcello & Hermanson, 1999). This practice however threatens the independence of the auditor(s) concerned and the firm as a whole. It has been suggested (Beasley *et al.*, 1999) that a consideration of client appointment raises

concerns about the objectivity of the auditor in exercising due professional skepticism, overlooking irregularities or succumbing to client policies without question. Threats could also arise when audit team fails in exercising professional skepticism by relying on former partner's integrity. Former partner may also exploit prior knowledge of audit plans and procedures to manipulate records which may not be detected by audit firm.

Most regulatory frameworks have established guidelines on family or close employment relations. For instance, rule 101-1 of AICPA and Sec 290(134-137) and (143-149) of IFAC provides that an auditor or firm should not be associated with the client as an officer, director or employee in any managerial capacity, nor be a promoter, underwriter or trustee for any trust or pension during the period covered by the financial reports or engagement. However, exceptions to employment include avoiding key or governance positions and the family members not participating or supervising investment plans. Rule 101-2 of AICPA and Sec 290(138) of IFAC provide that even an influential member's consideration of client appointment compromise the firm's independence unless such member reports such considerations and distances self from the engagement until the auditor declines the offer or it expires. In Nigeria, Section 358 of CAMA as amended 2004 stipulates that auditors to be members of ICAN or ANAN who have practicing license. They must not be officers or servants of the company, not a partner, employed by officers of the company, or connected to the company in any manner and not a body corporate.

Studies have shown that past employment relations or affiliations significantly influence AI perceptions. For example, Imhoff (1978) found bankers and analysts were more doubtful about auditors' integrity when dealing with former colleagues due to previous relationships and shared experiences. Similarly, Lindsay, Rennie, Murphy and Silvester (1987) findings that most bankers and financial analysts perceive revolving door employments to impair AI, which is also consistent with Koh and Mahathevan (1993) findings that engagement team's independence becomes compromised when their fellow auditor joins client in financial statement preparation. However, they also find that observing cooling off period, non-involvement in financial statement generation or not being among top cadre in client business mitigates this threat considerably. The revolving door practice among firms also results in higher discretionary accruals (Menon & Williams, 2004), lower tendency to report violations (Kaplan & Whitecotton, 2001) and inaccurate accounting estimates (Parlin & Bartlett, 1994). Yet a few studies (Geiger & North, 2006; Muhamad-Sori & Mohamad, 2007) find no significant association between employment offers and auditor independence.

2.9.1.4 Financial Interest in Client

The independence of auditors who have a directly or indirect association with attests clients may be influenced by direct or indirect material financial interest in clients, which gives rise to self-interest threat. According to the AICPA (ET 100-1.18), financial interests may include auditors or their immediate family members owning more than 5% shares in audit client or obtaining or giving loans from an officer or

director of client. This also includes economic dependence on a single client or engaging in business relations such as joint venture with client, either directly or indirectly through self or close family relation such as spouse. Immediate family members may however own material direct or indirect financial interest through an unavoidable participation plan and the member is neither on the attest team nor in a position to influence engagement.

Research has provided evidence that financial interest or business relationships pose considerable threats to AI. For instance, Trompeter (1994) finds that auditors are more likely to accept client accounting choices when compensated based on local office profitability suggesting that financial incentives and interests can influence audit judgments. Unpaid fees are another indicator of auditor financial interest that threatens PAI (Beattie *et al.,* 1999; Alleyne *et al.,* 2006). This is because the auditor then becomes one of the client's creditors and a self-interest threat arises. Furthermore, Tribunella and Tribunella (2011) assert that while direct financial interest always compromises independence, indirect financial interest compromises auditor independence only when it is material. This may be because the existence of such financial relationships brings about self-interest threats, familiarity threats and conflict of interest.

2.9.1.5 Contingent Fees

There is scanty literature on contingent fees and auditor independence possibly because of its outright prohibition in most regulatory frameworks. The IFAC (2012,

Section 240:3,5 & 6) provides that contingent fees, commissions or referral fees may create self-interest threat to objectivity, professional competence and due care and may be mitigated by disclosure to clients of all prior arrangements for commissions and referral fees and obtaining client prior approval for commission arrangements. While the AICPA and SEC have prohibited auditors from accepting fees from clients on contingency basis, some states in the USA and Government agencies have often adopted a contract audits based on contingent fees for tax assessment and other audit services. For instance, Unger (2002) reports that contract audits afford many states the opportunity of recouping their tax proceeds from tax and real property, identification of taxpayers, valuation and appraisal and various other audits at minimal costs. Contract audits have however come under much criticism especially with respect to tax assessments where auditors seem to maximize collections for personal contract benefits (Unger, 2002).

Audit contracts based on contingent fees also compromise auditor independence (Dye, Balachandran & Magee, 1990) by inducing auditors to make biased public estimates, which may not reflect actual best estimates in order to maximize expected fees. Dye, Balachandran and Magee (1990) used economic modeling to investigate auditors and client response to contingent audit contracts in the audit market with information asymmetries. The model reveals while single auditor-client contracting favors contingent audit contracts, collectively auditors favor the ban on contingent fees. Furthermore, expanding opportunities for audit contracting may cause a decline in audit market competition.

2.9.1.6 Audit Partner Compensation

How the audit firm compensates or remunerates audit partners may also significantly influence auditor judgments. According to Trompeter (1994), partner objectivity may suffer compromises if it any association with engagement profitability or ability to retain clients. This is because the auditor has an imposed pressure to overlook income smoothing or misstatements in order to retain clients and sustain office sales. Johnstone, Warfield and Sutton (2001) also assert that compensation based on partner's ability to obtain consulting services also affects independence risk.

Trompeter (1994) conducted an experimental study using fifty four audit practitioners in a three case scenario with varying degrees of GAAP constrains to determine the effect of compensation schemes and regulation on auditor judgment. The findings reveal that client retention pressures were more likely to influence partners in smaller profit pool firms and this was especially so where accounting principles offered a wider range of policy choices. The influence of compensation schemes on audit judgments may however be mitigated by GAAP and auditor risk perceptions leading to judgments that are more conservative. Partner compensation therefore differs among firm sizes as small profit pool firms were more concerned about engagement and office profitability and had more comprehensive peer review systems whereas larger firms concentrated on attracting new clients, sale of other non-audit services, technical expertise and partner tenure. The findings suggest tying compensation schemes to client retention objectives compromise auditor objectivity though GAAP and internal monitoring mechanisms mitigate this threat.

Similarly, Hannes (2010) posits that auditor independence alone is insufficient in combating fraudulent practices given the inherent ambiguity associated with the state of mind which is difficult to observe and unverifiable, suggesting instead of providing an incentive for auditors to enhance objectivity through stock-based compensation schemes. The study explains that such a scheme would entail the inclusion of a three-year maximum firm/partner tenure wherein a part of audit compensation is deferred until the certification of the audit report upon which it is converted to stock which could be disposed of after an agreed holding period. However, this scheme appears to be in violation of independence regulations that prohibit an auditor from granting or collecting loans, owning stakes in client, contingent fees or a situation where a significant part of audit fees remain unpaid, giving rise to self-interest threat which may compromise AI.

2.9.1.7 Economic Dependence

Economic dependence in prior literature is a function of the client's importance to the auditor relative to other clients. Regulatory bodies and literature posit that bigger clients possess better bargaining powers and are more likely convince auditors to compromise their independence**.** Hence, auditors are more likely to resist earnings management adjustment from smaller clients than from bigger intimidating ones (Nelson, Elliott & Tarpeley, 2002). The issue becomes more worrisome for auditors with very large and complex clients who operate in various industries hence requiring diverse industry expertise (Carcello & Nagy, 2004). Operating in these environments often results in aggressive accounting treatments, which could digress

from within, GAAP boundaries to fraudulent financial reporting (Young, 2000 as cited in Carello & Nagy, 2004).

Prior studies (Craswell, Stokes & Laughton, 2002; Reynolds, Deis, & Francis, 2004; Chung & Kallapur, 2003; Larcker & Richardson, 2004) indicate that economic dependence may result from high magnitude of audit fees, NAS fees or both. There has been much scholarly debate on the influence of NAS as a source of economic dependence on PAI and few studies on audit fees as a source of economic dependence (Mitra, Deis & Hossain, 2009). According to Reynolds *et al.,* (2004) the stability of high yearly audit fee income makes rational auditors perceive more client pressure from NAS incomes than audit fees. Results are however mixed and inconclusive. For instance, Craswell *et al.,* (2002) examined the effect of fee dependence at national and audit firm levels on AI. Using audit fees as a measure of economic dependence and propensity to qualify audits as a measure of independent judgment, the study used audit fee data from Australia from 1994 and 1996. The findings reveal that audit fee dependence at both local and national level does not threaten independence. This suggests that auditors will issue qualified opinions irrespective of the magnitude of audit fees.

In addition, Mitra *et al.,* (2009) investigated the impact of audit fees on reported earnings quality. Using a sample of 1,142 Big 4 client companies from 2000 to 2005, the study measured earnings quality by performance-adjusted discretionary accruals and decomposed actual audit fees into expected and unexpected fees. The study

results reveal income-increasing discretionary accruals is negatively associated with audit fees (expected and unexpected) for pre and post SOX periods while income-decreasing accruals is significantly positively associated with audit fees in pre SOX periods only. This invariably suggests that high audit fees result from greater engagement efforts, which limit biases, improve earnings quality, and as such do not impair independence.

Furthermore, Hoitash, Markelevich and Barragato (2007) examined the relationship between fees paid to auditors and audit quality during the period 2000 to 2003. The study obtained data from standard & poor's audit fee database using 13,860 observations. Audit quality measures are absolute performance-adjusted discretionary accruals and modified accruals quality measure. Findings show a significant positive relationship between adjusted abnormal fees and adjusted discretionary accruals, suggesting that economic dependence influences auditor behavior. Results from tests on audit and NAS fees are also positive though inconsistent after SOX periods.

Yet some studies find no relationship between either firms' gross fee income and discretionary accruals or client fees and income-increasing accruals (Ashbaugh, LaFond & Mayhew, 2003; Chung & Kallapur, 2003; Larcker & Richardson, 2004). Economic dependence may also relate to financial condition of client. DeAngelo (1981) proposed that economic dependence results from bilateral monopoly between auditor-client relationship, which creates an incentive to retain clients and economic

rents accruing there from by compromising audit quality. However, having many clients and none of them commanding a significant proportion of audit revenues may mitigate the influence of economic dependence.

Reynolds and Francis (2000) posit that big audit firms reduce their economic dependence by having a portfolio of clients but local office branches, which are decision-making units often, fall victim to economic dependence because individual large clients may determine office fees. They investigated the supposed tradeoff between economic dependence and reputation protection in relation to audit decision making in local branches of Big accounting firms as compared to parent firms by examining 4,952 US companies audited by 499 local offices for 1996 fiscal year. Economic dependence (influence) measures are the size of client (fees) relative to local office size (total office fees) and audit quality measures are magnitude of discretionary accruals. Findings for both local and parent office reveal that economic dependence does not make auditors lenient and compromise audit quality for larger clients. This may suggest that economic incentives, reputation protection and litigation avoidance mitigate any chances of independence impairment arising from economic bonds.

According to Hunt and Lulseged (2007), Big 5 and non-Big 5 auditors differ in audit quality due to human, technological competencies and underlying client characteristics. In their study, they examined the influence of economic dependence on reporting decisions and the mediating effects of litigation risk and audit tenure of

non-Big 5 auditors. The study sourced data from Audit Analytics and Compustat to examine 1,680 observations from 2001-2003. Client influence measures are sales from a client relative to all public clients' sales of an audit office while audit-reporting quality by the level of discretionary accruals (absolute values and accrual variances). The study results show that non Big 5 auditors are indifferent to the client size (large or small) as fee dependence does not impair independence. Test on tenure mediation also reveal that lengthy audit tenures does not impair AI.

Additionally, Sharma, Sharma & Ananthanarayanan (2011) argue that corporate governance structures improve independence and financial reporting quality through Audit committee oversight. Their study investigated the association of client's economic importance and earnings management as moderated by audit committees using 224 firm-year observations from New Zealand stock exchange over a 2-year period. Earnings management measures were discretionary total and current accruals, the existence of audit committee as a dichotomous variable and NAS fees relative to gross office fees (audit and non-audit fees) measured client importance. The study found a positive association between client importance and earnings management with a higher significance where audit committees default. This implies that client importance only impairs AI through aggressive earnings management when Audit committees are weak. The study also established that client importance and earnings management depended on inside ownership, growth, firm size and leverage, but was highly moderated by audit committees.

Large clients with complex operations in more than one industry require special expertise. Maintaining auditor independence will therefore require technical expertise and resistance to pressures. Carcello and Nagy (2004) examined the relationship between client size and industry specialist auditors as they related to fraudulent financial reporting. Using 218 non-financial companies, the study measured auditor market share (total client sales relative to client assets within the industry) as auditor expertise and firm size as represented by total assets. The study found a significant negative association between auditor industry specialization and poor quality financial reports, which was weaker for larger clients and not driven by client complexity. This suggests that benefits of auditor technical expertise (specialization) in maintaining audit quality by deters fraudulent financial reporting and client size moderates this influence.

Additionally, Dee, Lulseged and Nowlin (2006) examined matched-paired design of 192 large (S&P 500) and 192 small client firms, which exerted varying degrees of influence on the audit firm. NAS fees to total fees (fee ratio) measured economic bonding and discretionary accruals measured degree of earnings management. Findings show a positive association between higher proportions of NAS to gross fees and higher levels of income increasing accruals for large clients. The results suggest that while auditors do not often yield to smaller clients already having income decreasing-accruals due to conservatism and reputation protection, they may yield to larger and more prominent clients.

Thus, the influence of economic dependence remains controversial. Even though some studies find no association between economic dependence and impaired AI or audit quality, majority of the studies indicate greater economic dependence is associated with lower perceptions of AI and audit quality. Thus, the implied association with lower perceptions of AI and the inconsistent results give reasons for further verification of this factor's effect on PAI.

2.9.2 Self-Review Threats Avoidance

The self-review threat arises when auditors are placed in position of reviewing their own or partner's work either by virtue of providing certain kinds of non-audit services like internal audit, bookkeeping or developing internal control systems (Quick & Warming-Rasmussen, 2009) or because of previous employment as an influential officer with client (IFAC, 2012: 200.5). In order to mitigate the threat of self-review some regulatory frameworks ban certain NAS while others require second partner review. For example, section 201 of SOX bans the provision of certain non-audit services because of their likely influence on auditor independence such as managerial services, bookkeeping, internal audit services, financial information system design, appraisal and valuation, actuarial, legal and broker-dealer services, contingent or compensation based rewards while others are subject to audit committee approval.

Empirical studies report mixed results on the influence of self-review threats. For instance, Firth (1981) investigated the perception of UK loan officers when auditors

engaged in bookkeeping functions as preparing source documents and financial statements and found that respondents were not confident enough to grant loans to companies whose auditors provided joint services. Shockley (1981) also considered designing client internal control system to constitute self-review as auditors are perceived to audit their own work. This is similar to Pany and Reckers's (1983) findings where directors perceived system design a great threat to auditor independence. Other studies indicate a contrary opinion. For example, Goldman and Barlev (1974) argue that providing NAS strengthens the auditor's hold on the client and confers power to the auditor because it makes the client management dependent on him. As a result, NAS enhances auditor independence.

Similarly, Bartlett (1993) investigated CPA and bankers perceptions of auditor independence in ten conflict circumstances; size of audit fee, provision of management consulting services which entailed design and implementation of accounting system, executive search assistance, hiring of chief financial officer and assistance in complex accounting transactions, contingent fees, joint venture with client, budget pressures and attest services only. Findings indicate that accounting education did not significantly influence respondents' perception. Furthermore, the significant differences in perceptions between bankers and CPA's in nine cases imply that users differ and are generally uncertain about auditor independence. Auditors were overly more confident in their ability to be independent compared to users.

2.9.3 Advocacy Threats Avoidance

Client advocacy threat arises when auditors are involved in circumstances that promote, or appear to promote client management interests. According to IFAC, (2012: 200.6) circumstances giving rise to advocacy threat include promoting securities of client, rendering certain NAS as litigation or dispute resolution with third parties or representing the client before tax authorities. When an auditor aligns his interest with client management, there is a conflict with his primary duty of upholding public interest.

There are few empirical studies on advocacy threat and they present mixed results about the influence on auditor independence. For example, Crain, Goldwasser and Harry (1994) assert that litigation support services are prone to malpractice claims and threaten public accounting practice. Some studies (Trompeter, 1994; Brody & Masseli, 1996) contend that auditors are generally conservative and act in their client interests to enhance their own economic interests mostly when accounting regulations are ambiguous. However, Haynes, Jenkins and Nutt (1998) examined the claim that auditors advocated their client management's position using an experimental study of 96 certified public accountants. Findings indicate auditors do not automatically advocate for their clients in situational or contextual conditions when client position was unknown. They however, supported client position (whether in buyer or seller situations) when specific information about client preferences was provided, though this was more associated with experienced auditors.

Further, Ponemon (1995) used an experimental study to investigate 101-litigation support specialist and 106 auditors of two public accounting firms. Findings indicate that professional judgment of accountants providing litigation support services were more inclined to the client choices, thereby compromising objectivity in spite of experience and professional ethics. The biasness of accounting estimates made by auditors indicated auditors' tendency to subordinate their judgment in favor of their client management.

Even though the AICPA does not recognizes tax services as violating AI, Francis (2006) argues that aggressive tax planning by accounting firms has resulted in issuance of tax planning guidelines. This suggests that firms pursue their client management interest to reduce or avoid taxes. Similarly, Jenkins and Lowe (2011) investigated the perceptions of 58 auditors through a mail survey to determine their perceptions of their responsibilities to client management and the extent to which they would advocate for their clients. The results indicate 32.8% of auditors supported client advocacy, 65.5% were supportive of client accounting choices and 63.8% were sensitive to pursuing their economic interests, as client loss was an important consideration.

Similarly, Cheung and Hay (2004) investigated the perception of New Zealand shareholders on auditor independence and found shareholders perceived independence to be compromised when auditors provided internal audit services, IT systems design, advocated for their clients in takeover bids, Managed client

buildings or became directors in client company. Put together, these studies suggest that auditors are perceived as biased when supporting client choices and mostly advocate client positions where accounting principles are ambiguous and client position is known.

2.9.4 Familiarity Threats Avoidance

The International Federation of Accountants (IFAC, 2012: 200.7) provides that familiarity threats arise when auditors develop close relations with the clients due to family and personal relationships, long association of senior audit personnel with assurance clients (tenure) or acceptance of gifts/hospitality from clients. Regulatory frameworks assert that close ties between auditors and their client management may compromise objectivity.

2.9.4.1 Prior or Potential Employment Relationships

Literature on employing former auditors is sparse (Bedard, Deis, Curtis & Jenkins, 2008) and has yielded mixed results on the circumstances which result in familiarity threat. For instance, Hussey (1999) investigated the influence of familiarity threat and auditor independence by surveying 776 finance directors perceptions on three aspects where familiarity threat may exist; auditor appointment, length of tenure and frequency of contact and the directors' perception of the director-auditor relations in the UK. The study found directors did not perceive non-audit service, lengthy tenures or personal relations to influence auditor independence but stressed the need to curb director influence at auditor selection stage.

Moreover, Martinov-Bennie, Cohen and Simnett (2011) assert that the familiarity of former colleague to firm's plans and procedures engenders the possibility of circumventing audit tests thereby making misstatements go undetected. Client hiring of former auditor (revolving door syndrome) also engenders familiarity threats and has received some regulatory concerns. For instance, the SOX requires audit partners to observe a one year cooling off period (Shaub, 2005) while Australian auditors must observe a two year cooling off period (Chapple & Koh, 2007) before joining a client firm in an influential capacity.

Scholarly and professional opinions however are inconsistent. While accounting firms claim restricting auditor movement to client firm will harm prospects of client firms employing qualified personnel, other studies have shown cooling off period mitigates perceived independence threats. For instance, Wright and Booker (2005) surveyed the perceptions of 174 state boards of accounting officers on the revolving door syndrome and the need for cooling off period. Findings indicate that members perceived cooling-off periods significantly reduce negative influences of independence compromises.

Furthermore, Imhoff Jr (1978) used a within subject experiment to investigate the frequency of 19 (258 audit staff) auditor employments in client firms and the perception of 87 bankers and 57 CPA's of such employment on auditor independence. Findings show that 20% of auditors accepted client offers. Various

researchers have examined employment effects on users' perceptions. Both CPA's and bankers did not perceive a threat in independence compromise when auditor assumed a non-supervisory role. About 68% of users questioned auditor objectivity when an audit supervisor accepted client employment within six months of audit while 40% of CPA's did not perceive a threat to objectivity. This suggests that though users differed in their perception of independence, time period and auditor rank significantly influenced users' and CPA perceptions.

Koh and Mahathevan (1993) employed a between subjects design to investigate middle managers perceptions of auditor client employment and auditor independence as they related to past and future audits. Results show there were greater independence concerns when the period between audit conclusion and employment acceptance was short. There were similar concerns for future audits only when the former auditor held a supervisory role in the audit firm or assumed an influential accounting position in the client firm. Similarly, Kaplan and Whitecotton (2001) used an experimental study to examine 73 auditors' reporting intentions and independence when faced with the knowledge that another colleague within the engagement team is considering employment with client. The results show auditors are reluctant to report employment consideration intentions to engagement partners.

Similarly, Law (2010) surveyed 205 CPA's and interviewed 20 others to investigate perceptions of CPA's employment with former clients influence on auditor independence post Enron. Their findings indicate the rank of partner significantly

influences perceptions of independence. Furthermore, independence was as perceived compromised when former auditor had direct relationship with client, but more severely compromised when a former manager was involved.

2.9.4.2 Alumni Affiliation

There are concerns that alumni affiliation may also lead to familiarity threats. However, empirical results are mixed. While some studies find a positive association between alumni association and independence impairment due to personal relationships and identity effects (Menon & Williams, 2004; Lennox, 2005; Bamber & Iyer, 2007; Lennox & Parker, 2007), other studies fail to find evidence of independence impairment resulting from alumni effects (Geiger, North & O'Connell, 2005; Martinov-Bennie, Cohen & Simnett, 2011). Studies that established positive association argue that the presence of alumni increases the unwillingness to question former colleagues and exercise sufficient professional skepticism due to implied trust and confidence on alumni colleague (Beasley, Carcello & Hermanson, 2000; Lennox, 2005). Other studies that fail to find support for alumni effect have hinged their findings on increased regulatory scrutiny.

For instance, exploring the heightened regulatory environment in Australia, Martinov-Bennie, Cohen and Simnett (2011) conducted an experimental study using 52 audit professionals from the big four firms to examine the perceptions of auditors on the influence of alumni relations and CFO previous audit background in the post Enron/HIH environment. The findings failed to support any significant effect of

these factors on auditor judgment that may likely compromise auditor objectivity and professional skepticism.

2.9.4.3 Length of Audit Engagement (tenure)

Lengthy audit engagements also present familiarity threat that may compromise auditor objectivity because of the closeness that develops between auditor and client management. The significance of this threat to AI has resulted in regulatory authorities establishing standards to restrict auditor tenure through either partner rotation or mandatory firm rotation in various countries. For example, the SOX Act and the Australian Corporations Act require partner rotation after five years, with a two-year cooling off period (Chapple & Koh, 2007).

Empirical studies have also examined the influence of auditor tenure on auditor independence. Some studies find lengthy tenures make auditors develop close bond with client that may compromise objectivity and ultimately affect audit quality. For instance, According to Davis, Soo and Trompeter (2002) the longer a firm retains an auditor, the lesser the chances that he will report objectively on client's assertions or detect errors. They examined the relationship between length of auditor tenure, independence and audit quality using a sample of 846 firms having 12,892 firm year observations from 1980-1998. Findings indicate a significant negative relationship between audit tenure and discretionary accruals and a significant positive relationship between audit tenure and forecast errors. This suggests that lengthy audit tenures impair auditor independence by allowing clients latitude/flexibility to engage

in aggressive earnings management, therefore constraining audit tenures could strengthen AI and check earnings management.

Al-Thuneibat *et al.,* (2011) also investigated the influence of auditor tenure using a sample of 190 manufacturing and 99 service firms in Jordan. The length of audit firm-client relationship measured audit tenure while equity risk premium was measured as excess of company cost of equity over risk free rate of interest and audit quality was proxied by the absolute value of discretionary accruals. The study finds a positive relation between audit tenure and equity risk premium, equity risk premium increasing as audit firm tenure increases resulting in reduced audit quality. This concurs with other studies advocating for auditor rotation due to negative effects perceived from long audit-client relationships and the increased risk on equity.

Further, Kramer, Georgakopoulos, Sotiropoulos and Vasileio (2011) posit that since auditors face a lot of risk in the initial years of engagement, they should be more concerned with conservative reporting during the initial phase of relationship. Their study examined the influence of audit firm rotation and tenure on earnings conservatism. Using a sample of 11,643 firm year observations from 1980-2006 containing 460 instances of audit firm rotation, the study measured earnings quality as level of conservatism in reported earnings (negative and positive unexpected returns), tenure was measured as length of audit engagement with a client (up to 3years=short, 4-8years=medium and 9years or more=long). The results of the study failed to find significant evidence associating audit firm rotation with increased level

of earnings conservatism. However, results show levels of earnings conservatism to be higher for short audit tenures as compared to lengthy tenures implying audit firm rotation may positively influence timely recognition of losses.

Yet other studies show lengthy tenures enhanced auditor independence and audit quality. For example, Ghosh and Moon (2005) investigated how investors and information intermediaries (independent rating agencies and financial analysts) perceive auditor tenure in relation to stock rankings, debt ratings and earnings forecasts. The study used earnings response coefficient (ERC) as a measure of investor's perception of earnings quality and audit tenure measured as the duration of audit-client relationship. A full sample of public firms having 38,794 firm-year observations from 1990-2000 and a restricted sample having 5years auditor tenure were collected from compustat data. Findings reveal that ERC increases as auditor tenure increases and influence of earnings on stock rankings increases as audit tenure lengthens while debt ratings show no sign of variation. Influence of earnings on forecast also show an increase for future forecast when lengthy auditor-client relationships are involved suggesting that analysts perceive earnings quality improve as audit tenure lengthens.

Similarly, Lim and Tan (2010) contend that auditor tenure is associated with auditor expertise and economic incentives. Their study investigated the moderating effects of auditor specialization and fee dependence on the relationship between auditor tenure and audit quality using a sample of 12,783 firm year observations from 2000-

2005. The study measured audit quality as the level of discretionary accruals and auditor industry specialization as industry market share of Big 4 auditors (24% & 30%). Client importance/economic incentives was measured as auditor's economic bond with client (total fees from client relative to total fee income from all clients) and tenure by the cumulative number of engagement years (short3years or less and long 9years or more). The findings indicate firms audited by specialists provide higher quality audits when audit tenure increases as compared to non-specialists. This quality improvement is greater for auditors having lower fee dependence on clients. This suggests that extended auditor tenures improve auditor independence and audit quality when auditors are industry experts and have less fee dependence.

Additionally, Johnson, Khurana & Reynolds (2002) examined the effects of audit-firm tenure on the quality of financial reports using a sample of Big 6 clients and two proxies for financial reporting quality. The study measured earnings quality by the absolute value of unexpected accruals and audit firm tenure as the length of audit-client relationship (short=2-3years, medium=4-8years and long >9years). The study used a sample of 11,148 firm year observations from clients of Big 6 auditors. The findings indicate short tenure audit-client relationships (2-3years) are associated with poor quality audit reports evidenced by greater management earnings as compared to medium firm-client relationships (4-8years) while lengthy firm-client relationships (>9years) are also associated with a decline in reporting quality as compared to medium firm-client relationships. The findings suggest short tenure audit firm-client relationships that were associated with higher levels of unexpected accruals signify

poor audit quality, which may result in the early periods of audit engagement but may improve as audit tenure increases as evidenced by low unexpected accruals for medium and lengthy relationships.

A few others find auditor tenure having no association with independence compromises and audit quality. For example, Manry, Mock and Turner (2008) examined the effects of extended audit partner tenure on audit quality. Using a sample of 45 lower and 45 higher risk companies' audit conducted by three large audit firms from 1999 to 2001, the study measured Audit quality by the level of discretionary accruals and tenure by 5 and 7 years SOX directive. The study finds discretionary accruals are significantly but negatively related to audit partner's tenure with specific clients. This suggests that audit quality in small companies' increases as partner tenure increases, regardless of the level of audit risk. No significant relationship between partner tenure and audit quality in large firms and shorter audit tenures in small companies found.

In sum, scholarly opinions on influence of auditor tenure on auditor independence and audit quality remain divided. Proponents argue auditor rotation provides a fresh look to financial statements and curbs auditor excesses due to anticipated rotation as well as limit costs of corporate collapses due to poor audit quality in the long run to just initial rotation costs (Davis, Soo & Trompeter, 2002; Abdul Nasser, Abdul Wahid, Mustafa-Nazri & Hudaib, 2006; Meyer, Rigsby & Boon, 2006; Al-Thuneibat, Al-Issa & Baker, 2011). Regulators support rotation due to concerns

about independence impairment from economic dependence, which will inhibit development of creative, innovative audit programs and objective scrutiny because of over familiarity and economic bonds in long tenures (Carey & Simnett, 2006).

The conflicting views indicate the need for examining the extent to which rotation influences independence and audit quality given the inadequacies and noisiness of proxy measures used for measuring audit quality (Bamber & Bamber, 2009). It has also been argued (Jackson, Moldrich & Roebuck, 2008) that even though audit quality may decline due to inefficiencies associated with rotation, perceived audit quality may actually improve. Hence, there is a need to examine the influence of audit rotation on perceptions of independence and audit quality.

2.9.4.4 Client Gift/Hospitality

The acceptance of client gift and hospitality also engenders familiarity threat as it encourages closer auditor-client personal relations. Studies have found gifts/discount arrangements to have considerable influence on perceptions of AI though literatures on it are sparse possibly due to regulation on acceptable limits of gifts/tokens. According to Pany and Reckers (1980), even minimal amounts significantly affect financial statement users' perceptions of AI. Fern (1985) as cited in Law (2010) also found that there were negative perceptions of independence appearances and impressions of biasness in audit situations where clients offered auditors gifts. However, Law (2010) found that in Hong Kong, some level of social-relations between auditor and clients as 'guanxi' relations may not impair AI. Yet Liu, Wang

and Wu (2011) found that in China, management affiliations and state ownership and control impair AI.

In addition, Pany and Reckers (1980) investigated the impact of gifts, discount arrangements and client size on stockholders perceptions of AI. Though 480 stockholders were randomly selected from the stockholder list (NYSE) and mailed, only 107 (26%) responded which was used for the study. Subjects were required to evaluate auditors' ability to withstand client pressure in making audit judgments in six situations using a seven-point response scale. The study varied information on gifts, discount arrangements and client size across the subjects. Results indicate that though there were no differences between discounts and gifts, there were differences at specific levels of savings which was statistically significant at $40 and $125 where subjects were not inclined to agree and uncertain in most instances. Client size was insignificant with less confidence for auditors of larger clients. The study also found a significant interaction effect between discounts/gifts and amount of savings even though the gift was perceived as more detrimental to AI than purchase discounts which was also lowly rated. This may be because purchase discounts involve more active and overt auditor involvement in questionable behavior due to recurrent nature of purchases as compared to small token gifts which themselves become more questionable as they increase in size and significance.

Law (2010) adopted a combination of qualitative and quantitative approach to investigate the effects of types of NAS provision and gift hospitality on AI in Hong

Kong. The first part of the study involved semi-structured interviews of 10 Big 4 auditors in May and June 2008. The second part involved the use of the interview output to conduct extensive surveys of auditors and financial analysts to establish the validity and reliability of the interviews. The interviews revealed respondents were mainly concerned with the type of NAS provided and gift/hospitality accorded to auditors by clients in determining whether auditors were independent or not. Questionnaire survey also examined 413 financial analysts and auditor respondents' perceptions of NAS and gift/hospitality. Findings indicate taxation, internal audit services, accounting and corporate services have a significant influence on AI while gifts/hospitality and types of sample had no significant effect. This suggests that while NAS provision negatively influences perceived independence, provision of corporate finance services was perceived as having a negative effect while taxation services were perceived as beneficial value-added services that could enhance AI.

Similarly, Liu, Wang and Wu (2011) investigated the effects of the two types of management affiliation or "guanxi" (firm-level connections of state ownership and personal connections resulting from management affiliations with external auditors) and their combined effect on audit quality in China. A sample of 3,048 firm year observations comprising 1,540 Unaffiliated Non State owned enterprises (UNSOEs), 242 Affiliated Non State owned enterprises (ANSOEs), 1070 Unaffiliated State owned enterprises (USOEs) and 196 Affiliated State owned enterprises (ASOEs) was drawn and used for the analysis. Results indicate that both SOEs and affiliated firms were less likely to receive unclean audit opinions while influence of

management affiliations mitigated the likelihood of unclean audit opinions in SOEs as compared to NSOEs, which had a higher likelihood of receiving an unclean audit opinion. This also implies that management affiliations auditor-client relationships significantly impair AI especially where clients are under state control. The study's limitation included the use of guanxi management affiliations in china where guanxi is generally and socially acceptable. These results may not apply where prohibitions regarding such affiliations exist.

2.9.5 Intimidation Threats Avoidance

According to IFAC (2012; 200.8) Intimidation threat emanates from threatened auditor dismissal, threatened litigation, client pressure to reduce extent of audit work to reduce fees, greater client expertise in matters or partner promotion depending on acceptance of client policies. Studies have argued that clients often exert pressure on auditors to influence the type and form of audit opinion. For instance, Knapp (1985) used a repeated measure experiment to investigate the perceptions of 43 loan officers on client financial condition, NAS provision, audit market competition and nature of auditor-client conflict influencing auditor independence. Findings indicate ambiguity in technical standards may reduce auditor's ability to withstand client pressure while healthier clients had a higher likelihood of influencing auditor judgments. Respondents felt NAS provision and high audit market competition only slightly tilted auditor judgment in favor of client.

Similarly, Bierstaker and Wright (2001) examined the influence of fee and partner pressure on audit planning decisions using a case study of 83 auditors in a between subject design. Findings indicate that auditors responded to fee pressures by reducing budgeted hours, hence increasing efficiency while partner pressures resulted in by limiting planned tests. However, when faced with multiple competitive pressures, budgeted hours for more experienced staff were more likely to accommodate the shortfall, indicating their superior expertise to increase efficiency by meeting targets.

Additionally, Fearnley, Beattie and Brandt (2005) investigated six case studies involving 22 auditor-client interactions as they related to threats and safeguards affecting independence. Various outcomes resulted from the interactions depending on whether safeguards were able to sufficiently mitigate threats (good outcomes) or not (poor outcomes). In particular, the most frequent threats encountered are intimidation and familiarity threats even though research and regulatory frameworks did not pay much attention to them. Intimidation was found to consist of two dimensions; intimidation resulting from management underlying threat of fee reduction or removal which spills into economic self-interest, and direct bullying in the form of aggressive behavior to overcome auditor objections. Intimidation threats also exist within audit firms where client retention directs firm opinion, even against partners.

More so, a new threat that may arise from self-review, urgency threat resulted from last minute pressures to reach decisions. The study suggests safeguards to bullying,

removal and urgency threats such as standing up to intimidation, robust partner selection decisions, firm quality control and corporate governance mechanisms. Lack of scholarly and regulatory attention to intimidation threats constituted a major concern since it is one of the most frequently encountered threat in auditor-client interactions (Fearnley, Beattie & Brandt, 2005). The lack of scholarly attention further indicates the need to examine this threat in assessing PAI.

2.9.6 Safeguards Implementation

According to IFAC (2012, 100.13), safeguards consist of measures or actions which eliminate or reduce threats to acceptable levels that may no longer pose risk to auditor objectivity. They range from outright prohibition, disclosures, policies and standards, institutional and environmental arrangements. The existence and application of safeguards would enhance appearances of auditor independence to stakeholders and thus their confidence in audited reports. Safeguards are classified either as those created by the profession, legislation or regulation, or as those in the work environment. Section (100.14) of the IFAC defines professional, legislative or regulatory safeguards as comprising corporate governance regulations, Continuing professional development programs, educational, training and experience requirements for entry into profession, Professional or regulatory monitoring and disciplinary measures and third party professional external review.

IFAC (2012, 200.11) defines work environment safeguards as comprising firm-wide and engagement specific safeguards. Firm-wide safeguards include commitment and

compliance to fundamental principles, establishment of need to act in public interest and establishment and monitoring of quality control through policies and procedures. Others include policies on threats identification, evaluation and application of safeguards or termination/decline of engagement, documentation of internal commitment to principles, policies and procedures on member-client interest and relationship. Further, monitoring and control of economic dependence on single clients, separation of attest and NAS provision, timely communication of policies to staff, responsibility for firm quality control, advice and disciplinary mechanism and enhancement of reporting and communication channels to senior levels.

Engagement-specific safeguards include independent non-assurance partner review and advice, independent third party consultations, ethical issues discussion with governance team, disclosure of services provided and fees to governance team, conducting independent part or full engagement re-performance and rotation of senior assurance team. IFAC (2012, S200.14) allows the consideration of safeguards in the client system as third party ratification of engagement appointment, client employment of competent and experienced employees in managerial cadre, adequate internal procedures for objective non-assurance engagements as well as existence of corporate governance structure for oversight and control. According to Sec (200.10), the assessment of auditor independence should be dependent on consideration as the significance of the threat, nature of the engagement and audit firm structure.

Prior studies have shown the positive impact of safeguards in enhancing actual and perceived auditor independence. For example, Muhamad-Sori *et al.,* (2010) examined senior managers, loan officers and listed companies' perceptions of joint provision of attest and consulting services with respect to different types of non-audit services. Results from the questionnaire survey and interview showed all the loan officers, 91% managers of listed companies and 76% of auditors perceived a significant threat from joint provision of attest and consulting services. However, safeguards such as separation of attest from consulting staff can effectively mitigate the perceived threat.

Similarly, Hoitash and Hoitash (2009) investigated the role of audit committees in managing relationships with auditors after SOX in the USA. They found strong audit committees were associated with a higher level of assurance, appointment of high quality auditors and lower likelihoods of dismissal. Abbott *et al.*, (2003) also found companies having independent audit committees that met quarterly were more likely to have lower NAS fee ratios, suggesting that the oversight function of audit committees in safeguarding PAI and improving reporting quality will result in lower usage of incumbent auditor for NAS provision. Lisic, Myers and Zhou (2011) examined audit committees Characteristics in safeguarding AI by the extent to which auditors have protection from dismissal following the issuance of an ICMW opinion in the post-SOX period. Findings indicate even though auditors are more likely to be dismissed after issuing ICMW reports, the probability is reduced when audit committees are independent and have more financial and governance experts.

Some studies also provide support for auditor rotation. For example Meyer, Rigsby and Boon (2006) investigated the linkage between auditor tenure, audit quality and audit qualification removal. The study compared a sample of 337 firm years of 115 companies that received "subject to audit qualifications over a period of 12years using discrete time survival analysis to evaluate changes in reporting opinions. The findings support auditor rotation by revealing that strength of auditor client relationships raise possibilities of the removal of a qualified opinion suggesting that audit/client relationships influenced auditor decisions requiring more judgments (materiality uncertainty compared to litigation risks).

Similarly, Al-Thuneibat *et al.,* (2011) investigated the relation between audit tenure and perceived audit quality using a sample of 190 manufacturing and 99 service firms in Jordan. Their results showed auditor rotation was an important safeguard as lengthy tenures were associated with lower perceptions of audit quality and increased risk on equity. Johnstone *et al.,* (2001) also show that corporate governance mechanisms, audit firm culture and policies, regulatory oversight and quality controls are effective safeguards that mitigate independence risks. According to Bedard *et al.,* (2008), users of financial statements consider these safeguards as very important in enhancing audit quality.

In sum, the empirical results suggest implementing adequate safeguards is necessary in order to mitigate the threats that characterize the auditor-client relationships. The more auditors are perceived as independent, the greater the likelihood their opinions

will be considered a fair representation by stakeholders. As independence in appearance entails the avoidance of circumstances or influences which may impair auditor objectivity, sustaining stakeholders confidence will depend on how well independence frameworks foster the relinquishing of auditor interests (real or implied), relations or circumstances which may threaten auditor objectivity.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The previous chapter reviewed relevant literature and regulatory frameworks on auditor independence and discussed the variables that the study intends to focus on in investigating AI from Nigerian stakeholders' perspectives and proposing a measure for PAI. In line with this discussion, this chapter discusses the research methodology and procedures followed in the conduct of the study. This includes the research framework, hypotheses development and research design of the study. Under the research design, data collection procedures, sampling technique, measures and instrumentation used are discussed. This is followed by the method of data analysis and chapter summary.

3.2 Research Framework

A review of AI studies indicates that AI consists of two dimensions; independence in fact (IIF) and independence in appearance (IIA). Although IIF is a state of mind that is difficult to observe and measure, stakeholders perceptions of the constituents of factual independence provide a basis for measuring IIF. Based on review of prior literature and consultation with stakeholders of the audit process, the study has identified three components of Independence in Fact (IIF) that auditors are expected to approach their work with; Objectivity, Integrity and Professional Skepticism.

IFAC (2012) provides that IIA entails the avoidance of circumstances or influences that may make informed users doubt the objectivity of an auditor after weighing relevant safeguards applied. This suggests that the presence or absence of certain circumstances determine how stakeholders perceive the independence of auditors.

Based on the literature review and consultation with stakeholders of the audit process, the study has identified five independence threatening circumstances (threats) that provide the basis for assessing AI; self-interest threat avoidance, self-review threat avoidance, advocacy threat avoidance, familiarity threat avoidance and intimidation threat avoidance, and safeguard implementation which may be employed to mitigate the threats. This study examines the perceptions of Nigerian stakeholders on AI and proposes a PAI measure based on these identified bases. The proposed measurement model will thus constitute nine constructs; perceived objectivity, perceived integrity and perceived professional skepticism relating to independence in fact and self-interest threat avoidance, self-review threat avoidance, advocacy threat avoidance, familiarity threat avoidance and intimidation threat avoidance, and safeguard implementation relating to independence in appearance. Figure 3.1 below shows the proposed measurement model for the PAI measure.

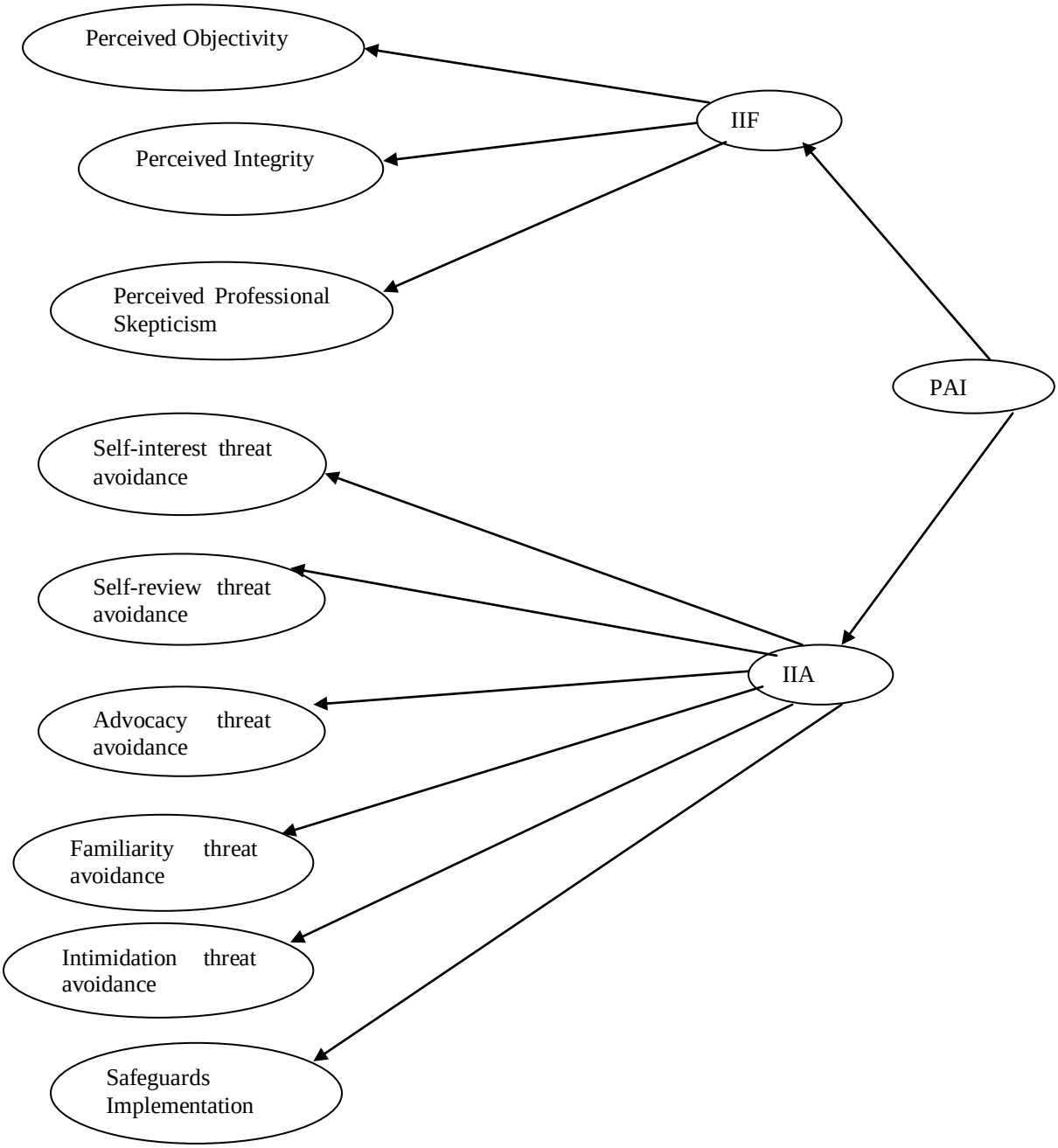

Figure 3.1
Research Framework

3.3 Underpinning Theories

There are many theories that explain the auditor-stakeholder interactions such as agency, stakeholder theory and legitimacy theory. The agency theory depicts the existence of a principal-agent relationship whereby due to certain circumstances (separation of ownership from control, risk bearing, decision making and information asymmetry), a principal engages an agent to undertake some duties for a reward (Fama & Jensen, 1983; Jensen & Meckling, 1976). The theory suggests that conflict of interest usually arises when the agent pursues selfish interests to the detriment of the principal (Adelopo, 2010). In relation to auditor independence, shareholders expect auditors to be objective when providing their opinion on financial statements. However, the fact that auditors may also provide other consulting services to client management provides an incentive for the auditor to align their judgments to management preferences, hence compromising their objectivity. The main shortcomings of the theory are its focus on self-interest involving two parties. As other stakeholders (creditors, investors, regulators and other third parties) may have simultaneous interests in auditor objectivity, other theories explaining this wider interaction become more appropriate (Audit Quality Forum, 2005).

The stakeholder theory rests on the premise that various groups have interests in corporate financial reports and as such, organizations have a responsibility to disclose and be accountable to their public (Freeman, 1984; Schilling, 2000). In relation to auditor independence, various users depend on the credibility and

reliability of audit reports to make investment and lending decisions. In line with this, the various professional codes of conduct charge professional accountants to uphold the public interest and report fairly on financial statements. Hence, professional accountants are accountable to all stakeholders in rendering their fiduciary responsibilities (An, Davey & Eggleton, 2011). This also implies that stakeholders can hold auditors accountable by evaluating how objective they perceive the auditors are in discharging their duties. The legitimacy theory rests on the premise that organizations need to affirm their legitimacy within the environment by conforming to societal norms and expectations in order to remain relevant and continue to exist (Suchman, 1995). As societies' attitude and expectations change, organizations need to adapt to changing requirements to ensure activities are legitimate and justified (Deegan, 2006).

With respect to auditor independence, the need to restore public confidence in the auditing profession after the corporate collapses and audit failures necessitates the need to re-establish the legitimacy of the profession. Re-establishment efforts include requirement for increased transparency, increased regulatory supervision and review of standards (Power, 2003). Afrem (2012) affirms that the perception of stakeholders about the auditor's independence becomes very significant because positive perceptions of independence add legitimacy to the auditor, the audit function and financial statements as a whole. In line with this, the legitimacy theory provides a basis for stakeholders to evaluate the legitimacy of auditors and assess them based on how objective they perceive them to be.

3.3.1 Stakeholder Theory

The stakeholder theory gained more prominence and acceptability in explaining corporate interactions compared to the agency theory that mainly focused on shareholders' perspective (Freeman, 1984). It posits that various groups such as management, shareholders, employees, customers, creditors, suppliers, and the community and business markets have stakes in the outcome of corporate financial reporting process (Freeman, 1984; Schilling, 2000). The management and coordination of the diverging interest of various stakeholders will therefore influence the corporate strategy and performance of organizations (Marcoux, 2003). According to An, Davey and Eggleton (2011) stakeholder theory defines the responsibility of organizations in disclosing corporate performance information to various stakeholders for decision making purposes because they are accountable to not only shareholders but all stakeholders.

Stakeholder theory constitutes ethical (moral) and business/positivist (managerial) perspectives (Phillips, 1997; An *et al.*, 2011). The ethical perspective contends that organizations should be fair and protect the rights of all stakeholders by working towards all stakeholders' interests. This entails providing them adequate information on organizational activities irrespective of whether or not they use the information and are or are not in position to influence the organization, but because it is ethical to do so (Deegan & Samkin, 2009 as cited in An *et al.*, (2011). The managerial or positivist perspective on the other hand focuses on how organizations meet various stakeholder demands by distinguishing between significant contributors that affect

organizational performance in terms of critical operational resources and those that do not (Roberts, 1992). This means that the organization has to balance the conflicting needs of primary stakeholder groups in order to retain their contributions to organizational performance (Clarkson, 1995).

According to Donaldson and Preston (1995) stakeholder theory is an embodiment of three aspects/theories; descriptive or empirical, instrumental and normative theories. They explain that descriptive/empirical aspect clarifies certain characteristics of corporations and their stakeholders in the past and present to make future predictions while the instrumental aspect identifies whether or not a linkage exists between corporate management and set objectives. Users of instrumental theory therefore employ stakeholder theory to find a connection between stakeholder management and corporate performance. Thirdly, they explain the normative aspect as providing guidance about organizations through moral and philosophical principles of individual/group rights and social contracts. Though they acknowledge the relevance of each aspect, they argue that the most fundamental 'inner core' of stakeholder theory is the normative aspect that justifies the existence of moral values and obligations to organization's stakeholders. This confers on corporate management to balance the interests of the various stakeholders in corporate managerial accountabilities (Collier, 2008).

Critics of stakeholder theory focus on its notion of trying to meet all stakeholder interests and its inability to provide management with solutions for solving the

problem of conflicting stakeholder interest (Jensen, 2001). In addition, the immeasurability of most stakeholders' objectives provides management the opportunity to be less accountable and mismanage resources (Mallin, 2004). As such, it is unspecific and difficult to operationalize because of its immeasurability and unobservability (Adelopo, 2010). According to Phillips (1997), stakeholder theory also suffers from the absence of a normative framework for moral justification concerning the legitimacy and identity of stakeholders since it has not ruled out or specifically identified particular groups from being stakeholders. He suggests the inclusion of stakeholder fairness to define stakeholder groups owed superior moral obligations above others and others that do not deserve additional moral consideration due to absence of additional obligation.

Orts and Strudler (2002) concur with this narrow stakeholder view to include all individuals that have significant property rights or significant contractual relations with a firm and exclude those groups of people whose economic interests are indirectly affected by the firm e.g. government and social community. They contend that this notion is in line with theory of the firm, which focuses on direct economic risk bearing participants and provides for reasonable ethical considerations within legal and environmental ramifications that defy the broad stakeholder theory. Orts and Strudler (2009) summarizes the three major weaknesses of stakeholder theory as; the identification and definition of stakeholder, vagueness and over breadth and the problem of balancing divergent interests in decision-making.

This study will employ the stakeholder theory in descriptive and normative aspects to explain the nature of interactions between auditors and various stakeholders (their clients, shareholders and other informed users). The theory explains how auditors balance these interactions in meeting their fiduciary duty while maintaining objectivity. With respect to AI, Duff (2004) contends that the demand for audit function results from the need to provide contractual obligations between corporate management and various stakeholder groups. The stakeholder theory provides the platform for examining the responsibilities and objectivity of auditors as monitoring mechanisms in maintaining AI by reporting fairly on the financial statements since various stakeholder groups depend on the credibility of audit reports in making decisions. Therefore, in addition to other incentives such as litigation and reputation (Deangelo, 1981), stakeholders' positive perceptions should provide some pressure/incentive to enhance AI. It then follows that the degree to which other informed users perceive auditors as objective and their opinions credible may depend on stakeholders' assessment of auditor independence.

3.3.2 Legitimacy Theory

According to Tilling and Tilt (2010), there are two classes of legitimacy theory. The Macro or Institutional legitimacy level which explains how wider organizational structures as government or capitalism gain societal acceptance and are institutionalized and the organizational level or strategic legitimacy theory which deals with how organizations gain acceptance in the society. Suchman (1995) defines legitimacy as a generalized perception or assumption of the desirability, acceptance

and appropriateness of an organization's actions and activities within social norms, beliefs, values and definitions. Thus, legitimacy theory contends that entities should establish their legitimacy in the eyes of various stakeholders by continuously ensuring their activities and actions are within the confines of societal norms and values. An implied social contract now exists between entities and the environment within which they operate which defines not only shareholders expectations but also environmental norms and expectations (Guthrie & Parker, 1989; Deegan, 2006). An *et al.,* (2011) note that organization's compliance to these expectations is crucial to their continuity and survival in the environment.

Legitimacy is also an operational resource that organizations harness from the environment and in order to achieve stated objectives (Pfeffer & Salancik, 2003; Suchman, 1995). This means that organizations can obtain this resource by pursuing objectives that are in line with societal values and norms i.e. upholding social contracts. Deegan (2009) argues that perceptions about an entity's deviation from the social contract results in the contract rescission and penalties including legal restrictions on operations, limiting supply of material and labor resources or reducing product demand through consumer boycotts may be imposed.

Additionally, as societies evolve, their attitudes and expectations change so entities need to adapt to these changing requirements to support the legitimacy of their activities and continuous operations (Deegan, 2006). In the course of operations, there may sometimes be a gap between societal expectations and organizational

performance resulting from wrong societal perceptions or organizational lapses in meeting responsibilities. In such situations, Lindblom (1994) as cited in Tilling and Tilt (2010) argues that the organization needs to reinforce its operational legitimacy by finding congruence between societal stakeholder expectations and its own objectives. Borrowing from Dowling and Pfeffer (1975), Lindblom (1994) suggests that resolving the threat of a legitimacy gap may include various strategies. These are communicating and demonstrating appropriateness of organizational activities to societal expectations, educating the various stakeholders on activity changes in line with environmental value systems, influencing and/or manipulating stakeholder perceptions on organizational activities or trying to change societal expectations to focus on possible goal attainability. Figure 2.5 Adapted from Tilling and Tilt (2010) shows the four phases of Lindblom's (1994) organizational legitimacy.

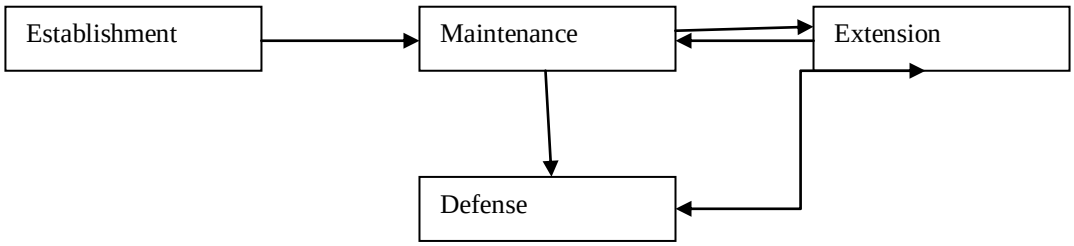

Figure 3.2
Levels of Legitimacy in organizations
Source: Tilling and Tilt, (2010).

The model shows the four stages organizations undergo to establish their legitimacy in the society. Schilling (2010) contends that the model could be extended by two phases; loss and disestablishment phases. He argues that where an organization fails

to defend itself, it moves into the loss phase where it can reestablish itself or eventually disestablish itself. Critics have argued that Legitimacy theory is superficial, narrow and needs updating, is loosely applied, one-sided when employed to assess only contractual obligations to society and many studies fail in expressly defining it contextually (Hybels, 1995; Mobus, 2005; Owen, 2008). Nevertheless, it continues to be used to support and justify many studies on corporate social disclosures and corporate governance (Deegan, Rankin & Tobin, 2002; Adelopo, 2010; Tilling & Tilt, 2010) and remains one of the most significant theories explaining corporate social reporting.

Most studies on corporate social disclosure infer that such disclosures are because of perceived legitimacy threats (Deegan *et al.*, 2002). Following this view, Richardson (1987) contends that accounting gives legitimacy to organizational economic activities by synchronizing business economic motives with social values within an accountability process. However, unlike voluntary corporate disclosures, solicited disclosures may be required when stakeholder groups perceive an information asymmetry in what is voluntarily disclosed (Van der Laan, 2009). Within the framework of corporate financial reporting, an organization considers its annual report to be the most important document (Gray, Kouhy & Lavers, 1995) which employs managerial, marketing and communication resources to convey the entity's performance, social imagery and legitimacy (Stanton & Stanton, 2002). Additionally, an audit is statutorily required to improve the credibility of financial statements.

According to Power (2003), the auditing profession is constantly involved in a process of continuous reform to ensure its legitimacy because of threats and pressures of audit failures and independence compromises, requiring increased transparency, rationalization and formalization of audit processes that result in various standards and technical guidance. Thus, an independent audit opinion adds credibility and legitimacy to financial reports. Positive perceptions of independence add legitimacy to the audit function, the financial report and the auditor (Afrem, 2012).

3.4 Hypotheses Development

A review of literature on scale development indicates an evaluation of constructs posited to measure underlying domains follows a comprehensive conceptual framework to ensure scales are valid in measuring the underlying domains they purport to measure. For instance, Parasuraman, Zeithaml and Berry (1988) conceptualized the quality of service as a function of customer perceptions and expectations. Based on this analogy, they developed a multi-item scale for measuring consumer perceptions of service quality. Similarly, Aladwani and Palvia (2002) note that the domains of the underlying constructs need to be delimited in order to generate sample items for the constructs investigated. In line with this, their study revealed four dimensions (technical adequacy, specific content, content quality and appearance) in a 25-item instrument reflectively measured perceived web quality.

Additionally, in developing a measure for customer satisfaction on internet banking in Taiwan, Chen, Hsiao and Hwang (2012) identified six subscales from customer satisfaction literature that they propose to measure internet banking satisfaction. Based on these propositions, the study conducted expert panel verification, pilot study, and web surveys to refine construct items of the proposed measure. To further refine and validate the measure, the study employed exploratory and confirmatory factor analyses. In addition, Lu, Zhang and Wang (2009) used a qualitative study to identify and propose a hierarchical model that explains customer perceived m-service quality. Their study developed and validated a measure of mobile service quality as defined by three dimensions (interaction quality, environment quality and outcome quality). Furthermore, Kaptein (2008) used the stakeholder theory to conceptually define the basis of developing a measure for unethical behaviour. The study identified and validated five dimensions posited to embody the domain of unethical behaviour in the work place. In line with these studies, this study reviewed literature on auditor independence and professional code of ethics for accountants to identify the constructs underlying the auditor independence dormain. The regulatory frameworks (e.g. IFAC, AICPA, ICAEW) and prior studies identify two dimensions to auditor independence (Independence in Fact and Independence in Appearance).

3.4.1 Independence in Fact (IIF)

As earlier mentioned, the study focuses on examining AI from the perspectives of Nigerian stakeholders. According to Carmicheal (2004), AI perceptions are vital to sustaining stakeholder confidence in audit reports, credibility and reliability of

financial statements as well as efficiency of capital markets. To be independent to stakeholders, auditors need to act and appear independent by avoiding circumstances and influences that may likely impair objectivity or manage them to acceptable limits that do not undermine objectivity (Srivasta, Mock & Turner, 2009; IFAC, 2012). In line with this, the IFAC has identified two dimensions of AI, independence in fact (IIF) and independence in appearance (IIA). According to IFAC, IIF is a state of mind that permits the auditor to act with objectivity, integrity and professional skepticism. Objectivity entails freedom from conflict of interest, impartiality and pursuing public interest. Integrity entails being honest by avoiding intentional misrepresentation of facts or subordination of professional judgment to client interest. Professional skepticism entails approaching an audit with an enquiring mind. Thus, the study posits that the PAI measure embody stakeholder perceptions about the domain of these three constructs that make up independence in fact (IIF).

H1*:* The PAI measure in Nigeria should embody an assessment of perceived auditor objectivity

H2*:* The PAI measure in Nigeria should embody an assessment of perceived auditor integrity

H3*:* The PAI measure in Nigeria should embody an assessment of perceived auditor professional skepticism

3.4.2 Independence in Appearance (IIA)

According to IFAC (2012), independence in appearance implies avoiding circumstances that may make informed users, having knowledge of facts and safeguards applied, doubt the objectivity of the auditor. These circumstances arise due to the various threats that predispose the auditor to independence compromises such as the self-interest threats, self-review threats, familiarity threats, advocacy threats and intimidation threats.

3.4.2.1 Self-Interest Threat Avoidance

According to IFAC (2012; 200.4) self-interest threats result from circumstances which make the auditor have a stake or personal interest in the audit client. Such instances include having direct or indirect material financial interest in client, provision of non-audit services, economic dependence on client, loan to or from client, contingent fees or unpaid fees, business relations with client and prior or potential employment with client.

Prior studies have indicated that auditors having financial interest in client are more likely to accept management's accounting choices (Trompeter, 1994; Beattie *et al.*, 1999; Tribunella & Tribunella, 2003; Alleyne *et al* 2006; Bamber & Iyer, 2007) and are reluctant in criticizing client management (Frankel, Johnson & Nelson, 2002; Muhamad-Sori *et al.*, 2010). Further, they have a higher likelihood of allowing earnings management and discretionary accruals (Frankel *et al.*, 2002; Hoitash, Markelevich & Barragato, 2007). Additionally, they report fewer qualified opinions

(Wines, 1994; Krishnan and Krishnan, 1996; Ahadiat, 2011; Sharma, Sharma, & Ananthanarayanan, 2011) and stakeholders perceive them negatively (Pany & Reckers, 1983; Khurana & Raman, 2006). This indicates that the alignment of auditor and client management interests at the expense of other stakeholder interests compromises auditor objectivity and leads to a decline in perceived independence and audit quality. It then suggests that an assessment of the existence and magnitude of self-interest threats will provide a basis for evaluating stakeholders PAI. In line with this argument, the study makes the following proposition:

H4*:* The PAI measure should embody an assessment of self-interest threat avoidance

3.4.2.2 Self-Review Threat Avoidance

Self-review threats emanate from circumstances where auditors are placed in position to review their own work (e.g. by providing joint assurance and certain non-audit services) or were former client employees (IFAC, 2012; 200.5). Empirical studies indicate that auditors' facing the self-review threat by providing certain NAS were perceived as less independent (Firth, 1981; Shockley, 1981; Lowe, Geiger & Pany, 1999; Shaub, 2004; Cheung & Hay, 2004) and exerted less effort in reviewing prior work (Quick & Warming-Rasmussen, 2009). Additionally, effective audit committees were also unlikely to procure NAS from incumbent auditor (Abbott *et al.*, 2003), or outsource internal audit services to incumbent auditors (Swanger & Chewning Jr., 2001; Abbott, Parker, Peters & Rama, 2007). It is therefore reasonable to suggest that stakeholders are more likely to assess an auditor's objectivity when

he/she reviews his/her own work. In line with this, the study makes the following supposition:

H5: The PAI measure should embody an assessment of self-review threat avoidance

3.4.2.3 Advocacy Threat Avoidance

Auditors become exposed to advocacy threats when they promote client interest as shares, perform management functions/decision making, provide litigation services or act on their client's behalf in dispute resolution with third parties (IFAC, 2012; 200.6). Empirical studies provide evidence that advocacy threat undermines auditor independence. For example, auditors providing litigation support services were found to more likely advocate their client position (Crain, Goldwasser & Harry, 1994; Trompeter, 1994; Ponemon, 1995; Brody & Masselli, 1996; Haynes, Jenkins & Nutt, 1998) while those providing tax services were more likely to assist their clients in aggressive tax planning and representation before tax authorities (Shaub, 2004; Francis, 2006). Some studies on auditor perceptions also suggest that auditors sometimes viewed themselves as client advocates and responsible to management (Jenkins & Lowe, 2011) while users perceived objectivity as impaired when auditors advocated client management position (Cheung & Hay, 2004). In sum, the studies suggest that perceptions of auditor biasness exist when auditors advocate client positions. Since stakeholders view client advocacy as threatening auditor objectivity, they are more likely to consider and assess circumstances that place auditors in advocacy position when assessing auditors. Hence, it is reasonable to expect that:

H6: The PAI measure should embody an assessment of advocacy threats avoidance

3.4.2.4 Familiarity Threat Avoidance

According to IFAC (2012, 200.7) familiarity threats result from circumstances as having close family ties with client employees, family member occupying an influential position in client company, influential client officer was a former partner, lengthy audit tenures or acceptance of gift and hospitality from client. Prior studies indicate that when auditors become excessively familiar with their clients, they are more likely to trust client accounting choices and identify with their interest (Beasley *et al.*, 2000; Lennox, 2005; Bamber & Iyer, 2007) and reduce level of professional skepticism by exerting little effort in audit planning and testing (Nelson, 2009; Endrawes & Monroe, 2010). In addition, they are more likely to be offered and accept jobs with client (Imhoff Jr, 1978; Koh & Mahathevan, 1993; Wright & Booker, 2005) and more likely to be perceived by users as biased (Pany & Reckers, 1980; Law, 2010).

Additionally, close bonds resulting from lengthy tenures were found to be associated with lower audit quality in terms of higher discretionary accruals and earnings management (Deis and Giroux, 1992; Davis, Soo & Trompeter, 2009; Dopuch, King, & Schwartz, 2001) and higher equity risk premium demands (Al-Thuneibat, Al-Issa & Baker, 2011). Furthermore, users perceive auditor acceptance of client gifts and hospitality as compromising auditor objectivity (Pany & Reckers, 1980; Law, 2010). The results suggest that circumstances engendering familiarity threat make stakeholders have negative perceptions about auditor independence. Hence, informed

users will be more likely to evaluate familiarity threats in measuring auditor independence. It can therefore be reasonably inferred that:

H7*:* The PAI measure should embody an assessment of familiarity threat avoidance

3.4.2.5 Intimidation Threat Avoidance

Intimidation threat emanates from threatened client dismissal, threatened litigation, client pressure to reduce extent of audit work to reduce fees, greater client expertise in matters or partner promotion depending on acceptance of client policies (IFAC, 2012; 200.8). There are limited studies on intimidation threat. The studies indicate a client's ability to exert pressure on auditor judgment is associated with its financial condition. For example, auditors were more likely to acquiesce to larger clients in strong financial condition than smaller and weaker ones (Knapp, 1985; Chung & Kallapur, 2003). Also, auditors facing intimidation threat were more likely to be pressured into hasty decisions and bullied into accepting client choices (Fearnley *et al.,* 2005) or threatened with auditor switch (Alleyne *et al.,* 2006; Al-Ajmi & Saudagaran, 2011).

The risk of client loss is significantly associated with independence compromises (Falk, Lynn, Mestelman, & Shehata, 2000) as auditors succumb to pressure to retain clients. Shaub (2004) and Behn, Carcello, Hermanson and Hermanson (1997) argue that auditors earning significant tax fees face an intimidation threat and audit managers are often less willing to confront client possibly because compensation schemes are tied to client satisfaction which has been found to decline with greater

professional skepticism. Consistent with these studies, stakeholders will perceive a possible impairment of auditor independence due to perceived intimidation when auditors accept engagements from large clients provide tax services, face likely auditor-switch, or compensated based on client retention. It is therefore reasonable to make the following proposition:

H8*:* The PAI measure should embody an assessment of intimidation threat avoidance

3.4.2.6 Safeguards Implementation

According to IFAC (2012, 100.13) safeguards are measures, actions or procedures that may be employed to eliminate or reduce threats to acceptable levels that no longer threaten auditor objectivity. These generally fall under professional, legislative or regulatory safeguards or safeguards within the work environment. In applying the safeguards, Sec (200.10) requires the professional accountant to exercise professional judgment on the best way to manage threats or otherwise, decline or terminate engagement. The benchmark for exercising professional judgment is considering what a reasonable and informed third party will conclude after weighing all relevant facts and circumstances available to the professional accountant such as the significance of the threat, nature of engagement and firm structure. Examples include firm quality control procedures, disclosure of fees (NAS and attest) and types of services provided, disciplinary measures, professional and regulatory monitoring, separation of attest and consulting staff, existence of

corporate governance mechanisms, independent partner reviews and partner or firm rotation.

Prior studies have supported the positive impact of safeguards in mitigating independence threats. For instance, stakeholders' perceive partner rotation, separating attest and consulting staff of the audit firm as enhancing auditor independence (Pany & Reckers, 1983; Lowe & Pany, 1995; Quick & Warming-Rasmussen, 2009). Effective audit committees have also been found to mitigate agency conflicts and demand higher audit quality (Piot, 2004; Lisic, Myers & Zhou, 2011), purchase fewer NAS from incumbent auditors (Abbott *et al.*, 2003), were less likely to dismiss auditors and safeguarded AI (Muhamad-Sori *et al.*, 2009). The committee's oversight function were likely to result in fewer restatements, fraudulent financial reporting and litigations (Abbott, Parker & Peters, 2004; Farber, 2006; Saleh, Iskandar, & Rahmat, 2007; Hoitash & Hoitash, 2009) which will translate into enhanced actual and perceived AI.

Cooling off (window) period also reduces the threat of revolving door syndrome to auditor objectivity (Koh & Mahathevan, 1993). Quality control and third party reviews also signal a commitment to audit quality (Johnstone, Warfield & Sutton, 2001), improve audit risk assessments (Ayers & Kaplan, 2003) and are generally perceived as important in maintaining audit quality (Bedard *et al.*, 2008). Put together, the conceptual framework and empirical results emphasize the relevance of maintaining adequate safeguards to eliminate or manage threats to acceptable levels

to enhance both IIF and IIA. In line with this thinking, the study makes the following proposition:

H9*:* The PAI measure should embody an assessment of safeguards implementation

3.5 Research Design

In line with the research objectives, the research design is the master plan of a study that explains the procedures for data collection, unit of analysis, population, sampling method and sample size, instrument and measurement. As earlier discussed, the study aims to examine AI from the perspective of Nigerian stakeholders and propose a PAI measure. As past researches especially in the developed countries have used archival approaches to examine various measures of AI (NAS fee ratio, client importance/economic dependence), this study intends to use survey method. This is because of the various limitations of the archival approaches such as questionable validity and reliability of proxy measures (Bamber & Bamber, 2009), omission of some variables and inability to establish causal connection between variables (Beattie *et al.*, 2013).

The survey entails sourcing primary data from various stakeholders of the audit process and use this to develop a measure that will enable empirical measurement of PAI and provide a basis for subsequent monitoring of PAI overtime in Nigeria. As an initial step in measuring PAI in Nigeria, the study is a cross-sectional study that will source data from target respondents about their perceptions and assessment of AI of external auditors in Nigeria.

3.5.1 Population

The unit of analysis of this study will be individuals. In this respect, there is the need to identify and inculcate the views of the major stakeholders of the audit process. The study selects six stakeholder groups: auditors, officers of the Financial Reporting Council of Nigeria (FRC) and the Federal Inland Revenue Service (FIRS), members of corporate governance body (IOD), bank loan officers (creditors) and members of registered shareholder association in Nigeria. The choice of these groups is in line with prior exploratory studies on auditor independence. (e.g. Alleyne *et al.,* 2006; Muhamad-Sori *et al.,* 2010; Al-Ajmi & Saudagaran, 2011; Beattie *et al.,* 2013).

The study selects auditors because they have a fiduciary duty to uphold their independence in the conduct of an audit; they are stakeholders of audit quality and because of their insight, familiarity and knowledge about the independence concept. The Financial Reporting Council officers register, regulate, monitor and enforce compliance of auditing practices to ethical standards. Their selection is because of their roles in monitoring and enforcement, which are vital in sustaining commitment to stakeholders (Berglof & Claessens, 2006). The institute of Directors (IOD) as a corporate governance body is selected because they are major stakeholders of the audit quality and annual audit represents one of the cornerstones of corporate governance as supported by the Committee on Corporate Governance of Public Companies in Nigeria (Okike, 2007). Shareholder association's selection is because they are primary stakeholders whom auditors owe a fiduciary duty to objectively

report on the true position of their investments. The Federal Inland Revenue Service officers are also stakeholders who rely on the credible financial reports to make tax assessments, hence their selection. Cheung and Hay (2004) contend that the views of shareholders and stakeholders are especially relevant when developing AI requirements.

Following support for the individual groups from prior literature, the study sourced the sampling frame for each group/stratum. For instance, the practicing auditors included both licensed chartered and national accountants from ICAN and ANAN. ICAN members list is from the institute's website of practicing professionals while ANAN members list is from the association's website of registered practicing professionals. There were 746 practicing ICAN members and 415 practicing ANAN members totaling 1,161 registered practicing accountants. The list for Financial Reporting Council officers, members of the Institute of Directors and Shareholders' association (Lagos zone) was requested from the administrative registry of each organization following approval was granted from top management. The population of FRC officers was 143, IOD members were 1,400 and Lagos Zone shareholders association were 1,500.

The sampling frame of 768 tax assessment officers of the Federal Inland Revenue Service is from the FIRS official website. For the bank loan officers, there are 22 mega banks in Nigeria and each bank had an average of 37 loan officers spread across the country. Due to the inability to get a sampling frame of loan officers from

the banks, the researcher used the average per bank to calculate the population of loan officers for the whole banks yielding 814 bank loan officers. Put together, the population from all the groups was 5,786.

3.5.2 Sampling Method

In order to select the required number of respondents the probability sampling method is used. This is because the study sought to examine stakeholder perceptions before proposing a measure that would be generally acceptable to the stakeholders about their perceptions of AI in Nigeria. The study selects stratified sampling method because stakeholders comprise various groups. The adoption of stratified sampling as the most suitable technique also considers the fact that various stakeholder groups from various organizations are target respondents. This also finds support from prior studies (e.g. Hair, Money, Samuel & Page, 2007; Sekaran & Bougie, 2010) which noted that investigating various groups requires evaluation of each subgroup as a stratum. Furthermore, Sekaran and Bougie (2010) report that stratification is most suitable when a population has various segments which can be segregated in order to facilitate selection of a more realistic and representative sample.

Next, the study adopts the disproportionate stratified sampling method because the target respondents are members of various groups (auditors, shareholders, FRC officers, FIRS officers, bank loan officers and members of the institute of directors) that do not have equal population distribution within each stratum.

Sekaran and Bougie (2010) note that disproportionate stratified sampling becomes most appropriate when stratums vary in sizes or when respondents within stratums vary with respect to certain characteristics such as knowledge or experience. Disproportionate stratified sampling is also employed because it ensures homogeneity within a group i.e. stakeholders, and heterogeneity across groups, i.e. different organizations and associations (Hair, Money, Samuel & Page, 2007). According to Sekaran and Bougie (2010), disproportionate stratified sampling involves altering stratum sizes using various methods while maintaining the target sample size. This will result in the redistribution and selection of strata subjects that are representative of the groups. Table 3.1 shows the total population of the groups is 5,786. According to Krejcie and Morgan (1970), 361 respondents are an appropriate sample for a population of up to 6,000.

Disproportionate stratified sampling uses various methods to allocate elements into subgroups. For example, Lohr (2010) notes that the apportionment of sample elements may be for within strata allocation, between strata allocation or optimum allocation analysis. The within strata analysis and between strata allocation analysis methods were not appropriate because the study does not focus on investigating detailed analysis within stratum or group differences across strata. The optimum allocation procedure is the most appropriate because it focuses variability within various strata.

In line with this, the study therefore uses disproportionate stratified sampling using optimum allocation procedure to select sample elements for each stratum. According to Lohr (2010), an optimum allocation becomes more appropriate when strata groups differ in terms of variability or data collection costs. In employing optimum allocation procedure, the number of elements selected from each stratum is dependent on their standard deviation so that variability is determines the selection of larger or smaller sample sizes for the stratums relative to their standard deviation. Following this, standard deviation showing each stratum's deviations from the mean is calculated using Microsoft Excel (2010). The study then employs each group's standard deviation as basis to apportion sample elements. The formula for standard deviation is as represented below.

$$SD = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

This resulted in selecting 68 auditors (18.8%, SD 139.1), 58 FRC officers (16.1%, SD 580.8), 54 members of the IOD (15%, SD 308.1), 60 FIRS tax assessment officers (16.6%, SD 138.8), 64 bank loan officers (17.7%, SD 106.3) and 57 shareholder respondents (15.8%, SD 378.8). Total sample size remains 361. Table 3.1 shows the disproportionate stratified sampling of respondents for the study.

Table 3.1
Disproportionate Stratified Sampling of Respondents

S/N	Proposed respondent group/Stratum	Population of Elements in Stratum	Sample per stratum
1	Practicing auditors	1,161	68
2	Financial Reporting Council officers	143	58
3	Members of Institute of Directors	1,400	54
4	FIRS Tax assessment officers	768	60
5	Creditors (Bank loan officers)	814	64
6	Shareholders/Investor group	1,500	57
	TOTAL	5, 786	361

Source: Researcher

According to Sekaran and Bougie (2010), non-response error could result from respondents' unavailability or refusal to participate due to survey length, patronage of research or method of data collection. However, incentivizing participation and advance notices minimizes these problems. Edwards, Roberts, Clarke, DiGuiseppi, Pratap, Wentz, and Kwan (2002) also find that responses doubled with the use of incentives and shorter questionnaires garner more responses. In addition, prior contact with participant before survey increases response rate. They suggested increasing additional materials and survey administration period as strategies to enhance response rate.

Thus, to increase the chances of attaining sufficient responses from target respondents (unit non-response), respondents were given incentives (branded UUM pen) as appreciation gesture to participate in addition to increasing the pre-determined sample size to compensate for any likelihood of poor response. Nakpodia, Ayo and Adomi (2007) study finds that in a typical Nigerian survey, only 10-60 percent of respondents respond without follow up suggesting that the non-

response rate is about 40 percent. An increase of 40 percent (144) to the sample of 361 yields a new sample of 505 respondents. Applying disproportionate stratified sampling to the new sample (505) implies randomly selecting 95 auditors, 81 FRC officers, 76 members of the IOD, 84 FIRS tax assessment officers, 90 bank loan officers and 79 shareholder respondents. Table 3.2 below shows the 40% adjustment for non-response.

Table 3.2
Adjusted Disproportionate Stratified Sampling of Respondents

S/N	Proposed respondent group/Stratum	Population of Elements in Stratum	Sample per stratum
1	Practicing auditors	1,161	95
2	Financial Reporting Council Officers	143	81
3	Members of Institute of Directors	1,400	76
4	FIRS Tax assessment officers	768	84
5	Creditors (Bank loan officers)	814	90
6	Shareholders/Investor group	1,500	79
	TOTAL	5,786	505

Source: Researcher

3.5.3 Construct Measurement

This section explains the operationalization of variables under investigation. The study provides a clear definition for each construct and states how prior literature measures the constructs. Instrument items sourced from IFAC framework and prior PAI studies as confirmed by Delphi panel experts are measured by a five point likert scale (1, 2, 3, 4, and 5) indicating stakeholders' level of agreement with the components in measuring PAI (strongly disagree, disagree, undecided, agree and strongly agree). Stakeholders were required to indicate their level of agreement with the components of AI. The study uses a five point likert scale because it does not

intend to assume priory which direction the respondents should lean to (Beattie *et al.,* 1999). According to Krosnick and Fabrigar (1997), a five or 7-point, scale with a mid-point is also justified because it reduces measurement error compared to forcing respondents to choose in particular direction. Schuman and Presser (1981) also support this and Krosnick and Fabrigar (1997) find that scales with mid-points reveal stronger associations of attitudes and interviewer bias is reduced thereby improving data quality. Thus, the study chooses a scale with a mid-point to allow respondents freely express their opinion. This also follows prior interdependence studies on perceptions of auditor independence as Alleyne *et al.,* (2006) and Al-Ajmi and Saudagaran (2011).

The definition of AI follows prior literature, according to its two dimensions as defined by IFAC (2012): Independence in Fact (IIF) and Independence in appearance (IIA). To measure stakeholders' perceptions about IIF, items on auditor objectivity and integrity are adapted from Brown *et al.,* (2007) instrument. The perceptions about the professional skepticism construct are measured using Hurtt (2010) scale of professional skepticism. To measure perceptions on IIA, a prior instrument developed by Shaub (2004) and some items from Beattie *et al.,* (1999), Muhamad-Sori and Karbhari (2005) and Oladele (2008) measuring threats to AI will be used. To measure safeguards implementation, the study generates items from IFAC (2012) code of ethics for professional accountants. This provides a means for assessing stakeholders' perceptions of IIA. Several items measure each construct. Table 3.1 shows the constructs that the study proposes to measure PAI.

Table 3.3
Constructs Summary and Sources of Measurements

S/N	Dimension/ Construct	Source	No. of items	Brief definition
	Independence in Fact			
1.	Perceived objectivity	Brown, Stocks and Wilder (2007)	5	Stakeholders' perception about the auditor's honesty and impartiality in the conduct of audit .
2.	Perceived integrity	Brown, Stocks and Wilder (2007)	5	Stakeholders' perception of the auditor's fair dealing, observance of ethical and technical standards
3.	Perceived professional skepticism	Hurtt (2010)	30	Stakeholders' perception about how the auditor approaches audit with inquisitiveness in order to evaluate audit evidence objectively.
	Independence in Appearance			
1.	Self-interest threat avoidance	Beattie, Fearnley and Brandt (1999), Shaub (2004) and Oladele (2008)	10	Stakeholders' assessment of auditor's avoidance of circumstances that make them have interest in attest client
2.	Self-review threat avoidance	Shaub (2004) and Muhamad-Sori and Karbhari (2005)	5	Stakeholders' assessment of auditor's avoidance of circumstances that place them in position to review their own work
3.	Familiarity threat avoidance	IFAC (2012), Oladele (2008) and Shaub (2004)	10	Stakeholders' assessment of auditor's avoidance of situations which put the auditor or firm in close association with attest client management
4.	Advocacy threat avoidance	Shuab (2004), Bartlett (1993) and Oladele (2008)	6	Stakeholders' assessment of auditor's avoidance of circumstances which place the auditor in a position of acting on behalf of client management
5.	Intimidation threat avoidance	Shaub (2004) and Bartlett (1993)	5	Stakeholders' assessment of auditor's avoidance of circumstances which put them or the firm under intimidation by attest client management
6.	Safeguards implementation assessment	Muhamad-Sori and Karbhari (2005), Oladele (2008) and IFAC (2012)	13	Stakeholders' assessment of measures and actions taken by auditors or audit firms to eliminate or reduce independence threats to acceptable levels

Source: Researcher

Table 3.1 shows thee constructs (perceived objectivity, perceived integrity, perceived professional skepticism) relate to IIF and six constructs (self-interest avoidance, self-review threat avoidance, familiarity threat avoidance, advocacy threat avoidance and intimidation threat avoidance and safeguards implementation) relate to IIA.

3.5.3.1 Perceived Objectivity

Even though objectivity relates to the mental attitude which may not be physically observed (Kinney, 1999), stakeholders' perceptions on auditor objectivity informs the degree of reliance they place on audited reports. As such, it is important to evaluate their perceptions on auditor independence with regard to objectivity. In line with Brown *et al.,* (2007), this study defines perceived objectivity as the reflection of the auditor's intellectual honesty, impartiality, avoidance of conflict of interest and intentional misrepresentation. It is measured by five items as adapted from Brown *et al.,* (2007) using a five point-scale ranging from '1' "strongly disagree" to '5' "strongly agree". Examples of items adapted include "Are free from conflict of interest", "Maintain independence in thought and action" and "Are impartial".

3.5.3.2 Perceived Integrity

The AICPA also charges auditors to uphold their integrity by not subordinating public trust to personal gain. Shaub (1988) suggests that in meeting various stakeholder needs, auditors need to conduct themselves with integrity. In line with Brown *et al.,* (2007) this study defines perceived integrity as perceptions about fair dealing, observance of ethical and technical standards, maintaining client

confidentiality and resisting subordination of judgment or circumvention of standards. It is measured by five items as adapted from Brown *et al.,* (2007) using a five point-scale ranging from '1' "strongly disagree" to '5' "strongly agree". Examples of items include "Always maintain client confidentiality", "Always adhere to ethical standards" and "Do not circumvent standards".

3.5.3.3 Perceived Professional Skepticism

Perceived professional skepticism relates to stakeholders' perceptions about auditor's approach to audit, gathering and objectively evaluating audit evidence. It is measured by 30 items as adapted from Hurtt (2010) using a five point-scale ranging from '1' "strongly disagree" to '5' "strongly agree". Examples of items adapted include "Wait to decide on issues until more information is gotten", "Like to question things that are seen or heard" and "Like to ensure that most available information is considered before making a decision".

3.5.3.4 Self-Interest Threat Avoidance

Self-interest threats refer to circumstances which place an auditor or audit firm to have interest with attest client (IFAC, 2012; 200.4). Following prior studies (e.g. Beattie *et al.,* 1999; Shaub, 2004), this construct will be measured by NAS fee ratio and economic dependence. Self-interest threat avoidance is measured by 10 items from Beattie *et al.,* (1999), Shaub (2004) and Oladele (2008) using a five point-scale ranging from '1' "strongly disagree" to '5' "strongly agree". Examples of items adapted include "Avoid income dependence from specific client retention", "Avoid

client significance to firm's overall portfolio" and "Avoid generating more than 10% of total office revenue from one client".

3.5.3.5 Self-Review Threat Avoidance

Self-review threats refer to circumstances that place auditors in position to review their own work (IFAC, 2012; 200.5). This study follows Shaub (2004) and Muhamad-Sori and Karbhari (2005) to measure self-review threats by five items using a five point-scale ranging from '1' "strongly disagree" to '5' "strongly agree". Examples of items adapted include "Do not provide internal audit services to attest client", "Do not design accounting systems for attest client" and "Provide NAS to attest clients only when consulting personnel are different from attest personnel".

3.5.3.6 Advocacy Threat Avoidance

Advocacy threats refer to circumstances which place the auditor in a position of acting on behalf of client management (IFAC, 2012; 200.6). Stakeholders may perceive an auditor advocating for their client when he provides services as managerial decision making, tax services, litigation support or dispute resolution and client representation (Shaub, 2004). Following Shaub (2004), Bartlett (1993) and Oladele (2008), this study measures advocacy threat by six items using a five point-scale ranging from '1' "strongly disagree" to '5' "strongly agree". Examples of items adapted include "Do not provide tax services in addition to attest services", "Do not provide tax services and assist attest clients in decision making" and "Do not represent client before Federal Inland Revenue Service".

3.5.3.7 Familiarity Threat Avoidance

Familiarity or trust threats refer to situations that put the auditor or firm in close association with attest client management. Circumstances engendering close auditor-client association include NAS provision, revolving door practice employment relations, lengthy audit tenures, family ties and acceptance of gift/client hospitality (IFAC, 2012; 200.7). This study measures familiarity threat by ten items from Shaub (2004), Oladele (2008) and IFAC (2012) using a five point-scale ranging from '1' "strongly disagree" to '5' "strongly agree". Examples of items adapted include "Avoid providing NAS to attest client", "Avoid having affiliations with attest clients" and "Do not accept material gifts and hospitality from attest client".

3.5.3.8 Intimidation Threat Avoidance

Intimidation threats refer to circumstances where auditors find themselves intimidated by attest client. Circumstances engendering intimidation include threatened dismissal, litigation, and pressure to reduce extent of audit work or client importance. This study measures intimidation threat by five items from Shaub (2004) and Bartlett (1993) using a five point-scale ranging from '1' "strongly disagree" to '5' "strongly agree". Examples of items adapted include "Avoid client significance to local office revenues", "Do not perform audit services under extreme time pressure" and "Do not accept engagement when former audit partner is in influential position as CEO, CFO in attest client".

3.5.3.9 Safeguards Implementation

This study defines safeguards as the measures and actions taken by auditors or audit firms to eliminate independence threats or reduce them to acceptable levels. IFAC (2012; 100.13) identifies two categories of safeguards; those by the profession, legislation or regulation and those to be established within the work environment. Although attest clients often have safeguards, auditors normally exercise caution against relying on them entirely. Safeguards observable to stakeholders include outright service policy prohibition, disclosure of attest and consulting service fees, disclosure of types and fees from consulting services, separation of consulting and attest personnel, quality control and third party review policies and corporate governance mechanisms. This study measures safeguards implementation by thirteen items from, Muhamad-Sori and Karbhari (2005), Oladele (2008) and IFAC (2012) using a five point-scale ranging from '1' "strongly disagree" to '5' "strongly agree". Examples of items adapted include "Audit and non-audit fees paid to auditor are disclosed in client financial reports", "Internal audit function is outsourced to another external auditor" and "Audit firm practice partner rotation".

3.5.4 Data Collection Technique

The study uses a single questionnaire to collect data from stakeholder respondents for a number of reasons. Firstly, the questionnaire offers numerous advantages in data collection such as simplicity, timeliness and minimal cost compared to interviews (Sekaran & Bougie, 2010). Secondly, it provides a more convenient means of efficiently examining stakeholders' perceptions of AI. This is justified by

Carmichael and Swieringa (1968) as the best way to obtain people's opinions. Thirdly, the need to use questionnaire also becomes necessary because of the quantitative aspect of this study, which focuses on measuring perceptions. Fourthly, most studies that have investigated PAI (e.g. Beattie *et al.*, 1999; Alleyne, *et al.*, 2006; Al-Ajmi & Saudagaran, 2011) have employed questionnaire to collect data. The questionnaire also affords various means of distribution such as through e-mail, hand-to-hand distribution or through postage mail. In order to increase the likelihood of good response, the researcher and two research assistants administer the questionnaire hand to hand. The study uses this method because personal contact with the respondents can help provide clarification where necessary, improve response rate and facilitate faster retrieval of questionnaires (Sekaran & Bougie, 2010). The mail postage is not suitable because postal services in Nigeria suffer from long delays and are not as efficient as in developed countries.

3.5.5 Data Collection Procedure

As mentioned earlier, the study uses questionnaire instrument to collect the relevant information from the various stakeholders about their perception of AI. Since the study intends to propose a measure for AI, this entails sourcing component items from literature and validating the items through the Delphi technique (expert panel) who are stakeholders of audit process in Nigeria. This finds support from various studies (Cravens, Oliver & Ramamoorti, 2003; Coy & Dixon, 2004; OECD, 2008) as the foundation of developing a measure. The procedure involves conducting an extensive literature review and developing the theoretical framework based on

regulatory frameworks and related prior studies. This is necessary to provide justification for the scope/domain of components of the proposed measure. Diamantopopoulos and Winklhofer (2001) suggest that indicators chosen should be sufficiently inclusive to cover entire scope of latent variable measures. Next, expert and stakeholders assessment of the indicator items is necessary to validate their suitability for inclusion in the proposed measure. The Organization for Economic Cooperation and Development (OECD, 2008) advices that this is necessary in order to provide a clear understanding and substantiate the quality of indicators selected for measure development. Nunnally and Berstein (1993) also posit that breadth of definition is extremely important in order to avoid excluding relevant indicators and consequently affect quality of measure. As such, expert validation and refinement of indicator items sourced from prior studies and IFAC (2012) code is undertaken.

3.5.5.1 Delphi Technique

The Delphi technique remains one of the best ways of obtaining a reliable consensus from a group of experts over a complex, critical or delicate issue. However, unlike focus groups or interviews, the Delphi technique's main advantage is the avoidance of direct confrontation among experts. According to Dalkey and Helmer (1963) as cited in Schmidt (1997), this enhances independent thought and consideration of opinions that is impaired due to preconceived notions, defense of personal stand and the likelihood of group persuasion when direct confrontation is involved. The Delphi method is a mechanism for expert problem solving in a variety of situations. Overtime, Okoli and Pawlowski (2004) observe that Delphi methods can be used to

suit peculiar problems or objectives. For example, in order to ascertain expert consensus about the importance of issues, a ranking-form of Delphi can be undertaken (Schmidt, 1997). Additionally, concept/framework development can also benefit from a Delphi panel of experts. According to Coy and Dixon (2004), the Delphi technique provides the best avenue to obtain expert opinion on complex matters. It is also the most practicable, flexible in terms of reconsideration and objective assessment of opinions that are devoid of undue influence or peer pressure (Sekaran & Bougie, 2010).

According to Okoli and Pawlowski (2004), the Delphi technique begins with the selection of an appropriate expert group qualified to answer the questions raised. Following this, a researcher then administers an instrument on the subject matter to individual experts after which, responses are collected and collated. Results from the first survey are then re-administered for affirmation, reconsideration or additional response based on feedback. A process of reiteration follows until the respondents while maintaining their anonymity reach an acceptable consensus. This enhances the quality and richness of information obtained. According to Cuhls (2003), the Delphi technique could involve two or more rounds and provides one of the best approaches to new things proposed and knowledge about such things are inconclusive or incomplete.

This study employs the Delphi method for various reasons. Firstly, developing a measure requires expert assessment and validation of the component indicators that

make up the measure. This is because experts have knowledge about the issue and the environment within which it is studied. Various studies support for this method as the foundation of concept development (e.g. Cravens, Oliver & Ramamoorti, 2003; Coy & Dixon, 2004; OECD, 2008). Secondly, the convenience with which experts can respond individually overcomes the problem of bringing them together for discussion at the same time, which can be very difficult (Okoli & Pawlowski, 2004). Finally, the effect of group pressure and domination is absent due to anonymity of experts to each other (Yang, Zeng & Zang, 2012).

This study defines experts as individuals that have important and in-depth knowledge about external auditing in general and are hence well informed and knowledgeable about auditor independence. In this respect, the study selects six categories of experts having valuable knowledge by virtue of their experience, expertise or monitoring role concerning external auditing are academics, professional bodies, government regulators, tax authority and a group of informed users (bank loan officers). The experts include five senior lecturers of Nigerian Universities (academics), five members of the Directorate of Inspection and Monitoring of the Financial Reporting Council of Nigeria (FRC, regulators) and five council members each of the two professional bodies (Institute of Chartered Accountants of Nigeria, ICAN and Association of National Accountants of Nigeria, ANAN). Others are five bank loan officers (creditors) and five directors from the corporate governance body Institute of Directors (IOD) summing up to 30 expert respondents. The researcher then contacts the experts, informs them about the purpose of the study, and solicits

for their participation and contribution. This is also in line with prior studies (e.g. Aladwani & Palvia, 2002; Coy & Dixon, 2004; Okoli & Pawlowski, 2004). The researcher selects diverse groups because heterogeneous groups are generally more creative than homogenous groups, hence the selection of a heterogeneous group of respondents (Okoli & Pawlowski, 2004).

On their acceptance to participate, the researcher emails 30 instruments to individual experts. The instrument listed a number of component indicators from the literature proposed to measure independence in fact (IIF) and independence in appearance (IIA). Experts were presented with a 107 item instrument and asked to indicate how important they perceive each item was in measuring AI using a 5 point scale ranging from '1' "not at all important" to '5' "very important". On receipt of the instruments, responses are collated, summarized and narrowed down to components that experts consider important in measuring AI. Using the scale, items that did not achieve an average score of three (3) were excluded and those scoring three (3) and above were retained.

The researcher codes each item in line with its underlying construct. For example, perceived objectivity had seven items and coded 'obj 1-7', perceived integrity had 10 items and coded 'intg 1-10', perceived professional skepticism had 30 items and coded 'psk 1-30'. Self-interest threat avoidance had 12 items and coded 'sita 1-12', self-review threat avoidance had seven items and coded "srevw 1-7', familiarity threat avoidance had 11 items coded 'fam 1-11', intimidation threat avoidance had

five items and coded ‘intm 1-5’ while safeguards implementation had 18 items coded ‘sima 1-18’.

The evaluation resulted in deleting two items for perceived objectivity, five items from perceived integrity while perceived professional skepticism and intimidation threat avoidance retained all their items. It also included deleting two items from self-interest and self-review threat avoidance each; one item from familiarity and advocacy threat avoidance each and five items from safeguards implementation (See appendix B). Overall, 18 items were deleted from the 107 items leaving 89 items.

Next, the researcher sends a second questionnaire comprising the remaining 89 items to the expert panel, which is a consolidated list of component indicators from the first instrument. The instruction on the instrument requires experts to verify their earlier responses or reconsider the remaining items and indicate their level of agreement/disagreement as well as add other additional components earlier missed. The returned instruments had no items added or deleted from them. Following Okoli and Pawlowski (2004) who suggested the use of Kendall coefficient of concordance to ascertain level of agreement/disagreement about items to be included in an instrument, the Kendal tau test was run for each construct with the items measuring it to ascertain whether responses were sufficiently correlated to suggest respondent concordance or not. Table 3.4 shows the result of Kendal tau correlation.

Table 3.4
Kendal tau correlation for Delphi panel

	Variable	Mpo	Mpi	Mpps	Msita	Msrta	Mfta	Madta	Minta	Msia
1	Perceived Objectivity	1.000								
2	Perceived Integrity	.514**	1.000							
3	Perceived Prof. Skepticism	.424**	.520**	1.000						
4	Self-interst Threat Avoidance	.551**	.539**	.424**	1.000					
5	Self-review Threat Avoidance	.415*	.555**	.395**	.500**	1.000				
6	Familiarity Threat Avoidance	.370*	.368*	.436**	.451**	.621**	1.000			
7	Advocacy Threat Avoidance	.632**	.584**	.378*	.407*	.391*	.430**	1.000		
8	Intimidation Threat Avoidance	.524**	.465**	.356*	.466**	.482**	.368*	.437**	1.000	
9	Safeguards Implementation	.502**	.423**	.329*	.644**	.536**	.429**	.371*	.469**	1.000

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The mean for each construct is calculated and coded. For example, the mean for perceived objectivity, perceived integrity, perceived professional skepticism, self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation are coded as Mpo, Mpi, Mpps, Msita, Msrta, Mfta, Madta, Minta and Msia respectively. The Kendal tau coefficient of concordance is then calculated and examined for significance at 1% and 5%. The results from table 3.4 show that mean responses for each constructs are highly correlated at 1% and 5% indicating that expert opinions are in agreement with each other. The high correlations suggest that sufficient consensuses among stakeholders' because there is high level of agreement among the experts about the constructs perceived to measure AI.

3.6 Pilot Study

A pilot test is a small mini trial of a proposed study that precludes a full-scale survey in order to test the instrument as well as obtain an insight into the likely conditions of the intended study (Gay, Mills & Airasian, 2006). According to DeVellis (2003), a pilot study is a necessary step in scale development that follows up on expert review to test the instrument. This study conducted a pilot test to achieve two major goals; firstly to validate the measure proposed by testing instrument validity and reliability and secondly to gain further insight about how the actual data may look like by anticipating and adjusting for potential problems that may be encountered during the full scale research. According to Kimberlin and Winetrstein (2008), the major indicators of an instruments quality are the validity and reliability measures. Furthermore, Sekaran and Bougie (2010) report that an instrument's reliability shows the stability and consistency with which a concept is measured i.e. there is a consistency across time and among the items measuring a particular concept.

Validity on the other hand refers to the extent to which a measure or an instrument accurately represents the concept intended and not something else i.e. ascertaining that an instruments actually measures what it set out to measure (Sekaran & Bougie, 2010; Hair, Black, Babin, & Anderson, 2010). Malhotra (2008) suggests that a pilot sample could range from 15 to 30 respondents. In line with this, the study reports and analyzes the results of a pilot study about Nigerian stakeholders' perceptions of the dimensions of AI.

3.6.1 Content and Face validity

Content validity refers to the extent to which an instrument is adequately representative of the concept it seeks to measure (Creswell, 2012). In other words, ensuring content validity entails making sure that questions asked about a concept adequately cover the essence of the concept measured. This is by consulting a panel of experts to review the instrument to assess construct composition and items suitability (Hair, Money, Samouel & Page, 2007; Sekaran & Bougie, 2010). In addition to the Delphi panel's input, the researcher sends a copy of the instrument to two professors of accounting (Universiti Utara Malaysia and Universiti of Jos, Nigeria) and two professional accountants to assess item suitability, layout and adequacy in measuring the constructs under investigation. Additionally, the researcher gives five copies of the instrument to five PhD accounting students (informed users) who are familiar with auditing practices in Nigeria to assess its clarity and understandability.

The outcome of this procedure resulted in the rewording and rephrasing of some questions but mostly was minor alterations. Following the expert recommendations, the researcher amends the instrument before administering to the pilot sample. Of the 72 instruments distributed to auditors and other financial statement users, the researcher was able to retrieve 65 instruments. Of these, five instruments were unusable because they were not completed properly leaving 60 usable questionnaires. Thus, the pilot achieves a high response rate of 83% due to the collaborative efforts of key contacts in the organizations targeted. The pilot study

was completed within three weeks within the months of November and December 2013.

3.6.2 Reliability Test

Reliability tests generally assess the extent to which items measuring the same concept mesh consistently in measuring that concept. In other words, it assesses the extent to which items hang together in measuring a construct. Kimberlin and Winetrstein (2008) assert that Cronbach alpha coefficient is the most widely used test for estimating inter-item internal consistency, which shows the average inter-correlations of items measuring a concept. Following this, the study uses the Cronbach alpha test to examine the instrument's reliability after the data was keyed into SPSS version 18 for windows and the items measuring it evaluated each construct. The generally accepted benchmark for Cronbach alpha is 0.70 and above although 0.60 is acceptable for exploratory studies (Hair *et al.,* 2010; Hair *et al.,* 2007).

The results show that all constructs achieved an acceptable internal consistency with alpha values ranging from 0.619 to 0.795 after deletion of some items from some constructs. For instance, the deletion included no item from perceived objectivity, intimidation and self-review threat avoidance, one item from perceived integrity and advocacy threat, fifteen items from perceived professional skepticism, one item from self-interest threat, four items from familiarity threat, and five items from safeguard implementation. From 89 items, 26 were deleted leaving 63 items remaining. Table

3.5 shows the summary of the reliability tests after deletion and the number of items dropped from the pilot study.

Table 3.5
Reliability Test of Pilot Study (N=60)

S/N	Construct	Before deletion No. of items	No. of items dropped	After deletion No. of items remaining	Alpha value
1	Perceived objectivity	5	0	5	.768
2	Perceived integrity	5	1	4	.675
3	Perceived professional skepticism	30	15	15	.739
4	Self-interest threat avoidance	10	1	9	.772
5	Self-review threat avoidance	5	0	5	.619
6	Familiarity threat avoidance	10	4	6	.653
7	Intimidation threat avoidance	5	0	5	.795
8	Advocacy threat avoidance	6	1	5	.689
9	Safeguards implementation	13	4	9	.738
	TOTAL	89	26	63	

Source: Pilot study

Since all alpha values are from 0.6 and above, the study presumes that all the constructs are reasonably reliable and items of each construct are consistent among themselves in measuring each construct.

3.7 Data Analysis Technique

This study is an interdependence study that aims to examine AI from the perspective of Nigerian stakeholders. After the data collection stage, the study employed both descriptive and inferential statistics to analyze the data. In line with Babbie (1990), descriptive statistics summarize and describe the data characteristics and demographics to enable easy understanding and interpretation. The inferential

statistics included reliability tests, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) using Structural Equation Modeling (SEM) with Statistical Package for social sciences (SPSS) software version 18, Analysis of Moment Structures (AMOS) software version 16 and SmartPLS 2.0.

In line with the aim of identifying the constituents of AI, EFA was undertaken on all the nine constructs using both principal component analysis (PCA) with varimax rotation and principal axis factoring (PAF) with direct oblimin rotation. The study employs both methods of EFA to establish the robustness and validity of the measure. According to Hair *et al.*, (2010) PCA is mainly for data reduction by identifying a linear combination of the major components that are able to explain or represent a large body of data. It does this by focusing on the total variance that the major components are able to explain (Floyd & Widaman, 1995). PAF on the other hand examines the relations among variables based on their underlying structure. It achieves this by focusing on only the shared variance between variables thereby revealing their common underlying structure.

In this regard, PAF estimates are more generalizable and generally more robust compared to PCA (Floyd & Widaman, 1995; Costello & Osborne, 2005). Confirmatory factor analysis (CFA) follows the EFA to confirm the results of the EFA using structural equation modeling (SEM). After the EFA, the study employs SEM because of a number of benefits it uniquely offers compared to other multivariate techniques. For instance, SEM estimates and accounts for measurement

error of relationships or factors being assessed thereby enhancing the reliability of measurement (Tabachnick & Fidell, 2007).

SEM is also ideal for evaluating complex models that have many variables simultaneously while taking cognizance of measurement error. SEM is especially suitable in examining different relationships through a collection of statistical techniques involving metric or non-metric, continuous or discrete and independent, dependent or interdependent relationships (Tabachnick & Fidell, 2007). According to Hair, Hult, Ringle and Sarstedt (2011), the use of SEM is very common in business researches for a number of reasons. Firstly, SEM provides the best way to model and estimate interdependent factors using the measurement model either by the co-variance or PLS technique. However, though some recent studies have found PLS SEM to be more flexible and accommodating than the co-variance methods, covariance based SEM (CB-SEM) is more rigorous. In fact, some scholars find PLS-SEM less suitable for examining initial associations among latent variables because of the lack of rigor (Hair, Ringle & Sarstedt, 2011).

Secondly, many disciplines employ CB-SEM as a powerful second-generation multivariate technique capable of examining multiple relationships among many variables simultaneously (Byrne, 2010). Thirdly, CB-SEM enables a confirmatory analysis of factors or theories by defining how well a postulated model fits or comes close to the covariance matrix for a data set. Studies therefore primarily employ CB-SEM to confirm or reject proposed theories or models by comparing the fitness of

the model to the data collected. As PLS-SEM primarily focuses on theory development by explaining variance in the dependent variable that is accounted for by the model (Sarstedt *et al,* 2014), CB-SEM is more suited to achieve the first two objectives of this study which lie in measure development and confirmation. Finally, Hair *et al.,* (2014) report that CB-SEM allows for the assessment of a global goodness of fit and achieves optimal and consistent parameter estimates by making an overall assessment of model fit which is often not met by PLS-SEM (PLS-SEM bias).

For the second phase of the study, the study employs PLS-SEM modeling using SmartPLS 2.0 software to analyze the data collected. This is because of the need to meet the third objective by ascertaining the predictive validity of the model established (Hair *et al*, 2014). Secondly, the sample collected was very small (n=62) which excludes the possibility of using other types of analysis. Moreover, PLS SEM accommodates small sample sizes and thus becomes ideal for analysis (Chin, 2010). Thirdly, many studies use PLS SEM to estimate hierarchical models (higher order factors) with less reliance on statistical assumptions (Wold, 1982; Hair *et al*, 2014). Hence, the flexibility in assumptions and sample size in addition to emphasis on prediction makes PLS SEM not only appropriate but also ideal for testing the PAI measure.

3.8 Summary of Chapter

This chapter discussed the methodology for the conduct of this study. It highlighted the theoretical framework of the study which comprises nine variables (Perceived objectivity, Perceived integrity, Perceived Professional Skepticism, self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, advocacy threat avoidance, intimidation threat avoidance and safeguard implementation) based on which hypotheses were developed. The research design was quantitative through a questionnaire survey. The sample of the study consists of three fundamental groups. The first group comprises of the Delphi respondents for developing the PAI instrument. They include ICAN and ANAN council members, officers of the Financial Reporting Council, academics, officers of corporate governance body as well as bank loan officers.

The second group includes stakeholders of the audit process that will be the target respondents to the survey (practicing auditors; ICAN and ANAN, FRC officers, corporate governance body, tax assessors, shareholders and bank loan officers. The third group constitute financial directors of listed companies in Nigeria audited by big four and non-big four auditors. A single instrument was developed based on adaptation from various prior studies such as Brown *et al.*, (2007), Hurtt (2010), Beattie *et al.*, (1999), Shaub (2004), Oladele (2008), Bartlett (1993) and IFAC code of ethics (2012). The study employed EFA, CB-SEM to analyze the data generated from the data collection process for the first phase of the study. The study employs PLS SEM modeling to analyze the data collected in the second phase.

CHAPTER FOUR

RESULTS

4.1 Introduction

As earlier mentioned, the study is in two phases; the development of an auditor independence (AI) measure from the perspective of Nigerian stakeholders and testing the applicability of the instrument from a sample of financial directors of listed companies. In line with this, this chapter presents the data collected from the surveys and the analysis conducted. Following the completion of the survey, the study examines the descriptive statistics of the data generated and screens data in order to check for missing values, outliers and data skewness. The study also reports demographic data followed by exploratory factor analysis (EFA) results. The results of the EFA using principal component analysis (PCA) with varimax rotation and principal axis factoring (PAF) with direct oblimin rotation are examined in order to select the one with the best fit and therefore subject it to confirmatory factor analysis (CFA) for validation. The final part of the chapter examines the applicability of the instrument developed and validated by the EFA and CFA from a small sample of financial directors of listed companies in Nigeria. The results of which are also presented, analyzed and findings reported.

4.2 Analysis of Survey Responses

As a recap, the study employs disproportionate stratified sampling because different stakeholder groups are target respondents. The researcher and two research assistants distributed 505 questionnaires over a period of two weeks in December 2013. Out of the 505 questionnaires, the researcher was able to retrieve 260 by the second week of January 2014 achieving a response rate of 51%. However, the researcher had to discard six instruments because they were incomplete. Three others had the same answers to most of the questions hence their exclusion from the analysis. Thus, the researcher was able to retain 251 usable questionnaires for further analysis. Table 4.1 shows the questionnaire distribution.

Table 4.1
Questionnaire Distribution

Proposed respondent group/Stratum	**Target sample per stratum**	**Issued per stratum**	**Returned per stratum**
Practicing auditors	68	95	43
Bank loan officer	64	90	46
Financial Reporting Council officers	58	81	48
FIRS Tax assessment officers	60	84	40
Corporate governance body members (IOD)	54	76	37
Shareholders	57	79	37
TOTAL	361	505	251

***Source*: Researcher**

Table 4.2 shows the descriptive statistics of the respondents. Descriptive analysis shows that 53% were males and 47% were females. The difference across gender is not wide and shows that although women in Nigeria are actively involved in the

labor market, it remains dominated by men. In terms of age, majority of the respondents (95%**)** were above 30 years of age and 98% have had more than five years' experience using financial statements. This shows that majority of the respondents are within the productive age group.

Table 4.2
Demographic data of Respondents

Items	frequency	Percentage %
Gender		
Male	133	53
Female	118	47
Age (years)		
21-30	13	5.2
31-40	131	52.2
41-50	95	37.8
51-60	12	4.8
Educational qualification		
Doctorate degree	12	4.8
Masters	158	62.9
First degree	38	15.1
Diploma/NCE	43	17.1
Respondent category		
Professional accountant (ICAN/ANAN)	43	17.1
Bank loan officer	46	18.3
Financial reporting council officer	48	19.1
Tax assessment officer	40	15.1
Officers of corporate governance body	37	14.7
Shareholder	37	14.7
Knowledge and awareness of the role of auditing		
Minimal	0	0
Average	55	21.9
Good	104	41.4
Very good	92	36.7
Continued		
Number of accounting courses completed		
1-3	0	0
4-6	23	9.2
7-9	79	31.5
10 and above	149	59.4

Note: Descriptive statistics of respondents surveyed

The respondent category shows that 17% were practicing auditors, 18% were bank loan officers, 19% were Financial Reporting Council officers, 16% were Federal Inland Revenue tax officers, 15% were Corporate Governance body officers (IOD) and 15% represented the shareholder group. Concerning their knowledge and awareness of the role of auditing, 78% had good-very good knowledge of auditing and 59.4% have completed more than ten accounting courses. This shows majority of the respondents constitute well-informed stakeholders who will be able to respond knowledgeably to the questions in the instrument.

4.3 Tests for Non-response Bias

Following the confirmation of valid responses, the next step is to check for non-response bias. This is because non-response bias is hardly avoidable and appears in various forms and degrees ranging from demographic, personality, motivation and behavior. Non-response arises from respondents that respond to questionnaires after much pressure (late responders) and as such, their responses are similar to non-responders, which ultimately affect results. Prior studies have reported that non-respondents may sometimes differ from true respondents in attitude, motivations, behaviors or personalities, which may likely influence the results of a study (Malhotra, Hall, Shaw, & Oppenheim, 2006). According to Malhotra *et al*., (2006), researchers need to check for non-response bias to ensure that early and late respondents do not significantly differ. The independent t-test is the commonest test used in examining differences between groups. The test compares the descriptive

statistics and runs a Levene test to assess equality of variance about particular variables investigated.

This study checked for non-response bias by categorizing respondents into early and late responders in line with Churchill and Brown (2004) and Malhotra *et al.* (2006) suggestion that late responders are generally unwilling and hence different from early reponders. Respondents were categorized as early if they filled and returned the questionnaire within the first three weeks of the data collection (1-early responders) while late responders were those that only filled and returned the questionnaires after follow up vist and within the last week of data collection (2-late responders). From this categorization, one hundred and sixty seven (167) questionnaires were classified as early responders while eighty four (84) were classified as late responders. Following this classification, an independent t-test was run on the demographic data to examine whether there were differences between the two groups of respondents. The researcher also conducts the Levene test for equality of variance. The descriptive tests provided a comparison of means, standard deviations and standardized mean error for the early and late responders.

Table 4.3
Group Descriptive Statistics for the Early and Late Respondents

Group Statistics					
Nonresp		**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Gender	1	167	1.47	.500	.039
	2	84	1.48	.502	.055
Age	1	167	2.44	.664	.051
	2	84	2.39	.677	.074
Eduqual	1	167	2.44	.833	.064
	2	84	2.46	.828	.090
Respcart	1	167	3.33	1.681	.130
	2	84	3.45	1.682	.184
Fstmexp	1	167	3.18	.801	.062
	2	84	3.13	.847	.092
Knowaud	1	167	3.16	.747	.058
	2	84	3.12	.767	.084
Noactcors	1	167	3.53	.657	.051
	2	84	3.45	.666	.073

Note: there were no issues of non response bias that could potentially affect the the analysis

Table 4.3 shows that apart from financial statement experience and respondent category, there is no marked difference between early and late responders in terms of other demographic data. Table 4.4 shows the Levene test for equality of variance.

Table 4.4

Independent Samples t-test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
gender	Equal variances	.065	.798	-.136	249	.892	-.009	.067	-.141	.123
	Equal variances not assumed			-.136	165.847	.892	-.009	.067	-.142	.123
age	Equal variances	.017	.896	.495	249	.621	.044	.089	-.132	.220
	Equal variances not assumed			.492	163.515	.623	.044	.090	-.133	.222
Eduqual	Equal variances	.001	.971	-.244	249	.807	-.027	.111	-.246	.192
	Equal variances not assumed			-.245	167.287	.807	-.027	.111	-.246	.192
Respcart	Equal variances	.017	.896	-.547	249	.585	-.123	.225	-.566	.320
	Equal variances not assumed			-.547	166.326	.585	-.123	.225	-.567	.321
Fstmexp	Equal variances	.349	.555	.446	249	.656	.049	.109	-.167	.264
	Equal variances not assumed			.437	158.490	.662	.049	.111	-.171	.269
Knowaud	Equal variances	.015	.903	.423	249	.673	.043	.101	-.156	.241
	Equal variances not assumed			.419	162.619	.676	.043	.102	-.158	.243
Noactcors	Equal variances	.172	.679	.845	249	.399	.075	.088	-.099	.248
	Equal variances not assumed			.841	164.428	.402	.075	.089	-.101	.250

Note: there were no issues of non response bias that could potentially affect the the analysis

The 2-tailed t-test result from table 4.4 reveals no significant difference between the early and late responders. Specifically, there are no differences based on gender ($t = -.136$, $p < .892$), age ($t = .495$, $p < .621$) or educational qualification ($t = -.244$, $p < .807$). The respondent category ($t = -0.547$, $p < .585$), financial statement experience ($t = .446$, $p < .656$), knowledge of auditing ($t = .423$, $p < .673$) and number of accounting courses completed ($t = .845$, $p < .399$) also showed no disparity between early and late responders. Based on these results, the study concludes that there is virtually no difference between early and late responders and therefore no problem of non-response bias.

4.4 Data Screening and Preliminary Analysis

Data screening is a necessary and integral stage before conducting multivariate analysis as it establishes the quality of the data and assesses compliance to multivariate assumptions in order to arrive at results that are more meaningful. Byrne (2010) also reported that data distribution and sample size directly affects the choice of analysis and results. In line with this, the researcher screened data for missing values, outliers and skewness.

4.4.1 Missing Data

According to Cavana *et al.,* (2001) missing data negatively affects the results of empirical research. In fact, structural equation modeling software such as AMOS will not run if missing values in data are not treated. Hair *et al.,* (2010) suggested deleting case respondents with missing values over 50% if the sample size is large.

The descriptive statistics revealed four (4) respondents had significant missing values across many constructs. The researcher therefore deleted the respondents in line with Hair *et al.*, (2010), and Tabachnick and Fiddel (2007) who suggest dropping the cases if there were no sample size issues.

4.4.2 Assessment of Outliers

After treating missing values, the next step is to screen for extreme scores (outliers) that are capable of distorting results. Outliers could be extremely low or high scores across several variables that significantly differ from other responses and require exclusion from the analysis (Hair *et al*., 2010). Many studies employ SPSS to detect univariate outliers by computing standardized Z-scores for each construct item. According to Tabachnick and Fidel (2007), scores having standardized Z-score values greater than ±3.29 are potential univariate outliers. In line with this, fourteen (14) cases (serial numbers 234, 238, 237, 241, 251, 254, 242, 260, 258, 253, 249, 247, 244 and 236) had Z-scores greater than ±3.29, which resulted in their exclusion from further analysis. Outliers (multivariate) could also be detected through simple linear regression by calculating the Mahalanobis distance which sets a threshold for determining potential outliers based on Chi square values and number of items (Gerrit, Martin, Garry & Bernd, 2010). Any case having values above the threshold is an outlier and requires exclusion from the analysis. From the chi table, the 89 items used under $P < 0.001$ (df-1=88) equals 134.74 and values greater than this should be deleted. Following Tabachnick and Fidel (2007), the researcher screened data for multivariate outliers. There were no cases with Mahalanobis distance values

greater than 134.74, as such the study considers the remaining 233 observations free from outliers.

4.4.3 Test for Normality

According to Hair *et al.,* (2010) normality is very important for most multivariate analysis and is required in exploratory research. Data is normal when it is symmetrical and follows the normal probability bell-shape curve. Many studies employ SPSS to examine data normality through kurtosis and skewness of data distribution. According to Tabachnick and Fidell (2007), skewness values should not be greater than ≤ 2 while kurtosis values should not be greater than ≤ 7 for normal data. Following this guideline, the study examined data kurtosis and skewness using SPSS version 18 and the results show all items have skewness values ≤ 2 and kurtosis values ≤ 7 benchmark. Based on this, the study considers the data reasonably normal and the 233 observations suitable for further multivariate analysis.

4.5 Exploratory Factor Analysis (EFA)

Exploratory factor analysis (EFA) is an interdependence technique employed in multivariate analysis to achieve two major objectives. Firstly, to summarize data by identifying underlying structures among a group of variables factors based on their interrelationships. Secondly, researchers may also use EFA to reduce a large body of data by identifying principal components that are able to represent all the components since they account for a significant measure of variance among all the

factors (Hair *et al.*, 2010). Although EFA requires some degree of normality, assumptions underlying EFA are conceptual rather than statistical. For example, Hair *et al.,* (2010) report that sample size to run EFA should be at least 100 respondents and some researchers require a 5:1 ratio of observations per variable. Additionally, Comrey and Lee as cited in Brown and Onsman (2012) classify sample size adequacy as follows: 100 (poor), 200 (fair), 300 (good), 500 (very good) and 1000 or more (excellent). Similarly, sufficient correlation among variables is required in order to group interrelated factors. In line with these requirements, 233 respondents are reasonably acceptable to permit exploratory analysis.

4.5.1 Factor Analysis using Principal Component Analysis (PCA)

Principal component analysis is useful as it provides a means of identifying the major items that are able to represent the data set. Furthermore, Pett, Lackey and Sullivan (2003) suggest using PCA in establishing preliminary solutions in EFA. Thus, the study conducts principal component analysis (PCA) using varimax rotation. In other words, the study seeks data reduction and summarization in order to achieve parsimony since there are large numbers of variables that may complicate analysis and interpretation as some items may measure different aspects of an underlying variable. Similarly, some factors may account for more variance and as such, are able to represent the remaining factors that contribute only marginally to the variance (Hair, *et al* 2010).

EFA is appropriate under certain conditions and the data is able to meet certain criteria. Firstly, sufficient correlation among factors is required. Hair *et al.,* (2010) explains that the correlation matrix should show a substantial number of correlations above 0.30 among factors to warrant the use of EFA. Following Hair *et al.,* (2010) and Tabachnick and Fidell (2007) the correlation matrices for individual constructs were visually examined and found to exhibit sufficient degree of correlation to permit the use of EFA. Secondly, the study examines the Bartlett test of sphericity, which shows the level of significance of factor correlations (Hair *et al.,* 2010). For this study, the Bartlett test of sphericity for all constructs was very significant (.000) indicating that factors were sufficiently correlated for exploratory purposes.

Next, the study examines the Kaiser-Myer-Olkin (KMO) measure of sampling adequacy for appropriateness of using EFA (Zikmund, 2003). The minimum benchmark according to Hair *et al* (2010) is ≥ 0.50 (weak) but ≥ 0.70 is preferable (meritorious). In this regard, the study examines the KMO for each construct. Eight constructs had KMO values above 0.70 and only one construct "perceived integrity" had KMO of 0.685, which is still above the minimum benchmark of 0.50 and very close to Hair *et al* (2010) meritorious 0.70 benchmark. Thirdly, assesses the anti-image correlations for each construct along the diagonals against the 0.50 benchmark. This results in the exclusion of any factor one at a time, falling short of 0.50. According to Cooper and Schindler (2003), the anti-image correlation is a measure of partial correlation, which shows the extent to which individual factors explain one another. Starting with the lowest value, the researcher examines and

deletes factors and then recalculates the anti-image correlation until all factors meet the ≥ 0.50 benchmark.

Following this rule, the researcher examines the anti-image correlations for each construct along the diagonals. For perceived objectivity, po3 was < 0.50 and was therefore deleted, for perceived integrity all items were > 0.50, for perceived professional skepticism seven items were deleted starting from the lowest (pps23, pps30, pps16, pps26, pps19, pps13 and pps3) to achieve the ≥ 0.50 benchmark. There were no deletions for self-interest threat avoidance, self-review threat avoidance and intimidation threat avoidance because anti-image values were all ≥ 0.50. For familiarity threat avoidance, one item was deleted (fta10), advocacy threat avoidance had two items deleted (ata4 and ata2) while for safeguards implementation five items were deleted (sia7, sia13, sia6, sia11, sia10) to achieve the ≥ 0.50 criteria. After this, all anti-image correlations values were ≥ 0.50 benchmark, which indicates that factors reasonably associated with each other.

Fourthly, PCA requires an assessment of the variance shared by the variables (communality). According to Hair *et al.,* (2010) communality values for each item should be ≥ 0.50 to be acceptable. Some studies however consider low communalities to be below 0.40 (e.g. Stevens, 1999). In fact, Costello and Osborne (2005) report that communalities in social sciences are usually within 0.40 to 0.70 and exclusion from analysis should only be for items below 0.40. In this regard, the researcher estimated the communalities for each construct (item by item), some

items were deleted starting from the lowest, and communality recalculated until all items achieved acceptable level of communality. This assessment showed that no deletions for items of perceived objectivity, perceived integrity, self-review threat avoidance, intimidation and advocacy threats avoidance, seven items from perceived professional skepticism (pps21, pps28, pps25, pps6, pps20, pps27 and pps10). Similarly, deletions for three items from self-interest threat avoidance (sita10, sita1 and sita2), one item from self-review threat avoidance (srta2) and two items from familiarity threat avoidance (fta8 and fta1) and one item from safeguards implementation (sia3). After this, all items communalities were ≥ 0.50 and therefore retained for further analysis.

According to Williams, Onsman and Brown (2010) variance explained in humanities and social sciences is generally low and could range from 50-60%. Hair *et al.*, (2006) pegs a minimum acceptable cumulative variance at 60%. In selecting the number of factors for extraction, the study uses the Scree-test and cumulative variance greater than 50% as guideline, in line with Williams *et al.*, (2010). Total variance explained by the factors ranged between 62% - 90%, which is reasonably acceptable within studies in humanities. Following this, the study examines the rotated matrix for insignificant loadings or cross loadings. Five items from perceived professional skepticism cross load (pps22, pps17, pps1, pps11 and pps24), hence their exclusion from the analysis. Tables 4.5 to 4.13 present the EFA results using PCA with varimax rotation for individual constructs.

In sum, the FA results from KMO, Bartlett significance tests, anti-image correlations, communalities, variance explained and rotated matrix factor loadings all meet acceptable criteria. The results from the PCA demonstrate that PAI consist of two dimensions (independence in fact and independence in appearance which are in turn measured by nine constructs; perceived objectivity, perceived integrity, perceived professional skepticism, self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation.

Table 4.5
Exploratory factor Analysis (PCA) for "Perceived Objectivity"

Component	Items		Factor loading 1	2
Perceived objectivity	1.	Are always objective in audit	0.871	
	2.	Are free from conflict of interest		0.951
	3.	Maintain intellectual honesty in audit	0.771	
	4.	Always maintain independence in thought and action	0.758	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.799, Approx. Chi-Square = 306.627, df = 6, Sig. = 0.000, Variance = 79%				

Table 4.5 shows the EFA results of the first construct "perceived objectivity" using PCA with varimax rotation. It has only two components; component one has three items and is labeled "being objective" while component two has only one item "freedom from conflict of interest".

Table 4.6
Exploratory factor Analysis (PCA) for "Perceived Integrity"

Component	Items		Factor loading 1	2
Perceived integrity	1.	Always maintain client confidentiality	0.829	
	2.	Always adhere to technical standards		0.952
	3.	Always adhere to ethical standards	0.913	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.685, Approx. Chi-Square = 248.937, df = 3, Sig. = 0.000, Variance = 90%				

Table 4.6 presents the second construct "perceived integrity" which is made up of two components; component one having two items is labeled "confidentiality and ethical standards" while component two labeled "adherence to technical standards" has one item. The third construct "perceived professional skepticism" consisted of two components as shown in table 4.7. The researcher labels the first component "inquisitive approach to audit", which has eight items and the second component "search for more information", which has three items.

Table 4.7
Exploratory factor Analysis (PCA) for "Perceived professional skepticism"

Component	Items		Factor loading 1	2
Perceived professional skepticism	1.	Like to question things that are seen or heard	0.823	
	2.	Like to take sufficient time in making decisions	0.818	
	3.	Like to consider most available information before making a decison	0.827	
	4.	Wait to decide on issues until more information is gotten	0.814	
	5.	Notice inconsistencies in explanations	0.777	
	6.	Reject statements unless they have proof that they are true	0.785	
	7.	Like to search for more knowledge	0.835	
	8.	Like to understand the reason for other people's behavior		0.681
	9.	Do not accept things seen, read or heard at face value		0.758
	10.	Don't like to decide until all the readily available information is looked at	0.820	
	11.	Frequently questions things that are seen or heard		0.837
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.901, Approx. Chi-Square = 1329.174, df = 55, Sig. = 0.000, Variance = 64%				

The fourth construct "self-interest threat avoidance" consists of two components. The first component is labeled "economic dependence" and has three items while the second component is labeled "client importance" and has four items. This is presented in table 4.8.

Table 4.8
Exploratory factor Analysis (PCA) for "self-interest threat avoidance"

Component	Items		Factor loading 1	2
Self-interest threat avoidance	1.	Do not provide joint attest and NAS when total NAS fee from incumbent audit client ≥ 50% audit fee		0.746
	2.	Do not provide joint attest and NAS when total NAS fee from incumbent audit client ≥ 100% audit fee		0.691
	3.	Avoid income dependence from specific client retention		0.793
	4.	Do not provide NAS to audit clients	0.818	
	5.	Avoid Client significance to firm overall portfolio	0.755	
	6.	Avoid generating more than 10% of firm revenue from one client	0.821	
	7.	Avoid generating more than 10% of total office revenue from one client	0.867	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.775, Approx. Chi-Square = 427.371, df = 21, Sig. = 0.000, Variance = 62%				

The fifth construct "self-review threat avoidance" consists of two components. Component one has four items and is labeled "indirect services engendering self-review" and component two has one item and is labeled "direct services engendering self-review". This is presented in table 4.9.

Table 4.9
Exploratory factor Analysis (PCA) for "self-review threat avoidance"

Component	Items		Factor loading 1	2
Self-review threat avoidance	1.	Do not provide internal audit services to attest client	0.792	
	2.	Do not provide accounting and bookkeeping services to attest client		0.974
	3.	Do not provide valuation and actuarial services to attest client	0.863	
	4.	Provide NAS to attest clients only when consulting personnel are different from attest personnel	0.662	
	5.	Do not design accounting systems for attest client	0.870	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.768, Approx. Chi-Square = 458.793, df = 10, Sig. = 0.000, Variance = 74%				

Table 4.10 presents the sixth construct "familiarity threat avoidance". The construct consists of two components. The first component was "recruitment and hospitality" has three items while the second component was "family ties and same personnel" has two items. The seventh construct "intimidation threat avoidance" is made up of two components; component one has three items and is labeled "firm pressure" while component two has two items and is labeled "local office pressure". This is presented in table 4.11.

Table 4.10
Exploratory factor Analysis (PCA) for "familiarity threat avoidance"

Component	Items		Factor loading 1	2
Familiarity threat avoidance	1.	Do not provide recruitment of top managers to attest clients	0.889	
	2.	Avoid close family ties with attest client		0.697
	3.	Do not accept material gifts and hospitality from attest client	0.915	
	4.	Avoid having affiliations with attest clients	0.793	
	6.	Do not use the same audit personnel for attest over a long period of time		0.859
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.716, Approx. Chi-Square = 369.202, df = 10, Sig. = 0.000, Variance = 72%				

Table 4.11
Exploratory factor Analysis (PCA) for "intimidation threat avoidance"

Component	Items		Factor loading 1	2
Intimidation threat avoidance	1.	Avoid client significance to audit firm revenues	0.766	
	2.	Avoid client significance to local office revenues		0.784
	3.	Resist client pressure to reduce extent of audit work and fees	0.786	
	4.	Restructure audit plan when former audit partner is in influential position as CEO, CFO in attest client		0.827
	5.	Do not perform audit services under extreme time pressure	0.798	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.774, Approx. Chi-Square = 281.467, df = 10, Sig. = 0.000, Variance = 67%				

The eighth construct "advocacy threat avoidance" consists of two components. Component one is labeled "tax provision and client assistance" and has two items

while component two is labeled "client representation" and has two items as presented in table 4.12.

Table 4.12
Exploratory factor Analysis (PCA) for "advocacy threat avoidance"

Component	Items		Factor loading 1	2
Advocacy threat avoidance	1.	Do not provide tax services in addition to attest services	0.736	
	2.	Do not assist attest clients in decision making for complex transactions	0.906	
	3.	Do not represent client before Federal Inland Revenue Service		0.910
	4.	Do not provide other services that result in client representation		0.678
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.806, Approx. Chi-Square = 346.231, df = 6, Sig. = 0.000, Variance = 80%				

Table 4.13 presents the ninth construct "safeguards implementation". The construct consists of two components; component one has six items and is labeled "control and disclosure safeguards" while the second component has only one item "separation of attest and valuation personnel".

Table 4.13
Exploratory factor Analysis (PCA) for "safeguards implementation"

Component	Items		Factor loading 1	2
Safeguards implementation	1.	Audit committee approves non-audit services provided by the auditor	0.733	
	2.	Audit and non-audit fees paid to auditor are disclosed in client financial reports	0.629	
	3.	Auditors practice partner rotation	0.779	
	4.	AI policies and procedures are established and implemented	0.761	
	5.	Disciplinary measures are established and implemented	0.727	
	6.	Auditors undertake third party professional external review	0.804	
	7.	Auditors use personnel who are not members of the attest team to perform valuation and tax services		0.983

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.862, Approx. Chi-Square = 467.187, df = 21, Sig. = 0.000, Variance = 61%

4.5.2 Factor Analysis using Principal Axis Factoring (PAF)

In line with prior studies (e.g. Kieffer, 1999; Pett *et al.*, 2003; Williams *et al.*, 2010) suggestion of examining and comparing various methods of factor analysis for best fit, principal axis factoring (PAF) with direct oblimin rotation was also conducted. Since the crux of this study is proposing a measure, identifying the underlying structures of the factors investigated is necessary. According to Hooper (2012), PAF is superior to other types of FA in theory or instrument development since it analyzes common variance that shared by the variables thus revealing their common underlying structure. Additionally it also permits the identification of items that do not measure particular variables. Furthermore, EFA is necessary in instrument

development because it helps in refining the items on variables to achieve psychometric balance (DeVellis, 2003).

Like PCA, PAF too is only appropriate under certain conditions and the data is able to meet established criteria. Firstly, sufficient correlation among factors is required. Following Hair *et al.,* (2010) the correlation matrices for individual constructs were visually examined and found to exhibit sufficient degree of correlation to permit the use of EFA as shown in Appendix C. Secondly, the Bartlett test of sphericity which shows the level of significance of factor correlations was examined for significance (Hair *et al*., 2010). For this study, the Bartlett test of sphericity for all constructs was very significant (.000) indicating that factors were sufficiently correlated for exploratory purposes. Next, the researcher examines the Kaiser-Myer-Olkin (KMO) measure of sampling adequacy to establish appropriateness of using EFA (Zikmund, 2003). In this regard, the study assesses the KMO for each construct. Seven constructs had KMO values above 0.70 while two constructs 'perceived integrity' and 'intimidation threat' had KMO of 0.685 and 0.674 respectively. The low KMO for the two constructs was still far above the minimum benchmark of 0.50 and very close to meritorious 0.70 and therefore acceptable (See Appendix C).

Thirdly, the researcher examines the anti-image correlation against the benchmark of 0.50 and excludes factors falling short from the analysis, one at a time. In line with Cooper and Schindler (2003) suggestion, the study also examines the anti-image correlations for each construct along the diagonals. For perceived objectivity, po3

fell short of 0.50 and was deleted, for perceived integrity all items were > 0.50, for perceived professional skepticism seven items were deleted starting from the lowest (pps23, pps30, pps16, pps26, pps19, pps13 and pps15) to achieve the ≥ 0.50 mark. With regards self-review and intimidation threat avoidance no items were deleted because diagonal values were all ≥ 0.50. For self-interest and familiarity threat avoidance, one item was deleted each (sita3 and fta10), for advocacy threat avoidance two items (ata4 and ata2) were deleted while for safeguards implementation five items were deleted (sia7, sia13, sia6, sia11, sia10) to achieve the ≥ 0.50 criteria. After this, all anti-image correlation values were ≥ 0.50 benchmark indicating that factors reasonably explained each other (See Appendix C).

Fourthly, EFA also requires an assessment of the variance shared by the variables (communality). Following Stevens (1999), and Costello and Osborne (2005), the study estimated communalities for each construct (item by item) and some items deleted, starting from the lowest and communality recalculated until all items achieved acceptable level of communality. For example, there were no deletions of items from perceived objectivity, perceived integrity and advocacy threat avoidance while fifteen items from perceived professional skepticism (pps3, pps1, pps20, pps17, pps25, pps24, pps6, pps22, pps10, pps11, pps27, pps28, pps14, pps21 and pps29). Similarly, four items from self-interest threat avoidance (sita10, sita1, sita2 and sita4), one item from self-review threat avoidance (srta2) and five items from familiarity threat avoidance (fta8, fta9, fta4, fta1 and fta2), two items from intimidation threat avoidance (ita2, ita4) and three items from safeguards

implementation (sia12, sia2 and sia3) were deleted. After this, all items achieved minimum level of communality and thus, retained for further analysis (Appendix C).

In selecting the number of factors for extraction, the uses the Scree-test and cumulative variance shared greater than 60% as guideline. Total variance explained by the factors ranged between 64%-72%, which is reasonably acceptable. The benchmark could range between 50-60 percent in humanities and social sciences (Hair *et al.*, 2006; Onsman & Brown, 2010). The Scree-test for each construct was examined and revealed one solid factor extracted for seven constructs (perceived integrity, objectivity, professional skepticism, self-interest, self-review, intimidation, advocacy and safeguard implementation) while two factors were extracted for familiarity threat. Next, the researcher examined the pattern matrix for insignificant loadings or cross loadings. Items for perceived integrity, perceived objectivity, perceived professional skepticism, self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguard implementation loaded significantly on only one factor (> 0.50). One item from professional skepticism (pps12) was deleted because it cross-loaded.

Tables 4.14 to 4.22 present the EFA results for individual constructs. In sum, the EFA results from KMO, Bartlett significance tests, anti-image correlations, communalities, variance explained and pattern matrix loadings all meet acceptable criteria. This also indicates that the factors remaining from the EFA analysis

represent the factors that are sufficiently able to explain the data and are therefore, appropriate in developing the measurement model for confirmatory factor analysis (CFA). All items factor loadings are ≥ 0.50 and are thus suitable in estimating the measurement model. This is in line with Hair *et al.,* (2010) benchmark of ≥ 0.50 for estimating the measurement model. Like the PCA, the results from the PAF demonstrate that AI consist of two dimensions (independence in fact and independence in appearance which are in turn measured by nine constructs; perceived objectivity, perceived integrity, perceived professional skepticism, self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation. Table 4.14 shows the EFA results of the first construct "perceived objectivity" using PAF with direct oblimin rotation. It has only one component with four items. Table 4.15 presents the second construct "perceived integrity" which constitutes only one component and has three items

Table 4.14
Exploratory factor Analysis (PAF) for "Perceived Objectivity"

Component	Items		Factor loading 1
Perceived objectivity	1.	Are always objective in audit	0.751
	2.	Are free from conflict of interest	0.605
	3.	Maintain intellectual honesty in audit	0.783
	4.	Always maintain Independence in thought and action	0.769
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.799, Approx. Chi-Square = 306.627, df = 6, Sig. = 0.000, Variance = 64%			

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Table 4.15
Exploratory factor Analysis (PAF) for "Perceived Integrity"

Component	Items		Factor loading 1
Perceived integrity	1.	Always maintain client confidentiality	0.865
	2.	Always adhere to technical standards	0.622
	3.	Always adhere to ethical standards	0.830
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.685, Approx. Chi-Square = 248.937, df = 3, Sig. = 0.000, Variance = 72%			

Table 4.16
Exploratory factor Analysis (PAF) for "Perceived professional skepticism"

Component	Items		Factor loading 1
Perceived professional skepticism	1.	Like to question things that are seen or heard	0.820
	2.	Like to take sufficient time in making decisions	0.773
	3.	Like to consider most available information before making a decison	0.779
	4.	Wait to decide on issues until more information is gotten	0.803
	5.	Notice inconsistencies in explanations	0.740
	6.	Reject statements unless there is proof that they are true	0.763
	7.	Don't like to decide until all readily available information is looked at	0.790
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.931, Approx. Chi-Square = 951.288, df = 21 Sig. = 0.000, Variance = 66%			

The third construct "perceived professional skepticism" consisted of one component having seven items as shown in table 4.16. The fourth construct "self-interest threat avoidance" consists of only one component having four items as shown in table 4.17.

Table 4.17
Exploratory factor Analysis (PAF) for "Self-interest threat avoidance"

Component	Items		Factor loading 1
Self-interest threat avoidance	1.	Do not provide non-audit service to attest clients	0.759
	2.	Avoid client significance to overall portfolio	0.613
	3.	Avoid generating more than10% of firm revenue from one client	0.746
	4.	Avoid generating more than 10% of total office revenue from one client	0.871
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.805, Approx. Chi-Square = 352.535, df = 6, Sig. = 0.000, Variance = 66%			

Table 4.18
Exploratory factor Analysis (PAF) for "Self-review threat avoidance"

Component		Items	Factor loading 1	2
Self-review threat avoidance	1.	Don not provide internal audit services to attest clients	0.545	
	2.	Do not provide valuation and actuarial services to attest clients	0.973	
	3.	Provide NAS to attest client only when consulting personnel are different from attest personnel		0.716
	4.	Do not design accounting systems for attest clients	0.603	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.752, Approx. Chi-Square = 408.640, df = 6, Sig. = 0.000, Variance = 84%				

The fifth construct "self-review threat avoidance" consists of two components. Component one has three items labeled "services engendering self-review" and component two has one item "separating audit and consulting personnel". Table 4.18 presents this. Table 4.19 presents the sixth construct "familiarity threat avoidance". The construct consists of two components. The first component was "recruitment

and hospitality" has two items while the second component was "close relationships and affiliation" and has two items.

Table 4.19
Exploratory factor Analysis (PAF) for "Familiarity threat avoidance"

Component	Items		Factor loading 1	2
Familiarity threat avoidance	1.	Do not provide recruitment of top managers to attest clients	0.744	
	2.	Avoid personal relationships with attest clients		0.783
	3.	Do not accept material gifts and hospitality from attest client	0.955	
	4.	Avoid having affiliations with attest clients		0.674
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.744, Approx. Chi-Square = 431.343, df = 6, Sig. = 0.000, Variance = 85%				

The seventh construct "intimidation threat avoidance" is consists of only one component having three items. Table 4.20 shows the EFA for intimidation avoidance. The eight construct "advocacy threat avoidance" consists of only one component that has four items reported in table 4.21.

Table 4.20
Exploratory factor Analysis (PAF) for "Intimidation threat avoidance"

Component	Items		Factor loading 1
Intimidation threat avoidance	1.	Avoid client significance to audit firm revenues	0.766
	2.	Resist client pressure to reduce extent of audit work and fees	0.543
	3.	Do not perform audit services under extreme time pressure	0.776
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.674, Approx. Chi-Square = 163.207, df = 3, Sig. = 0.000, Variance = 66%			

Table 4.21
Exploratory factor Analysis (PAF) for "advocacy threat avoidance"

Component	Items		Factor loading 1
advocacy threat avoidance	1.	Do not provide tax services in addition to attest services	0.812
	2.	Do not assist attest clients in decision making for complex transactions	0.725
	3.	Do not represent client before Federal Inland Revenue Service	0.704
	4.	Do not provide other services that result in client representation	0.767
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.806, Approx. Chi-Square = 346.231, df = 6, Sig. = 0.000, Variance = 66%			

Table 4.22 presents the ninth construct "safeguards implementation". The construct consists of one component and consists of four items.

Table 4.22
Exploratory factor Analysis (PAF) for "safeguards implementation"

Component	Items		Factor loading 1
Safeguards implementation	1.	Audit committee approves non-audit services provided by the auditor	0.669
	2.	Auditors practice partner rotation	0.748
	3.	AI policies and procedures are established and implemented	0.724
	4.	Auditors undertake third party professional external review	0.778
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.803, Approx. Chi-Square = 303.055, df = 6, Sig. = 0.000, Variance = 64%			

Although both methods (PCA and PAF) achieved acceptable results, the PAF results demonstrated the best fit with seven of the constructs loaded strongly on one factor

with minimum of three items. The PCA yielded significantly higher communalities, total variance accounted for, higher item loadings and number of components. According to Costello and Osborne (2005), these inflated values generally result because PCA does not focus on common variance shared as PAF does. Hence, the PAF results are more generalizable and therefore adopted in line with prior studies suggestions (DeVellis, 2003; Costello & Osborne, 2005; Hooper, 2012).

4.6 Reliability

After the factor analysis, the study assessed items for their reliability. Reliability tests examine whether items measuring a construct are consistent and hang together in measuring it (Sekaran and Bougie, 2010). In this regard, the study conducts reliability tests to establish items internal consistency from the results of the PFA. Following prior studies suggestion of using cronbach alpha tests being the most widely used test (Kimberlin & Winetrstein, 2008; Sekaran & Bougie, 2010), Cronbach alpha was calculated for each construct. According to Hair *et al.,* (2010) the acceptable benchmark for cronbach alpha is 0.70 although 0.60 is acceptable for exploratory research. The reliability tests based on PFA results shows individual constructs had alpha coefficient well above 0.70 so there was no deletion of items. A total reliability score for all the constructs combined was also calculated and yielded an alpha coefficient of 0.637, which is also acceptable (See Appendix D). The study presents the reliability test in table 4.23

Table 4.23
Reliability Test based on PFA results (N=233

S/N	Construct	No. of items	No. of items remaining	Alpha value
1	Perceived objectivity	4	4	0.814
2	Perceived integrity	3	3	0.800
3	Perceived professional skepticism	7	7	0.914
4	Self-interest threat	4	4	0.827
5	Self-review threat	4	4	0.831
6	familiarity threat	4	4	0.847
7	intimidation threat	3	3	0.747
8	Advocacy threat	4	4	0.833
9	Safeguards implementation	4	4	0.817
10	All constructs		37	0.637
	TOTAL	37	37	

Source: Researcher

4.7 Confirmatory Factor Analysis (CFA)

The first objective of the study sought to identify the constituents of the dimensions of auditor independence (AI) from Nigerian stakeholders' perspective. In line with this, the EFA results suggested that AI consisted of nine constructs having several items. They are perceived objectivity, perceived integrity, perceived professional skepticism, self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation. However, EFA alone is not sufficient to base findings. Proposed models need confirmation and validation to be acceptable. According to Tabachnick and Fidell (2007) EFA is a tool that helps in consolidating variables and

generating theories at the early stages of research. The second aspect of factor analysis is confirmatory (CFA) and offers a more advanced method of testing proposed theories and models. Thus, CFA can either confirm or reject theories or measurement models proposed (Hair *et al*., 2010). CFA can be conducted through structural equation modeling (SEM) using either covariance based modeling or partial least squares (PLS SEM).

The covariance based SEM aims to minimize differences between an observed matrix and an estimated matrix i.e. achieving minimal discrepancy between an implied model covariance and that actually observed (Barret, 2007). Researchers commonly use various software packages such as AMOS, LISREL or EQS to confirm measurement models. When the measurement model achieves acceptable levels of fitness and constructs validity, this establishes confirmatory analysis (Hair *et al.*, 2010). Following prior studies on covariance based SEM, the study employs Analysis of moment structures (AMOS) modeling software version 16 in conducting the CFA with maximum likelihood estimation (ML) approach. The study adopts this estimation method in line with Byrne (2010) and Hair *et al*., (2006) as the study has met criteria of sample size greater than one hundred observations, normal data and continuous scale measurements.

Unlike first order constructs, higher order constructs require stages in model assessment. When using covariance based SEM to assess molecular models, Chin (2010) notes that researchers are limited to only the second order stage to avoid

model identification problems. Thus, following prior literature (e.g. Yang, Cai, Zhou & Zhou, 2004; Byrne, 2010), the first order factors are specified and assessed using AMOS 16 for each dimension separately (IIF and IIA) and then as a combined model. Generally, a model is valid and fit when empirical data achieves the three categories of goodness of fit (GOF) indices; absolute fit indices, incremental fit indices and parsimonious fit indices.

Because each category encompasses various indices, the study avoids redundancy by reporting at least four indices from the various categories (Hair *et al.*, 2010). Following this, the study reports a mix of indices from each category. This includes Chi-square (X^2), Root Mean Square Error of Approximation (RMSEA) and Root mean square residual (RMSR) for absolute fit, Tucker Lewis index (TLI), Comparative Fit Index (CFI) and incremental fit index (IFI) for incremental fit measures and Normed Chi-square (X^2/df) for parsimonious indices in addition to probability value (P-value) were used. The first order measurement model presented for the first dimension independence in fact (IIF) as measured by three constructs (perceived objectivity, perceived integrity and perceived professional skepticism) in figure 4.1.

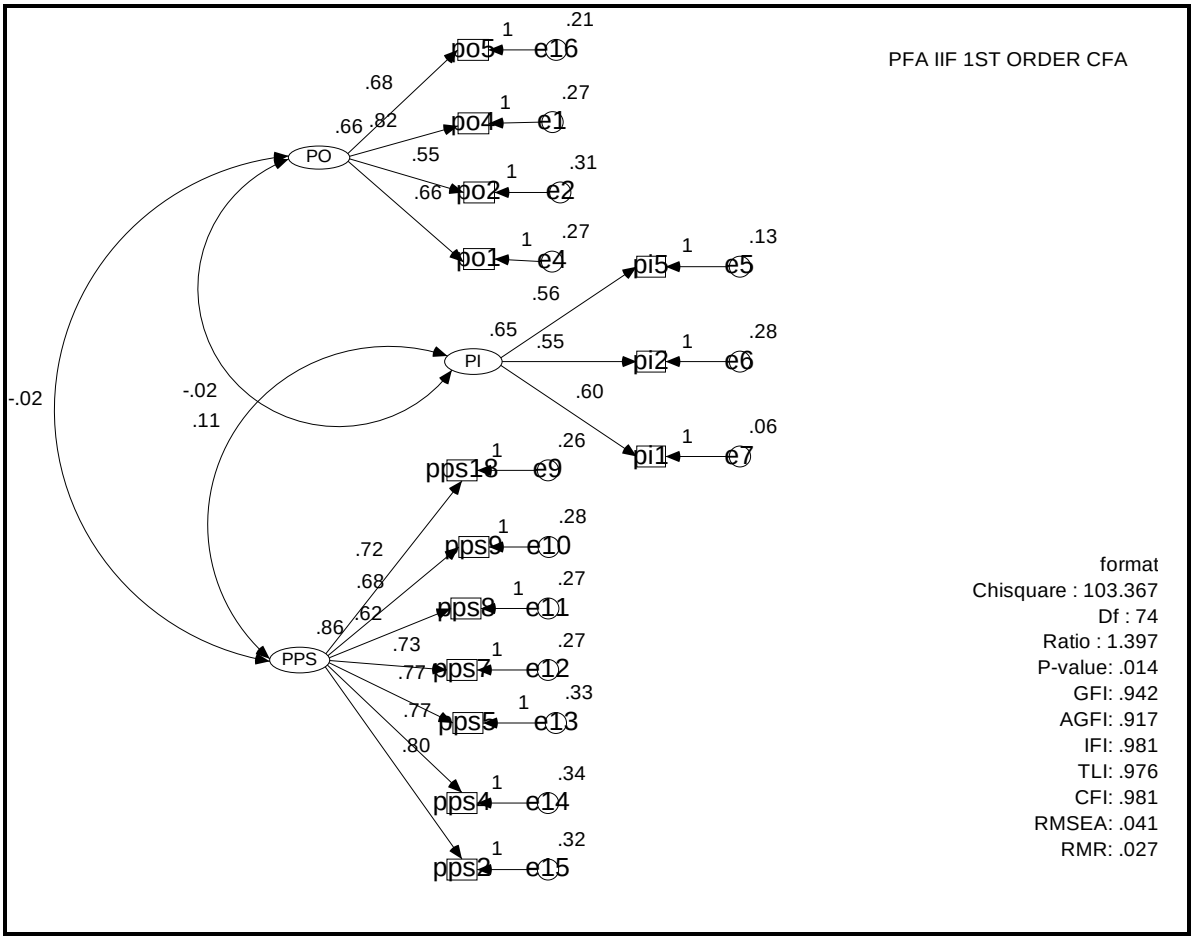

Fig 4.1
IIF first-order first-run CFA

The model fitness is fair since it is able to achieve most yardsticks except P-value. The Normed ratio (X^2/DF) was 1.397, RMSEA of 0.041, RMR of 0.027, CFI of 0.981 and P-value of 0.014. To achieve model fit, the model needs to be re-specified which may be achieved in two ways; exploring whether certain factors can be correlated using the modification index or deleting items with low factor loadings which can negatively affect the measurement model result (Byrne, 2010). Following this, the study deletes items with lowest loadings (pps18 & pps8) and the revised model was re-run. The revised model yielded an excellent fit with normed ratio

(X^2/DF) of 1.242, P-value of 0.115, RMSEA of 0.032, RMR of 0.025, CFI of 0.989 and TLI of 0.986.

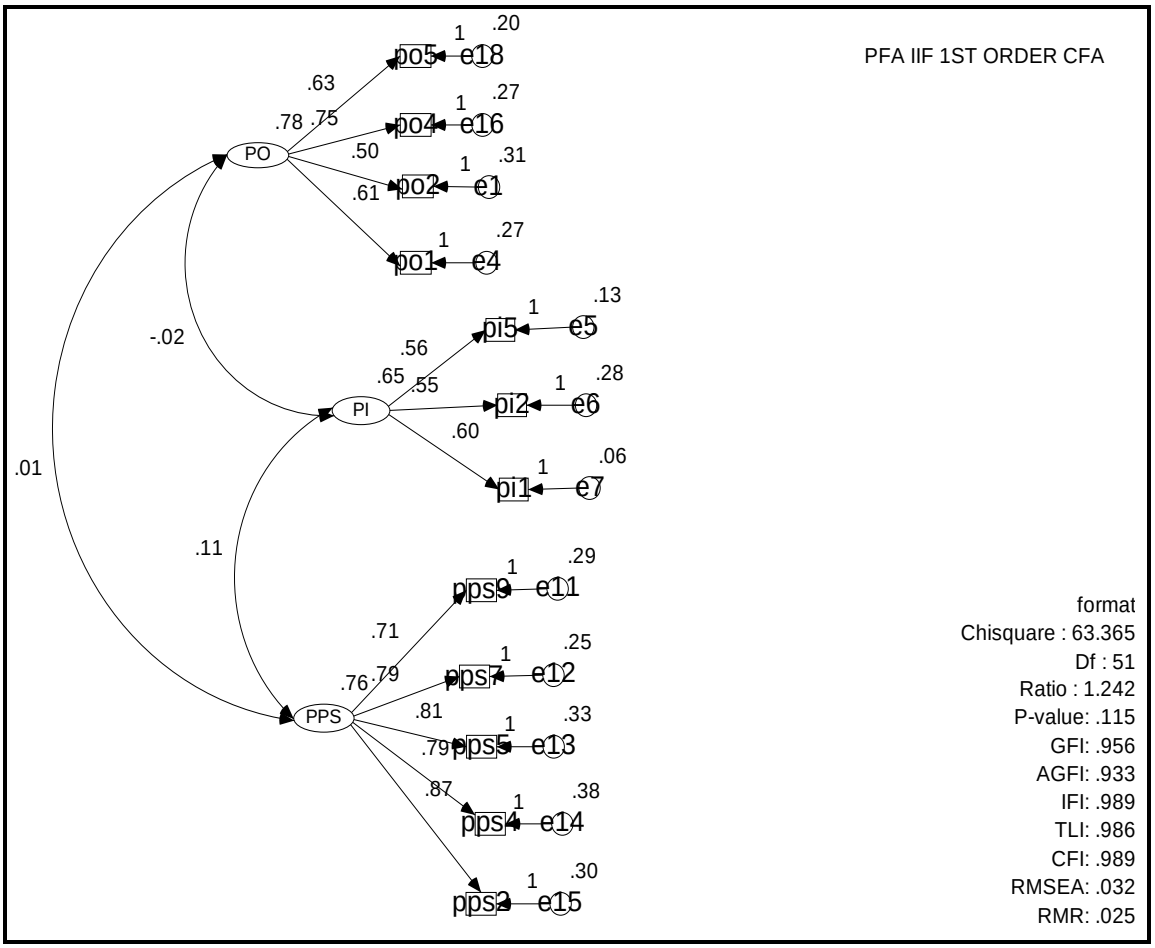

Fig 4.2
IIF final run CFA

The measurement model of the second dimension independence in appearance (IIA) comprising six constructs (self-interest threat, self-review threat, familiarity threat, and intimidation threat and advocacy threat avoidance and safeguards implementation) was also estimated and assessed. The model fitness is fair, though it does not achieve the P-value and some items had low loadings. The Normed ratio (X^2/DF) was 1.450, RMSEA 0.044, RMR of 0.030, CFI of 0.952, TLI of 0.944 and

P-value of 0.000. The study revises the model by deleting items that had the least standardized loadings (srt4 and ft5). The revised model achieved a reasonable fit with normed ratio (X^2/DF) of 1.142, P-value of 0.96, RMSEA of 0.025, RMR of 0.026, CFI of 0.986 and TLI of 0.984.

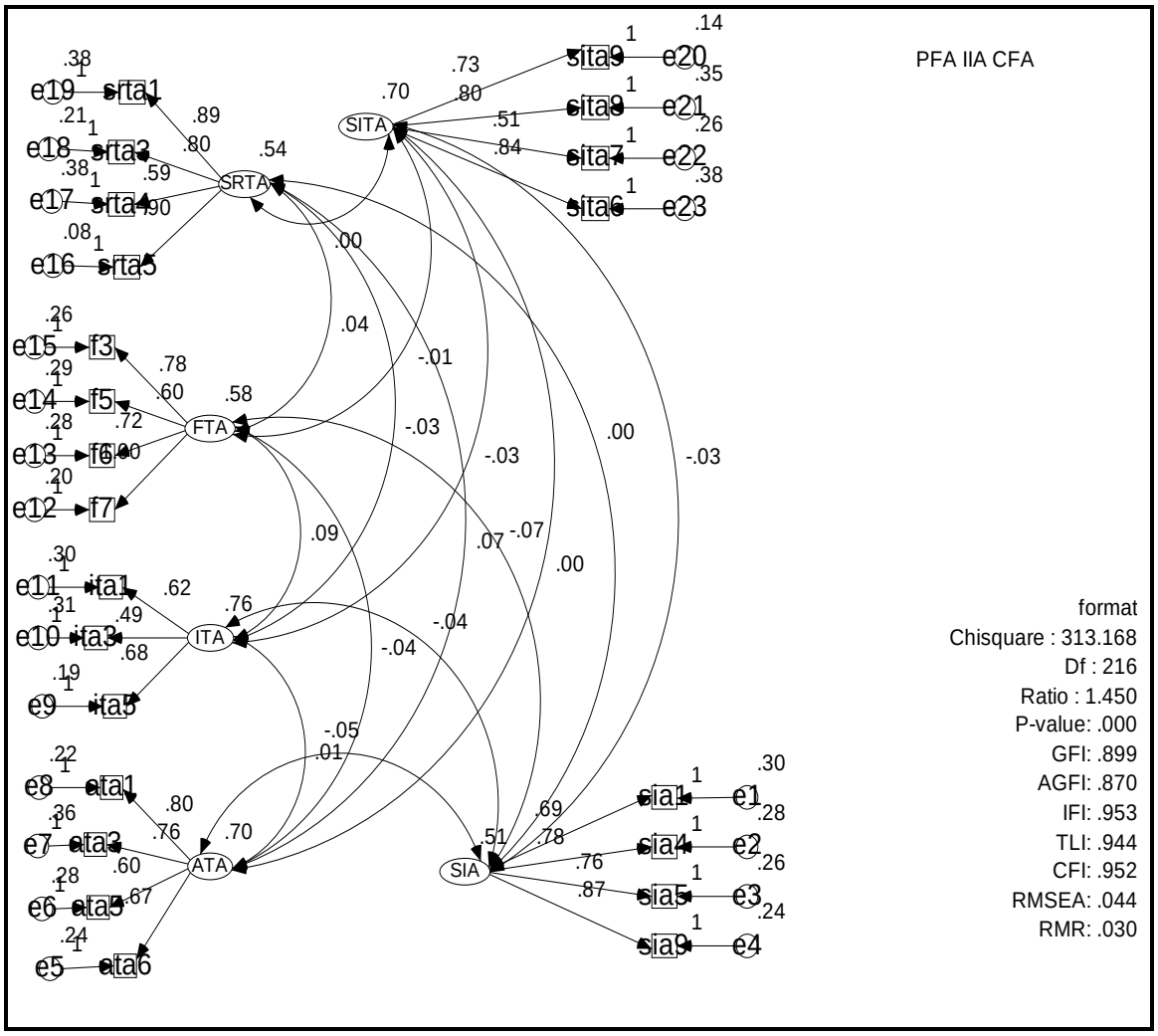

Fig 4.3
IIA First order first-run CFA

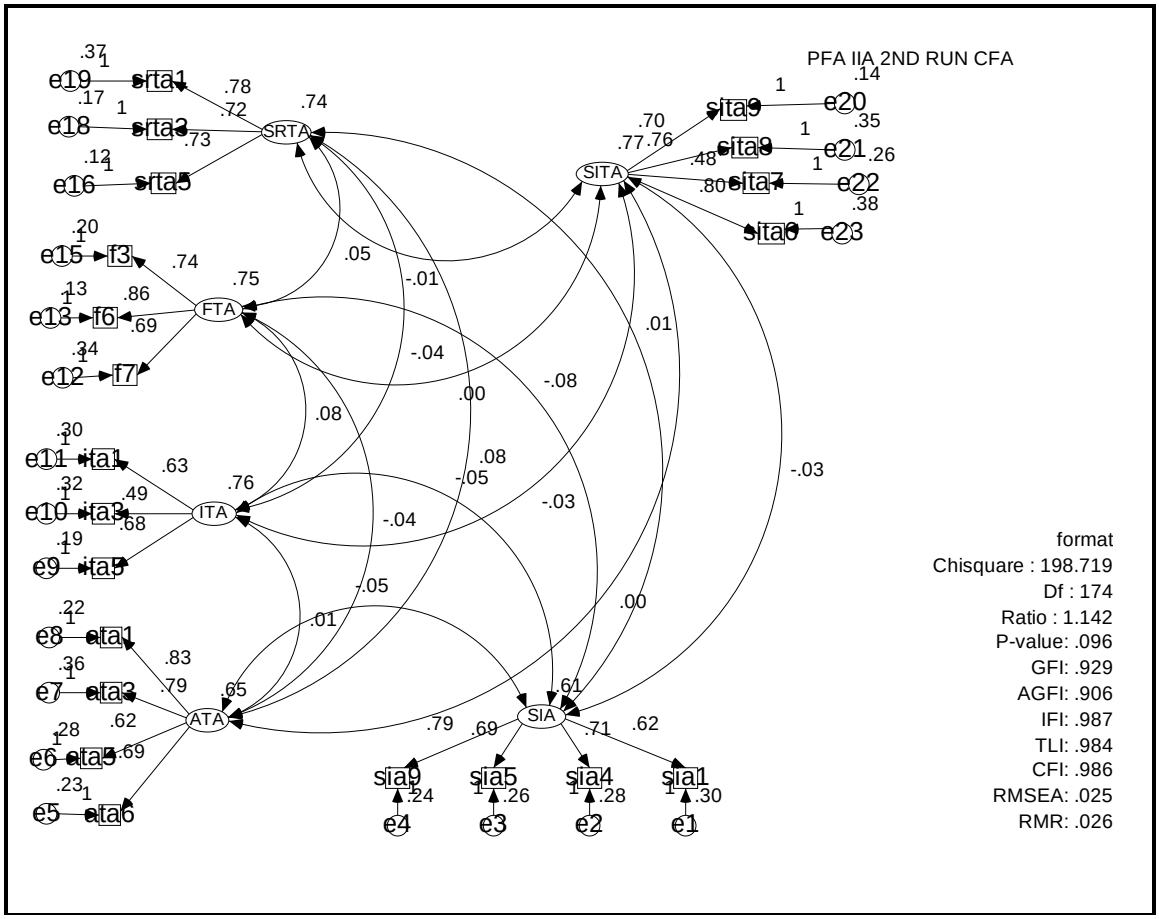

Fig 4.4
IIA final run CFA

Based on the International Federation of Accountants (IFAC, 2012) definition of auditor independence (AI) as comprising both dimensions of independence in fact and independence in appearance to yield an overall auditor independence construct, both dimensions are therefore combined in the second order measurement model. The second order model thus included three constructs for the IIF dimension and six constructs for the IIA dimension from the EFA and first order measurement model. The study presents this combined second-order model in figure 4.5.

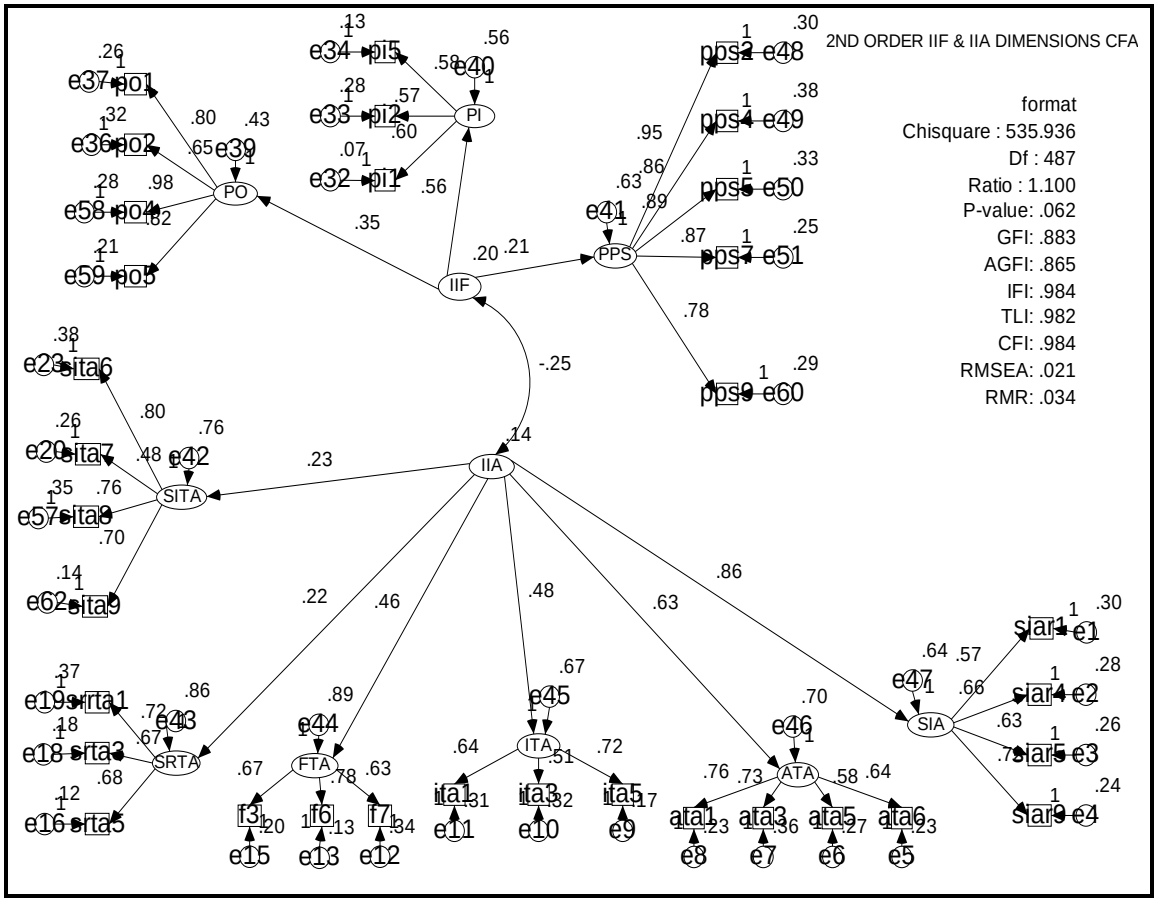

Fig 4.5
Second order measurement model

The second order model yielded a good fit, with a normed ratio (X^2/DF) of 1.100, RMSEA of 0.021, RMR of 0.034, CFI of 0.984 and TLI of 0.982, IFI 0.984 and P-value of 0.062. Six of the constructs loaded fairly well on the second order though three constructs had low loadings on the second order factors. The model therefore confirms the existence of the dimensions of IIF and IIA that define the overall PAI construct. In all, the deletion of four items out of the 37 items from the EFA in the CFA leaves 33 items. The study presents a summary of model fit indices in table 4.24. Based on the fit indices result, it is therefore, concluded that model fit has been

achieved and measurement model is in line with theoretical understanding (see Appendix F).

Table 4.24
Fit indices of the second order measurement model (Final Run)

S/N	Indices	Benchmark	Model result
1.	Chi square		535.936
2.	D/f		487
3.	CMIN/Df	< 2	1.100
4.	P-value	>0.05	0.062
5.	IFI	>0.90	0.984
6.	TLI	>0.90	0.982
7.	CFI	>0.90	0.984
8.	RMSEA	<0.05	0.021
9.	RMR	<0.05	0.034

Note: CMIN=Chi-Square; DF=degrees of freedom; CFI=comparative fit index; IFI= incremental fit index; TLI= Tucker-Lewis index; RMSEA=root mean square error of approximation, RMR=root mean square residual

4.8 Construct Validity and Reliability

Following the estimation and confirmation of measurement models, the study needs to establish the validity and reliability of construct items from the CFA. This is in line with various scholars' recommendation (e.g. Tabachnick & Fidell, 2007; Hair *et al*., 2010; Byrne, 2010).

4.8.1 Composite Reliability

SEM models require an estimation of composite reliability to augment reliability of the alpha coefficient (Fornell & Larcker, 1981). This is because Cronbach alpha only provides the lower-bound estimate for internal consistency. Composite reliability is therefore, calculated in order to determine the overall consistency of a group of items

measuring a particular construct. It is like an adjusted Cronbach alpha and thus more accurate.

The formula for composite reliability (CR) is:

$$\mathbf{C.R.} = \frac{(\sum_{i=1}^{n} Li)^2}{(\sum_{i=1}^{n} Li)^2 + \sum_{i=1}^{n} ei}$$

Where:

CR = composite reliability

L*i* = standardized factor loading

ei = error variance

In CFA, composite reliability values of 0.70 and above are acceptable (Hair *et al.*, 2010). In this regard, the study calculates the composite reliability for all the constructs using the standardized factor loadings. The results showed that all constructs were reasonably reliable; perceived objectivity 0.817, perceived integrity 0.820, perceived professional skepticism 0.887, self-interest threat avoidance 0.837, self-review threat avoidance 0.857, familiarity threat avoidance 0.857, intimidation threat avoidance 0.752, advocacy threat avoidance 0.836 and safeguards implementation 0.819. Additionally, construct validity was also examined in order to determine whether items used were actually measuring the constructs under study. According to Hair *et al.*, (2010) construct validity establishes whether constructs indeed tap the concepts under investigation. There are various types of validity such as convergent, discriminant and criterion validity.

4.8.2 Convergent Validity

Convergent validity examines the correlation between various measures measuring the same concept. Put differently, it assesses whether reliability coefficient (CA), composite reliability (CR) and average variance extracted values (AVE) correlate and achieve acceptable benchmark or not. Hair *et al.*, (2010) recommend using AVE to examine how construct indicators converge and share common variance. In this regard, the study examined the convergent validity by assessing the correlation of the three measures (cronbach alpha, composite reliability and average variance extracted. The study presents this in table 4.26. The formula for average variance extracted (AVE) is:

$$\mathbf{A.V.E} = \frac{\sum_{i=1}^{n} Li^2}{n}$$

Where:

AVE= average variance extracted

L*i* = standardized factor loading

n= number of items

Table 4.25
Convergent Validity

S/N	Construct	Item	Factor loading	Factor loading squared	Average Variance Extracted (AVE)	Composite reliability (CR)	Cronbach alpha (CA)
1.	Perceived objectivity	Po1	0.726	0.527	0.530	0.817	0.814
		Po2	0.618	0.382			
		Po4	0.783	0.613			
		Po5	0.773	0.598			
2.	Perceived integrity	Pi1	0.876	0.767	0.606	0.820	0.800
		Pi2	0.650	0.423			
		Pi5	0.792	0.627			
3.	Perceived professional skepticism	Pps2	0.812	0.659	0.610	0.887	0.914
		Pps4	0.743	0.552			
		Pps5	0.779	0.607			
		Pps7	0.812	0.659			
		Pps9	0.758	0.575			
4.	Self-interest threat	Sita6	0.750	0.563	0.564	0.837	0.827
		Sita7	0.741	0.411			
		Sita8	0.748	0.560			
		Sita9	0.850	0.723			
5.	Self-review threat	Srt1	0.741	0.549	0.668	0.857	0.831
		Srt3	0.827	0.684			
		Srt5	0.878	0.771			
6.	Familiarity threat	Ft3	0.823	0.677	0.668	0.857	0.847
		Ft6	0.901	0.812			
		Ft7	0.717	0.514			
7.	Intimidation threat	Ita1	0.692	0.479	0.506	0.752	0.747
		Ita3	0.603	0.364			
		Ita5	0.822	0.676			
8.	Advocacy threat	Ata1	0.809	0.654	0.561	0.836	0.833
		Ata3	0.728	0.530			
		Ata5	0.699	0.489			
		Ata6	0.756	0.572			
9.	Safeguards implementation	Sia1	0.668	0.446	0.532	0.819	0.817
		Sia4	0.730	0.533			
		Sia5	0.732	0.536			
		Sia9	0.784	0.615			

Note: Factor loadings > .50, AVE > .50, Composite reliability > .70, Cronbach alpha > .70

Table 4.25 shows that all construct have achieved the minimum or surpassed the benchmark for AVE, composite reliability and cronbach alpha. This shows that convergent validity is established.

4.8.3 Discriminant Validity

Discriminant validity on the other hand examines the extent to which constructs truly differ from other constructs (Byrne, 2010; Hair *et al.*, 2010). In other words, discriminant validity is established when constructs correlate poorly with other measures indicating they are unique and distinct from one another. Prior studies report various ways of establishing discriminant validity such as comparing the AVE of constructs with their square of correlation estimate or comparing the square root of AVE of constructs with their absolute correlation. Whichever method a study adopts, Fornell and Larcker (1981) report that discriminant validity is established when the AVE is greater than the constructs correlation. Following this guideline, the AVE of all constructs was calculated and compared with correlation for all constructs as presented in table 4.26.

Table 4.26
Discriminant Validity

	SITA	PPS	PO	PI	SRTA	FTA	ITA	ATA	SIA
SITA	**0.75**								
PPS	-0.02	**0.78**							
PO	-0.03	0.03	**0.73**						
PI	-0.05	0.04	0.07	**0.78**					
SRTA	0.01	-0.02	-0.03	-0.04	**0.82**				
FTA	0.02	-0.03	-0.06	-0.09	0.02	**0.82**			
ITA	0.02	-0.04	-0.08	-0.10	0.02	0.04	**0.71**		
ATA	0.03	-0.05	-0.10	-0.13	0.02	0.05	0.06	**0.75**	
SIA	0.04	-0.07	-0.13	-0.18	0.03	0.07	0.08	0.10	**0.73**

Note: The values in bold on the diagonals are the square root of the AVE while those values off the diagonals are latent variable correlations

From table 4.26, the square root of AVE for each construct is much higher than its corresponding correlation off the diagonals from all sides. This thus indicates that each construct shares more variance with its items than with other constructs and hence has discriminant validity. Furthermore, Byrne (2010) suggests that AVE higher than 0.50 is also an indication of discriminant validity. Based on this, discriminant validity is established.

4.9 Second Stage: Testing the Applicability of the PAI Instrument among Financial Directors of Listed Companies in Nigeria

Although the results so far demonstrate the reliability and suitability of the PAI measure, they are not sufficient in establishing the utility of the measure. In this regard, an examination of predictive validity is necessary as part of the final validation process (Nunnally, 1978). Thus in meeting the third objective of this study which sought to examine the applicability of the measure among financial directors of listed companies in Nigeria, an assessment of the measure's predictive validity is

ascertained. This objective evaluates the robustness of the 33-item measure established in this study by examining how financial directors perceive the independence of their auditors.

The researcher collects from financial directors of listed companies in Nigeria. The financial directors were categorized based on the type of auditor their companies engaged (Big four and Non-big four). The study selects clients of the big four audit firms randomly from each auditor's transparency report details. However, clients of Price Waterhouse Coopers were not included due to inability to get a sampling frame for selection. The selection of non-big four clients includes ICAN and ANAN registered practicing professional accountants. For each auditor, the researcher administers ten questionnaires to ten financial directors of the listed companies in Lagos, Nigeria. In total, the researcher administered 70 questionnaires: 30 to big four clients and 40 to non-big four clients. Out of the 70 questionnaires, the researcher was able to retrieve 62, which informs for the analysis.

The sample size is adequate for the use of partial least square modeling (PLS SEM). Although Lee, Petter, fayad and Robinson argue that there is no established rule for minimum sample size using partial least square modelling (PLS), most studies (e.g. Goodhue, Lewis & Thompson, 2006; Chin, 2010; Hair *et al*., 2013) advice using the '10' times rule. Basically this guideline states that the minimum sample size can be estimated by multiplying the construct with the largest number of indicators 10 times (Hair I et al., *2013)*. For this test sample, the construct with the largest number of

indicators is perceived professional skepticism (5 items). Applying the '10' times rule, the minimum sample size will be 50. In this respect, the study's sample of 62 meets this minimum benchmark.

Table 4.27
Demographic data of Respondents

S/N	Items	Frequency	Percentage
1	*Gender*		
	Male	44	71
	Female	18	29
2	*Age (years)*		
	21-30	0	0
	31-40	0	0
	41-50	28	45.2
	51-60	34	54.8
3	*Educational qualification*		
	Doctorate degree	12	19.4
	Masters	50	80.6
	First degree	0	0
	Diploma/NCE	0	0
4	*Years of experience using financial statements*		
	Less than 5 years	0	0
	5-9 years	0	0
	10-14 years	30	48.4
	15-19 years	32	51.6
	Knowledge and awareness of the role of auditing		
5	Minimal	0	0
	Average	0	0
	Good	24	38.7
	Very good	38	61.3
6	*Auditor type*		
	Big four	27	43.5
	Non-big four	35	56.5

Source: *Researcher*

Table 4.27 presents the descriptive analysis with 72% males and 29% females. The difference across gender is very wide and shows that few women in Nigeria occupy the financial director position, which men dominate. In terms of age, majority of the respondents (55%**)** were within the 51-60 age bracket and 52% had more than fifteen

years' experience using financial statements. Table 4.27 shows the descriptive statistics of the respondents. Concerning their knowledge and awareness of the role of auditing, 61% had very good knowledge of auditing and non-big four auditors audited 57% of the companies surveyed.

4.10 Model Evaluation

Following the descriptive analysis, the study also conducts inferential analysis using the partial least square structural equation modeling (Smart PLS). The selection of PLS SEM is because of the need to test the measure for various reasons. Firstly, because the sample is very small (n=62) and as such PLS SEM becomes ideal for analysis (Chin, 2010). Secondly, PLS SEM also enables the prediction of key variables and identification of driver constructs (Hair *et al.*, 2014). Hence, it will help establish the predictive validity of the PAI measure established. Thirdly, PLS SEM is suitable in estimating hierarchical models (higher order factors) with less reliance on statistical assumptions (Wold, 1982; Hair *et al.*, 2014). Hence, the use of PLS SEM is ideal for testing the applicability of the PAI measure.

4.10.1 Preliminary Screening

Following Marcoulides and Saunders (2006) guidelines for assessing hierarchical reflective models on PLS, the researcher screens data for missing values, skewness and outliers before estimation of measurement model. There were no missing values on the data so examination for outliers follows by calculating the Mahalanobis-distance in line with Tabachnick and Fidel (2007) suggestion. The chi table showed

that the degree of freedom (62-1) at 1% is 100.88. Thus, any value above this is an outlier. There were no cases with Mahalanobis distance values greater than 100.88, as such the 62 responses are reasonably outliers free. Although PLS SEM is not sensitive to non-normal data, data skewness was assessed using SPSS version 18 to determine kurtosis and skewness. The results showed all items have skewness values below ≤ 2 and kurtosis values well below ≤ 7 (Tabachnick & Fidel, 2007). Based on this, the data is reasonably normal.

4.10.2 Measurement Model Estimation

The measurement model was estimated using SmartPLS 2.0 path modeling (Ringle, Wende & Will, 2012). The PLS path modeling permits the specification of hierarchical models through the use of manifest variables of the first order repeatedly for second and third order constructs (Noonan & Wold, 1983; Tenenhaus, Vinzi, Chatelin & Lauro, 2005). In other words, a second-order construct consisting of three first-order constructs each having three manifest variables can be specified by using all the nine manifest variables underlying the first order constructs (Wetzels, Odekerken-Schroder & Van Oppen, 2009). This means that the manifest variables of first-order constructs can be used more than once depending on the level of the hierarchical model (second, third or fourth order). Following this, the study used the manifest variables for the first-order latent variables to specify the second and third order constructs thereby using the manifest variables three times.

The constructs perceived objectivity (PO) has four items, perceived integrity (PI) three items and perceived professional skepticism (PPS) having five items. This means their second order construct independence in fact (IIF) has eleven items (PO+PI+PPS). Similarly, self-interest threat avoidance (SITA) has four items, self-review threat avoidance (SRTA) has three items and familiarity threat avoidance (FTA) has three items. Intimidation threat avoidance (ITA) has three items, advocacy threat avoidance (ATA) has four items and safeguards implementation (SIA) has four items, meaning that the second order constructs they reflect, independence in appearance (IIA) has twenty one items (SITA+SRTA+FTA+ITA+ATA+SIA). The final underlying construct perceived auditor independence (PAI) now constitute the summation of all the manifest variables for both IIF and IIA dimensions and thus has thirty three items (PO+PI+PPS+SITA+SRTA+FTA+ITA+ATA+SIA). Figure 4.6 shows the measurement model specified using SmartPLS.

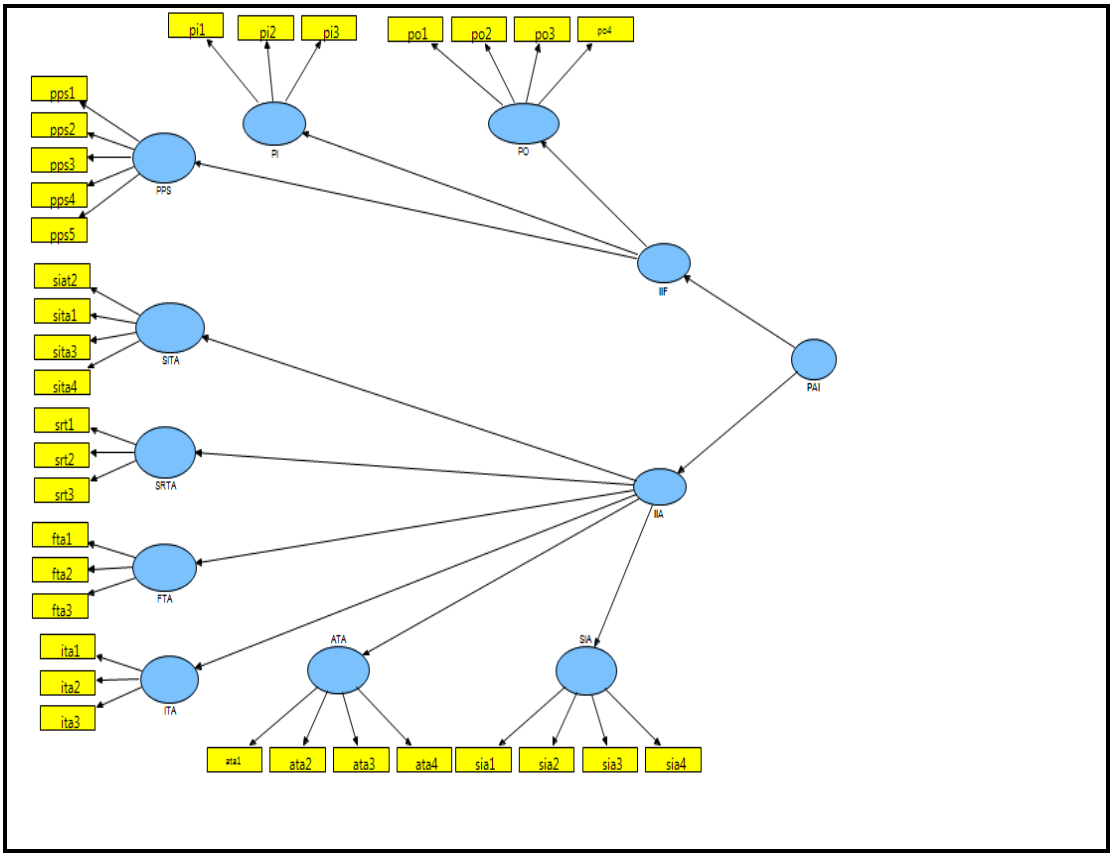

Fig. 4.6
PLS Measurement model

Figure 4.7 below shows the PLS algorithm with the path coefficients calculated. The path coefficients show the loadings of each construct on the first, second and third order. The loadings on the first, second and third order constructs are reasonably acceptable and significant for seven of the constructs (PO, PI, PPS, SITA, ITA, ATA and SIA). Two constructs self-review threat avoidance and familiarity threat avoidance loadings are slightly less than 0.50 (0.461 and 0.445 respectively). They have however achieved the benchmark of 0.40 minimum (Hair, Ringle & Sarstadt, 2013).

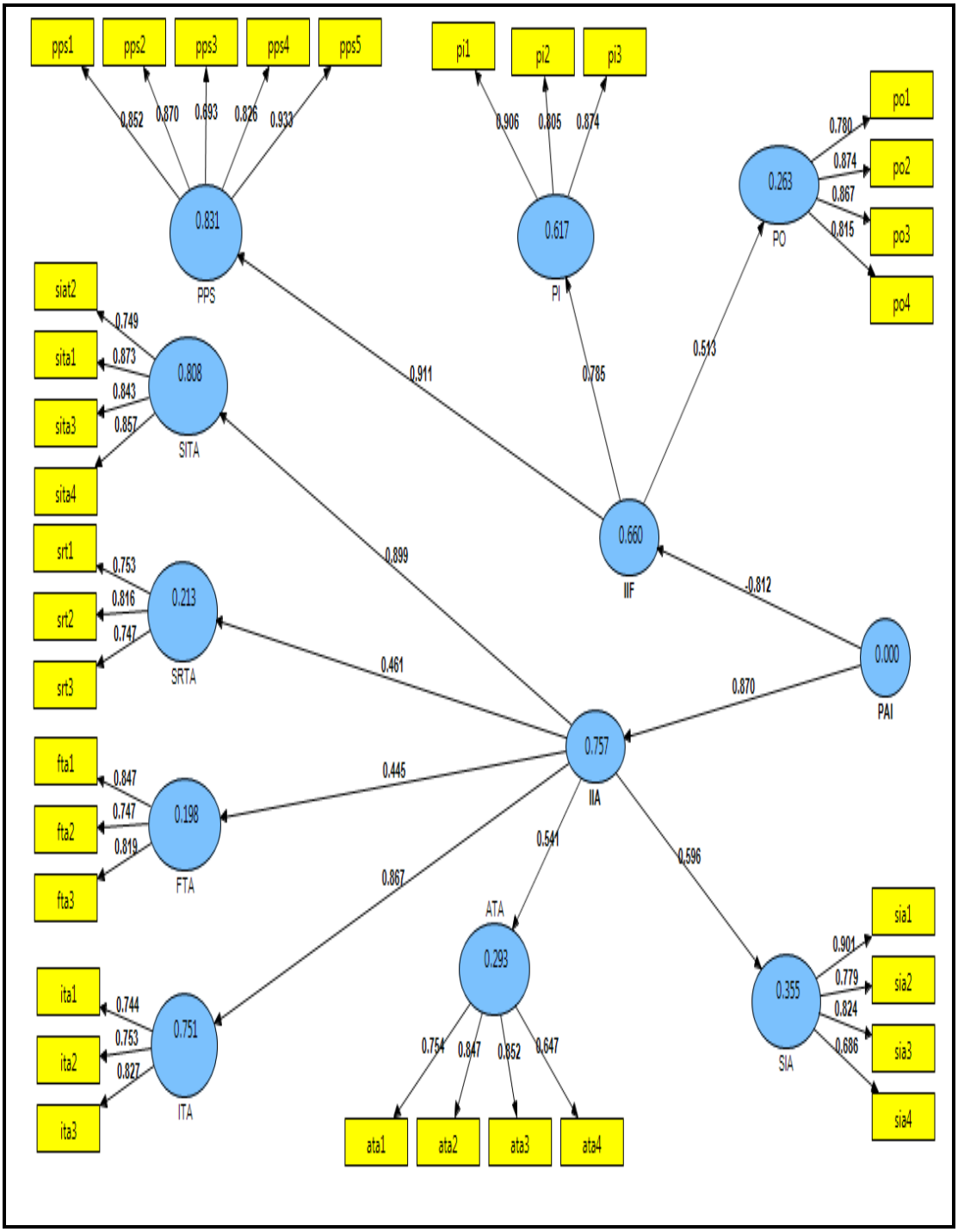

Fig. 4.7
PLS algorithm measurement model with path coefficients

The results show that some constructs have more influence on their underlying second order factors than others do. For instance, perceived integrity and perceived professional skepticism determine independence in fact more than perceived objectivity. Similarly, self-interest threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation determine independence in appearance more than self-review and familiarity threats avoidance.

Because PLS focuses on assessing prediction, a model's predictive power is determined by the R square (R^2) values of latent variables which shows the amount of variance of that construct that is explained by the model (Chin, 1998b). For this model, the R^2 for all the constructs are reasonably acceptable; perceived objectivity 0.263, perceived integrity 0.618, perceived professional skepticism 0.831, self-interest threat avoidance 0.808, self-review threat avoidance 0.213, familiarity threat avoidance 0.198, intimidation threat avoidance 0.751, advocacy threat avoidance 0.293 and safeguards implementation 0.355. All the constructs R^2 exceed Cohen (1988) and Falk and Miller's (1992) 10% as minimum bench mark for acceptability.

The results show that the constructs differed with respect to variance they accounted for. For example, while perceived integrity, perceived professional skepticism, self-interest threat avoidance and intimidation threat avoidance explained a higher portion of their variances (0.618, 0.831, 0.808 & 0.751) compared to perceived objectivity, self-review, familiarity and advocacy threats avoidance and safeguards implementation which explained a lower portion of their variance accounted (0.263,

0.213, 0.198, 0.293 & 0.355). The low R^2 however exceeds Cohen (1988) and Falk and Miller's (1992) 10% as minimum bench mark for acceptability.

4.10.3 Predictive Relevance

The study examines the predictive relevance of a model in order to determine the predictive capacity of a model. Following Stone (1974) and Geisser (1975), Chin (2010) reports that this is built on the notion of cross validation, which suggests that prediction of observed variables is of much greater relevance than using artificial construct parameters. This requires the calculation of the Q^2 measure to ascertain how well a model predicts data in the face of intentional omission of some constructs. According to Hair, Sarstedt, Pieper, & Ringle (2012) the Q^2 not only examines how values surmise a model, it also provides an assessment of parameter estimates. In PLS, this calculation follows a blindfolding procedure that alternately omits a construct's data during parameter estimation and subsequently tries to estimate the omitted construct using the estimated parameters (Chin, 2010). Predictive relevance relies on a calculation of crossvalidated redundancy or cross validated communality.

The formula for calculating Q^2 is:

$$Q^2 = \frac{R^2 \text{ included} - R^2 \text{ excluded}}{1\text{-included}}$$

Where:

R^2 included represents the R^2 before construct deletion

R^2 excluded represents the R^2 after construct deletion

Table 4.28
Construct Cross Validated Redundancy

Total	SSO	SSE	1-SSE/SSO (Q^2)
IIA	1302	1042.101	0.20
IIF	744	546.8623	0.27

Note: Q2 > 0

Table 4.28 shows the Q^2 calculated by blindfolding variable score which was subjected to cross validation of redundancy to determine the second order constructs as defined by the first order constructs thereby demonstrating the model's perdictive quality. Following Hair *et al*., (2013) yardstick of $Q^2 > 0$ indicating predictive relevance and $Q^2 < 0$ indicating no predictive relevance, Table 4.30 shows that the study's Q^2 of 0.20 and 0.27 for IIF and IIA indicates that the model has predictive relevance.

4.10.4 Validity and Reliability

In PLS, the measurement or outer model is estimated to determine the goodness of measures as they relate to two general yardsticks; model validity and reliability (Ramayah, Lee & In, 2011). Thus the reliability, convergent and discriminant validity of the measure is examined in line with Fornell and Larcker (1981). For reliability, both cronbach alpha and composite reliability are calculated and examined in relation to existing benchmark (Sekaran & Bougie, 2010). Construct validity is examined through convergent and discriminant validity and compared with existing benchmarks. Thus, following Hair *et al*., (2010), the study calculates the factor loadings, Cronbach alpha, composite reliability and average variance

extracted to determine whether the construct measures are related hence establishing convergent validity. Table 4.29 and 4.30 presents the results of the convergent and discriminant validity tests (See Appendix G).

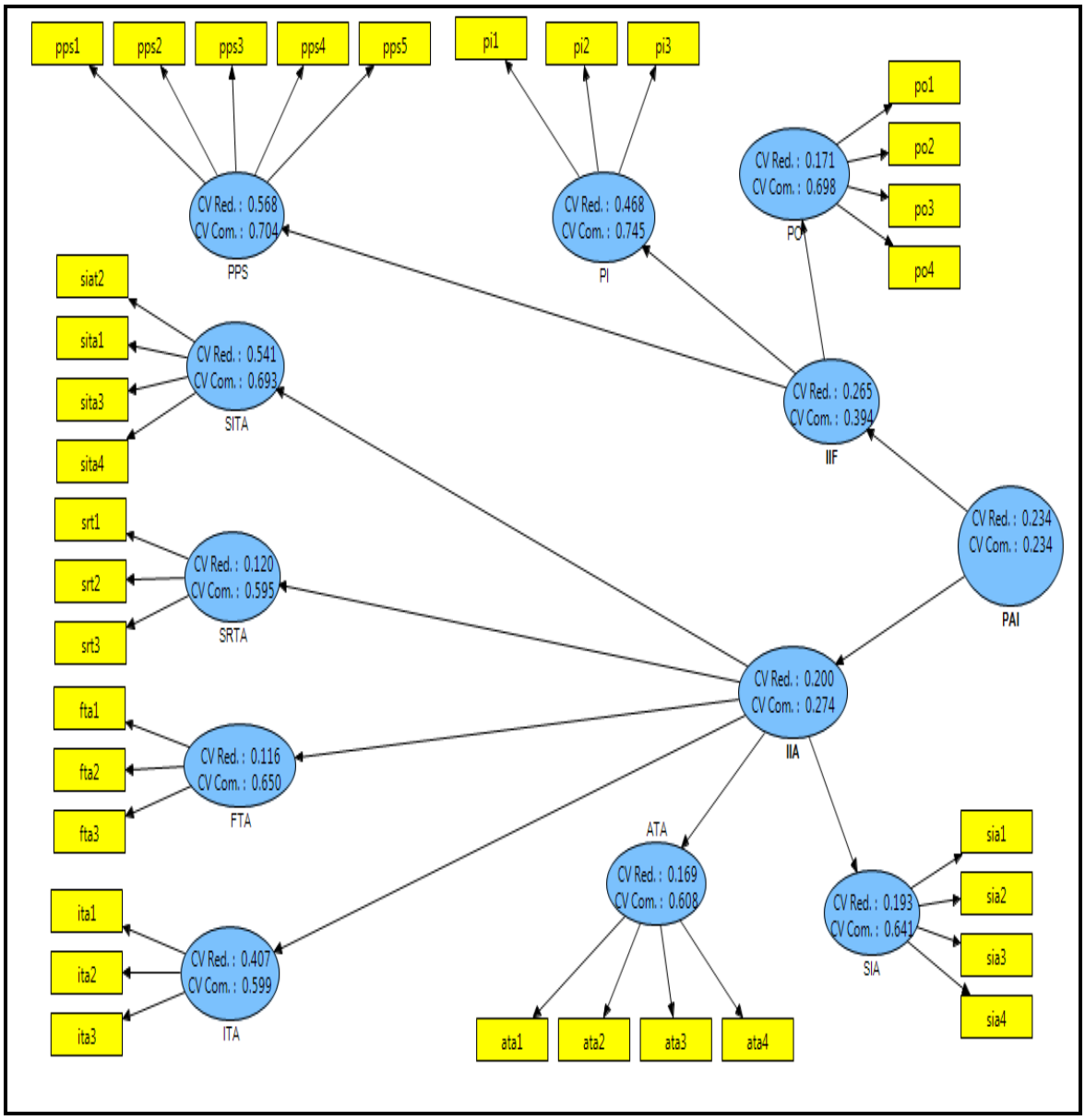

Fig 4.8
Model predictive relevance

Table 4.29
Convergent Validity and Reliability Analysis

Construct	Items	Factor loadings	AVE	Composite reliability	Cronbach alpha
Perceived objectivity	Po1	0.780	0.697	0.902	0.859
	Po2	0.874			
	Po3	0.867			
	Po4	0.815			
Perceived integrity	Pi1	0.906	0.744	0.897	0.828
	Pi2	0.805			
	Pi3	0.874			
Perceived professional skepticism	Pps1	0.852	0.703	0.922	0.892
	Pps2	0.870			
	Pps3	0.693			
	Pps4	0.826			
	Pps5	0.933			
Self-interest threat avoidance	Sita1	0.749	0.692	0.900	0.851
	Sita2	0.873			
	Sita3	0.843			
	Sita4	0.857			
Self-review threat avoidance	Srta1	0.753			
	Srta2	0.816	0.597	0.816	0.665
	Srta3	0.747			
Familiarity threat avoidance	Fta1	0.847	0.649	0.847	0.729
	Fta2	0.747			
	Fta3	0.819			
Intimidation threat avoidance	Ita1	0.744	0.601	0.819	0.671
	Ita2	0.753			
	Ita3	0.827			
Advocacy threat avoidance	Ata1	0.754	0.608	0.860	0.787
	Ata2	0.847			
	Ata3	0.852			
	Ata4	0.647			
Safeguards implementation	Sia1	0.901	0.642	0.877	0.820
	Sia2	0.779			
	Sia3	0.824			
	Sia4	0.686			

Note: Factor loadings > .5, AVE > .50, Composite reliability > .70, Cronbach alpha > .60

Table 4.29 shows all factor loadings are > 0.50, the AVE values range between 0.601 and 0.744 all above the 0.50 threshold, the composite reliability ranges

between 0.816 and 0.922 all above the 0.70 threshold and Cronbach alpha ranging between 0.665 and 0.892. Although two constructs have coefficient alpha less than 0.70, 0.60 is also acceptable (Hair *et al.*, 2010). In sum, the results indicate that convergent validity is established. To determine whether the constructs are distinct from each other through discriminant validity, Fornell and Larcker (1981) recommend that the square root of AVE be greater than the correlation estimates. Table 4.30 shows the discriminant validity.

Table 4.30
Discriminant Validity

Construct	Ata	Fta	Ita	Pi	Po	Pps	Sia	Sita	Srta
Ata	**0.78**								
Fta	0.07	**0.82**							
Ita	0.26	0.39	**0.8**						
Pi	-0.43	-0.16	-0.21	**0.86**					
Po	0.08	0.11	-0.05	0.22	**0.82**				
Pps	-0.51	-0.13	-0.4	0.55	0.2	**0.84**			
Sia	0.46	-0.04	0.32	-0.1	0.1	-0.42	**0.8**		
Sita	0.33	0.36	0.81	-0.13	0	-0.32	0.41	**0.84**	
Srta	0.12	0.17	0.59	0	0.07	-0.19	0.11	0.45	**0.8**

Note: The values in bold on the diagonals are the square root of the AVE while those values off the diagonals are latent variable correlations

In other words, the square root of the AVE is plot along the diagonals of the correlation coefficient of the constructs and has to be higher than the corresponding row and column to which it relates. Table 4.30 shows the result of the discriminant validity of the constructs. From the results, the square roots of AVE of all the constructs are greater than their corresponding diagonals indicating that the constructs are distinct from each other and hence discriminant validity is established.

Table 4.31
Auditor Independence measure after EFA and CFA

S/N	Construct	Items
1.	Perceived objectivity	1. Are always objective in audit 2. Are free from conflict of interest 3. Maintain intellectual honesty in audit 4. Always maintain independence in thought and action
2.	Perceived integrity	1. Always maintain client confidentiality 2. Always adhere to technical standards 3. Always adhere to ethical standards
3.	Perceived professional skepticism	1. Like to question things that are seen or heard 2. Like to take sufficient time in making decisions 3. Like to consider most available information before making a decision 4. Wait to decide on issues until more information is gotten 5. Reject statements unless there is proof that they are true
4.	Self-interest threat avoidance	1. Do not provide non-audit services to attest client 2. Avoid client significance to overall firm portfolio 3. Avoid generating more than10% of firm revenue from one client 4. Avoid generating more than 10% of total office revenue from one client
5.	Self-review threat avoidance	1. Do not provide internal audit services to attest clients 2. Do not provide valuation and actuarial services to attest clients 3. Do not design accounting systems for attest clients
6.	Familiarity threat avoidance	1. Do not provide recruitment of top managers to attest clients 2. Do not accept material gifts and hospitality from attest client 3. Avoid having affiliations with attest clients
7.	Intimidation threat avoidance	1. Avoid client significance to audit firm revenues 2. Resist client pressure to reduce extent of audit work and fees 3. Do not perform audit services under extreme time pressure
8.	Advocacy threat avoidance	1. Do not provide tax services in addition to attest services 2. Do not assist attest clients in decision making for complex transactions 3. Do not represent client before Federal Inland Revenue Service 4. Do not provide other services that result in client representation
9.	Safeguards implementation	1. Audit committee approves non-audit services provided by the auditor 2. Auditors practice partner rotation 3. AI policies and procedures are established and implemented 4. Auditors undertake third party professional external review

Source: Researcher

Table 4.31 presents the Auditor Independence measure after exploratory, confirmatory factor analysis and partial least squares modeling. Each construct has three or more items measuring it. The measure constitutes 33 items that measure the independence in fact (IIF) and independence in appearance (IIA) domain. The results of the PLS SEM have further confirmed the EFA and CFA results from the covariance based SEM that perceived auditor independence (PAI) constitutes nine constructs as defined by two dimensions independence in fact and independence in appearance. This is because even though there were deletions of many items during the EFA and CFA, none of the variables is dropped as each retains at least three items, which is also in line with Hair *et al.,* (2010).

Perceived objectivity consisted of four items; this provides support for hypothesis one, which states "The PAI measure should constitute an assessment of perceived auditor objectivity". The construct of perceived integrity and perceived professional skepticism have three and five items respectively hence hypotheses two and three which state that "The PAI measure in Nigeria should constitute an assessment of perceived auditor integrity" and "The PAI measure in Nigeria should constitute an assessment of perceived auditor professional skepticism" are also supported. Self-interest threat avoidance has four items thus supporting hypothesis four, which states "The PAI measure should embody an assessment of self-interest threat avoidance". Self-review threat avoidance and familiarity threat avoidance both have three items each thus providing support for hypotheses five and six, which state "The PAI measure should embody an assessment of self-review threat avoidance" and "The

PAI measure should embody an assessment of familiarity threat avoidance". Intimidation threat avoidance also has three items thus, supporting hypothesis seven, which states "The PAI measure should embody an assessment of intimidation threat avoidance". The constructs of advocacy threat avoidance and safeguards implementation both constitute four items each which also provides support to hypotheses eight and nine, which state "The PAI measure should embody an assessment of intimidation threat avoidance" and "The PAI measure should embody an assessment of safeguards implementation." Table 4.32 presents a summary of the findings of the perceived auditor independence measure (PAI).

Table 4.32
Summary of Findings

S/N		Proposed Hypothesis	Findings
1	H1	The PAI measure in Nigeria should constitute an assessment of perceived auditor objectivity	Supported
2	H2	The PAI measure in Nigeria should constitute an assessment of perceived auditor integrity	Supported
3	H3	The PAI measure in Nigeria should constitute an assessment of perceived professional skepticism	Supported
4	H4	The PAI measure in Nigeria should constitute an assessment of self-interest threat avoidance	Supported
5	H5	The PAI measure in Nigeria should constitute an assessment of self-review threat avoidance	Supported
6	H6	The PAI measure in Nigeria should constitute an assessment of familiarity threat avoidance	Supported
7	H7	The PAI measure in Nigeria should constitute an assessment of intimidation threat avoidance	Supported
8	H8	The PAI measure in Nigeria should constitute an assessment of advocacy threat avoidance	Supported
9	H9	The PAI measure in Nigeria should constitute an assessment of safeguards implementation	Supported

Source: Researcher

4.11 Chapter Summary

The chapter presented the results of the data analysis for the two phases of study conducted. In the first phase, the researcher develops a measure for PAI by identifying the constituents of a PAI measure and assessing the measure using interdependence analysis. Although the study issued 505 questionnaires to stakeholders in Lagos and Abuja during the field survey, the researchers were able to retrieve only 260 out of which 27 discarded during data screening. This results in 233 valid responses for data analysis. Responses from the survey of were analyzed using descriptive and inferential analysis. Specifically, exploratory factor analysis (EFA) using both principal component analysis (PCA) with varimax rotation and principal axis factoring (PAF) with direct oblimin were conducted to explore the underlying structure of the items generated from literature proposed to measure the two dimensions of auditor independence. Reliability of the measure was also assessed using cronbach alpha. All items were found to be reasonably reliable having alpha coefficient above the minimum 0.60.

The results of both EFA showed the PAI measure consisted of nine constructs; perceived objectivity, perceived integrity, perceived professional skepticism, self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation. However, because the results of the PFA were more robust and produced better fit, hence their adoption and used in the CFA. The CFA was necessary to confirm and validate the results of the exploratory study and conducted

in two stages because the model was a hierarchical one. The first stage assessed the first order constructs for each dimension separately. The second stage (second order) combined both dimensions in the measurement model. The model results also show that the PAI measure consisted of nine constructs underlying two dimensions i.e. perceived objectivity, perceived integrity, perceived professional skepticism for the independence in fact domain and self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation for the independence in appearance domain. Thus, the study achieves the first and second objectives of the study.

In order to achieve the third objective that sought to assess the applicability of the PAI measure among financial directors of listed companies in Nigeria, the second phase of the study involved administering the PAI measure to a small sample of financial directors of listed companies. Seventy questionnaires were issued to financial directors of listed companies that were audited by big four and non-big four auditors. Of these, sixty-two (86%) were returned and because the sample size was small and the need to examine how well PAI was defined by the model, SmartPLS modeling was used for the analysis. Reliability results using cronbach alpha coefficient showed that all items exceeded the minimum 0.60 benchmark while composite reliability values were all above 0.70 benchmark. All constructs also attained convergent validity as their average variance extracted (AVE) were all higher than 0.50 benchmark. The examines discriminant validity by relating the square root of AVE to constructs correlation.

Finally, the R square (R^2) of all constructs were generally moderate to substantial and only one construct (familiarity threat avoidance) had an R^2 of 0.198 which is also weakly acceptable. In order to test the model's predictive relevance, the study uses blindfolding and constructs cross-validated redundancy to calculate the Q^2 measure of predictive relevance. The result yielded a Q^2 value of 0.20 and 0.27 for the second order constructs IIF and IIA indicating a good predictive relevance. In sum, the results provide support for the hypotheses proposed and the validity of the PAI measure for Nigerian auditors.

CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

5.1 Introduction

Following the results of data analysis from the previous chapter, this chapter discusses the research findings from the results obtained in chapter four. Specifically, the discussion of findings centers on external auditor independence in general and the Nigerian scenario in particular. In this regard, theoretical and practical implications of the study are identified and discussed. Based on the analytical discussions, summaries and conclusions are reached in line with results and existing literature. The main contributions of the study are also highlighted and suggestions for further studies are provided based on the limitations of the study. The last part of the chapter provides the concluding remarks.

5.2 Discussion of Research Objectives

In line with the research questions raised, the study's main objective was to gain a better understanding and propose a measure for the concept of PAI in Nigeria. In order to do this, the first step was to identify the constituents of the PAI concept from prior literature and ethical code of conduct for professional accountants. Secondly, an examination of how the dimensions interdependently measured PAI was made using exploratory and confirmatory factor analysis. Finally, an assessment of the applicability of the PAI measure established was conducted from a survey of financial directors of listed companies in Nigeria. These objectives and how they

have been pursued are discussed in greater detail in the next sections sequentially starting from the first, second and third objective.

5.2.1 The Constituents of the Dimensions of AI

The first objective of this study sought to identify the constituents of the dimensions of AI. In pursuing this objective, a delphi test was conducted in order to seek the opinions of experts about the items generated from literature and professional code of ethics posited to measure AI. Following this, a pilot study on Nigerian stakeholders was also carried out and subsequently the full scale survey was conducted and subjected to exploratory and confirmatory factor analysis. The findings reveal that the PAI measure consisted of nine constructs; perceived objectivity, perceived integrity and perceived professional skepticism which define the mental state domain (IIF), self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation which define the appearances domain (IIA). Each construct also consisted of several items.

The study's results are in line with prior theoretical assertions that auditor independence is indeed a complex concept (Taylor *et al*. 2003; Duff, 2004) but crucial to auditing profession (Chapple & Koh, 2007). In fact, more recent code of professional ethics (IFAC, AICPA, ICAEW etc.) define AI in terms of factual state of mind and appearances of AI and specify conditions/circumstances which define both dimensions. Although the perceived auditor independence (PAI) measure

developed in this study is similar to Shaub (2004) potential auditor independence measure which uses the five major threats as a basis for assessing AI, it differs from the latter instrument in two major respects. This study includes stakeholders' perceptions about the auditor's state of mind as measured by perceived integrity, perceived objectivity and perceived professional skepticism (Chapple & Koh, 2008; IFAC, 2012). Thus in addition to an assessment of the avoidance of five major threats, an assessment of the three other constructs that embody the factual domain of AI is also included (perceived integrity, perceived objectivity and perceived professional skepticism). This is very important and necessary, as AI comprises both factual and perceived independence.

In defining factual independence, SAS 1.220 requires auditors to be "objective, intellectually honest and free from any obligation/interest in client, management or owners". Similarly, IFAC (2012:120.1) defines objectivity as not compromising professional judgments because of undue influence or subordination of judgment, avoiding bias, conflict of interest or intentional misrepresentation of facts. Auditors are required to have and exhibit a high sense of integrity by being straightforward, deal fairly, honestly and truthfully in professional relationships with client management and maintain client confidentiality (AICPA, 110.1). Thus, professional codes require auditors to be objective and appear objective in order to attain and sustain public trust. The third component of factual independence professional skepticism defined by International standards of auditing (ISA 240) as approaching an audit with an enquiring mind by critically and sufficiently assessing audit

evidence. In this regard, SAS 99 of the AICPA (2002) specifically charges auditors to exercise professional skepticism by considering the likelihood of the occurrence of material misstatements in the financial reports. This may result in soliciting further information or performing additional tests to obtain additional audit evidence and reduce auditor perceptions of material misstatements in the accounts (Shaub & Lawrence, 1996). In line with prior research, regulatory framework requirements and the relevance of objectivity, integrity and professional skepticism to factual independence, their inclusion into an AI measure becomes very necessary.

Secondly, apart from avoiding the five threats, one other construct (safeguards implementation) is also in line with IFAC's definition of independence in appearance. IFAC defines independence in appearance as the avoidance of circumstances which a reasonable informed user, having all relevant knowledge including safeguards applied, will conclude that an auditor's objectivity has been compromised (IFAC, 2012). In other words, apart from avoiding threatening circumstances, safeguards implementation to enhance AI also need to be considered in assessing appearances of AI. Thus, the inclusion of an assessment of safeguards implementation is justified. Put together, the PAI measure embodies nine constructs as defined by two dimensions.

Following the exploratory and confirmatory factor analysis, the hypothesis (H1, H2 and H3) that the PAI measure should constitute an assessment of perceived objectivity, perceived integrity and perceived professional skepticism receive

support. Support for these constructs having impact on AI is also in prior literature. For instance, the measure of auditor's virtue developed by Libby and Thorne (2007) found integrity as one of the most important non-instrumental auditor virtues in addition to other factors such as honesty, independence and objectivity. Support for perceived objectivity in relation to auditor independence is in line with Brown *et al.,* (2007) study that found both informed users and auditors' expected auditors to be objective and independent and their perceptions regarding objectivity and independence did not differ significantly.

Additionally, Fan *et al.,* (2012) findings showed that Chinese auditors measured AI by integrity, objectivity, independence and resisting client pressure. This is also in line with Chapple and Koh (2007) assertion that auditor independence requires acting with integrity and exercising professional skepticism. In other areas of management, Goodson and McGee (1991) also find that perceived objectivity is significant and positively related to performance management as subjects placed greater reliance on a system when they perceived the system is objective. Similarly, Akter and D'Ambra (2011) reported that mobile health users perceive ability and integrity as the most important characteristics service providers should possess. Furthermore, Hurtt (2010) reported that increased information search, contradiction detection, alternative generation commonly characterize auditor behavior with respect to professional skepticism and expanded scrutiny. Finally, based on a synthesis of literature, Hurtt *et al*., (2013) also affirm that professional skepticism and objectivity are very important components of factual independence and stress the

need to fill the void resulting from the absence of research on the association between professional skepticism and auditor independence. Put together, the studies provide empirical support for this study's findings that the PAI measure constitutes an assessment of perceived objectivity, integrity and professional skepticism for the independence in fact domain.

With regards to the independence in appearance which focuses on how informed users perceive an auditor's objectivity, integrity and professional skepticism given the threats encountered vis-à-vis the safeguards implemented, the study's findings showed that the PAI measure constitutes an assessment of self-interest, self-review, familiarity, intimidation and advocacy threats avoidance in addition to safeguards implementation. These findings are also in line with literature and regulatory frameworks stipulations (e.g. IFAC, AICPA and ICAEW). For instance, findings on self-interest threat avoidance was supported by Trompeter (1994) and Tribunella and Tribunella (2003) who reported that auditors that had financial interest in their clients were reluctant to criticize them and were more likely to accept client choices and align their interest with them.

Additionally, Irmawan *et al.*, (2013), Al-Ajmi and Saudagaran (2011) and Alleyne *et al.*, (2006) findings also showed financial statement users in the Indonesia, Bahrain and Barbados had negative perceptions about auditors that had financial interest in their clients. This suggests that having interest in client leads to alignment of auditor interest to client interest which hampers the statutory role of the auditor in protecting

stakeholders by rendering fair and objective opinions. The avoidance of self-interest threat therefore enhances perceptions of AI and credibility of audit opinions in the eyes of stakeholders.

Support for the study's findings on self-review threat avoidance concurs with many studies. For example, some studies (e.g. Pany & Reckers, 1983; Beattie *et al.,* 1999; Shaub, 2004) showed that loan officers and finance directors perceived a compromise of auditor independence when auditors provided bookkeeping, system design and internal audit functions. Additionally, Abbott *et al.,* (2003) and Abbott, Parker, Peters and Rama (2007) findings also show that effective audit committees were unlikely to purchase internal audit or other non-audit services from incumbent auditor due to fear of objectivity compromise when auditors provided services that result in self-review threat. In fact, the banning by SOX of auditor providing certain non-audit services such as bookkeeping, internal audit, system design and valuation services indicates there is an implied perception of compromise when auditors provided such services since during the audit the auditor will be reviewing his own work. However, because providing these services in addition to attest is acceptable in Nigeria, the need to assess stakeholder perceptions about them is necessary.

Similarly, Quick and Warming-Rasmussen (2009) found that German users were not as worried about accounting systems design as they were about internal audit and valuation services. Thus, the general perception of users is that auditors exerted less effort and professional skepticism when they reviewed their own work. In sum, the

support from prior studies provides empirical justification to this study's findings that the PAI measure embodies an assessment of self-review threat avoidance.

According to IFAC (2012: 200.7), familiarity threat result when auditors develop close ties with their client management that inhibits exercising sufficient professional skepticism and compromises objectivity. Although some studies contend that familiarity with client is necessary to garner more knowledge and expertise about the client (Gosh & Moon, 2005; Lim & Tan, 2010), familiarity leads to close ties that threaten objective reporting. The finding that stakeholders examine auditor's avoidance of familiarity threats, which determines their perception of independence appearances, is in line with many studies. For example, Lennox (2005), Bamber and Iyer (2007) and Endrawes and Monroe (2010) find that close familiarity with client leads to identification with client interests, acceptance of client accounting choices and reduced professional skepticism.

Similarly, Davis, Soo and Trompeter (2009) and Al-Thuneibat *et al.,* (2011) findings also show that lengthy auditor tenures engender greater familiarity, higher magnitude of discretionary accruals and higher risk premiums from investors indicating that investors also perceive higher investment risk and lower audit quality from long auditor-client relationships. Put together, the study's findings that the PAI measure should assess whether the auditor avoids familiarity threats is also in line with prior studies and therefore reasonably justified.

Another finding of this study is that the PAI measure embodies an assessment of intimidation threat avoidance, which determines stakeholders' perception of independence in appearance. This is in line with many prior study results. For example, Fearnley *et al.*, (2005) found that intimidation and familiarity were the most frequently encountered in auditor-client relations and manifested as pressures from fee reduction, hasty decisions, removal threats and direct bullying. Similarly, Chung and Kallapur (2003) found that large and strongly financially stable clients were more likely to exert pressure, intimidate and threaten auditors with switch, which increased the likelihood of acquiescing to such clients. Furthermore, Shaub (2004) also identifies significance of client financial condition and magnitude of tax fees as precursors to intimidation. In sum, prior studies also provide support for the study's findings that the PAI measure should embody an assessment of auditors' avoidance of intimidation threat to determine their appearance of independence.

The findings of advocacy threat avoidance as a component of the PAI measure is also in line with prior literature. For instance, Shaub (2004) and Francis (2006) reported that auditors providing tax services assisted their clients in aggressive tax planning and represented them before Tax authorities. This shows that they are advocating for their clients' benefit to reduce tax burden and in other cases represent them. Similarly, Jenkins and Lowe (2011) results on auditors' perception of their responsibility to management showed that 32.8% supported client advocacy, 65.5% supported client accounting choices and 63.8% felt pursuing economic interests was inevitable as client loss was an important consideration. Cheung and Hay (2004) also

report that New Zealand shareholders perceived an impairment of objectivity when auditors provided services that increased the likelihood of client advocacy. Thus, in line with prior studies, the finding that the PAI measure should assess whether auditors provide services that place them in position to advocate their clients' interest when assessing appearances of independence is supported.

With regards to safeguards implementation, this study's findings correspond with various studies which also reported factors such as auditor rotation enhancing and safeguarded AI (PCAOB, 2010:006) and reducing the likelihood of equity risk premiums Al-Thuneibat *et al.*, (2011). Johnstone, Warfield and Sutton (2001) also found corporate governance mechanisms, audit firm culture and policies, regulatory oversight and quality controls to be effective safeguards which mitigated independence risks and are generally perceived as important in enhancing audit quality (Bedard *et al.*, 2008). This is also in line with Muhamad-Sori *et al.*, (2010) findings that showed informed users in Malaysia perceived safeguards such as separation of attest and consulting audit staff effectively mitigated AI threats posed by non-audit service provisions. Hence, the prior studies provide support for the study's inclusion and result about safeguards implementation as a component of the PAI measure.

Moreover, the importance of safeguards implementation cannot be overemphasized, especially in the current business environment where professional accounting firms have metamorphosed from rendering attest functions to diversified multi-service

concerns. This diversification represents a threat to independence, thus enhancing appearances of auditor independence to stakeholders is necessary to establish greater confidence in audited reports. This is in line with Carmicheal (2004) and Alleyne *et al.*, (2006) views that AI perceptions are vital in sustaining stakeholder confidence in audit reports, credibility and reliability of financial statements as well as efficiency of capital markets.

To elaborate further from the Nigerian context, auditors have been facing credibility crises from other stakeholders resulting from the widespread perception that they are dependent of their client management. For example, the manner in which they lobby for audit jobs (Abubakar, 2011; Olatunde & Lauwo, 2010) and the upsurge in shareholder associations to protect and represent shareholders (Okike, 2007) are indications that perhaps the auditor is seen as only a 'figure head' necessitated only by legal requirement. Professional accountants may argue that these perceptions may be wrong but even if they are to some extent, Trevino and Weaver (2003) and Kaptein (2008) note that, the mere existence of these perceptions greatly influences stakeholders' attitude and behavior.

Prior studies (e.g. Bakre, 2007; Adeyemi & Akinniyi, 2011; Abubakar, 2011) have also reported that existing ethical codes are weak and ordinary notions of ethics or morality to protect the public interest do not ensure practicing accountants report fairly. They have therefore called for increased scrutiny and a system of continuous monitoring of auditors to safeguard auditor independence. The PAI measure

therefore provides a means by which regulators and other stakeholders can measure and monitor auditor independence.

The study developed the PAI measure based on the IFAC framework definition of auditor independence. The PAI measure consisted of the avoidance of the five major threats identified in Shaub (2004) potential AI measure, with four additional constructs; perceived objectivity, perceived integrity, perceived professional skepticism and safeguards implementation. The addition of these four variables significantly distinguishes the PAI measure from Shaub (2004) measure and is necessary for many reasons. Firstly, it is in line with regulatory requirements for the definition of auditor independence and emphasizes what constitutes the concept of auditor independence. To be independent to stakeholders, auditors need to act and appear independent by avoiding instances or influences that may make informed users doubt the auditor is capable of rendering fair and objective opinions (Srivasta *et al.,* 2009).

In line with this assertion, the IFAC (2012: 280.2) states that independence of mind and appearance is necessary in order for the professional accountant to be able to express an opinion and appear to express an opinion that is devoid of conflict of interest, bias or undue influence of others. Being independent however does not imply absolute independence as the auditor-client interaction entails existence of a financial and or economic relationship at an acceptable level that is and appears objective (McGrath *et al.,* 2001).

In adherence to this requirement, professional accountants are charged with identifying threats to AI, evaluate the significance of the threats, and then apply safeguards to eliminate them or reduce them to acceptable levels. In fact, this evaluation is based on considering what a reasonable and informed third party would conclude after weighing the circumstances and safeguards applied (IFAC 2012: 100.7). However, where safeguards are not sufficient to mitigate the threats, Sec 290.7 specifies that the circumstances engendering the threat be eliminated or the audit engagement declined. Thus, professional codes charge accountants to be and appear independent of their clients. This allows them to fulfill their fiduciary obligation and meet stakeholders' interest of fair and objective opinions in order for them to make informed investment decisions.

The PAI measure developed in this study gains basis from regulatory framework (IFAC) and prior studies (e.g. Shaub, 2004; Al-Eissa, 2009; Bamber & Bamber, 2009; Srivasta *et al*., 2009; Beattie *et al*., 2013). All the constructs are in line with the IFAC code of ethics framework on independence for professional accountants and prior literature. Though five of the constructs are adapted from Shaub (2004) potential AI measure, four other constructs not considered in the measure are added and empirically explored and validated so that a more concise and parsimonious instrument is attained. As auditors are not only responsible to the shareholders that appointed them, they have a duty to regulators and other stakeholders using accounting information for decision-making purposes.

5.2.2 How the Dimensions Interdependently Measure AI

The second objective of the study was to evaluate how the independence in fact and appearance dimensions interdependently measure AI. This focuses on methodology and interdependence analysis used to establish how factual and appearances measure AI. According to DeVellis (2003), developing a measure first starts with a clear conceptual definition based on theory or existing conceptual understanding concerning the phenomenon. This provides focus, delimits the phenomenon's domain and facilitates the generation of potential items to be included. The study defined auditor independence as embodied by two dimensions (independence in fact and appearance) in line with IFAC code of ethics for professional accountants as addressed in the discussion on the first objective in 5.2.1.

Next, the item generation involved collecting an item pool that consists of potential indicators for constructs for evaluation. DeVellis (2003) suggests that items should reflect their underlying latent variable so that each item's content primarily reflects the construct under investigation and each construct preferably has multiple items measuring it. In generating the item pool, the study sourced items from prior literature and IFAC professional codes of ethics. The professional code of ethics which is a by-product of intensive internal and external consultations with academic and professional stakeholders is used because it defines the concept of interest (auditor independence) and covers the most significant and relevant aspects of professional requirements for practicing accountants (Singh, 2008). Using business

codes is also in line with other researchers as sources of item pool for scale development (e.g. Trevino & Weaver, 2003; Kaptein, 2008).

In addition to the professional code of ethics, items for some constructs sourced from prior literature. For instance, the study selects items for perceived objectivity and integrity items from Brown *et al.,* (2007), professional skepticism from Hurtt (2010), some items of self-interest from Beattie *et al.*, (1999), self-review, familiarity, intimidation and advocacy threats from Shaub (2004) and safeguards implementation from IFAC code (2012). This also follows prior literature on scale development, which also source items from literature review and guidelines for scale development (e.g. DeVellis, 2003; Preez, Visser & Noordwyk, 2008; Chen, Hsiao & Hwang, 2012).

Following item generation, DeVellis (2003) recommends asking a group of experts in the related field to review the items of the proposed measure based on the conceptual definition. This stage benefits scale development in three ways; attaining content validity, concept clarity and further suggestions on potential items that may have been omitted. Literature provides an array of methods to employ for expert review regarding item generation and purification. For example, studies could employ structured interviews, focus groups, pilot studies or Delphi technique to garner expert opinions.

The study employed the Delphi technique as it avoided direct confrontation of experts and its attendant negative effects of following general opinion and undue influence by others due to peer pressure (Sekaran & Bougie, 2010). Support for using this method is also in line with various studies that have used it in framework or instrument development (Okoli & Pawlowski, 2004). For example, Aladwani and Palvia (2002) employed the Delphi technique to obtain information systems experts views on items for inclusion in an instrument developed for measuring user perceived web quality. Similarly, Coy and Dixon (2004) used the Delphi technique to garner expert stakeholders' views on items to be included in a public accountability disclosure index for annual reports.

The study's Delphi panel was composed of experts that were stakeholders in the financial reporting process in Nigeria. They consisted of five respondents from each of the five groups purposely selected; academics, officers of the Financial Reporting Council, members of the two professional bodies (Institute of Chartered Accountants of Nigeria and Association of National Accountants of Nigeria), bank loan officers and members of corporate governance body in Nigeria summing up to a total of 30 expert respondents. According to Okoli and Pawlowski (2004), diverse heterogeneous groups are more creative compared to homogenous groups, hence their selection.

In the first round of the Delphi, the researcher sends 107 items in a questionnaire was sent to each expert (See appendix B) and asks them to indicate the importance they

attach to each item in measuring the constructs using a five-point scale ranging from 1-not at all important to 5-very important. The researcher also requests experts to suggest omitted or additional items they considered relevant in measuring PAI. The study then summarizes and returns the results from the first instrument to each participant for validation and possible reconsideration. Items that did not achieve an average score of three excluded and those up to three and above retained. In sum, 89 items remained and the researcher assesses the level of agreement among raters by calculating a Kendal tau coefficient of concordance.

After the second round, enough consensuses result from the expert opinions indicating a high level of agreement among the experts on the remaining eighty-nine items (89) items. In addition to the Delphi panel input, the researcher gives the instrument to two professors of accounting, two professional accountants and five PhD accounting students to assess item layout, adequacy, clarity and understandability. This resulted in the rewording and rephrasing of some few questions. Following this revision, the items are suitable for the pilot testing.

According to DeVellis (2003), a pilot study is a necessary step in scale development that should follow expert review in order to test the instrument. In line with this, the study conducted a pilot test to validate the measure by testing its validity and reliability and gain further insight on how the actual survey may look like thus, anticipating and adjusting for potential problems that may arise during the full-scale research. Out of the 72 instruments distributed to auditors and other financial

statement users, 60 usable instruments constitute the testing sample. Results show that all constructs achieved an acceptable internal consistency with alpha values ranging from 0.609 to 0.795 after some items deletion for some constructs. From 89 items, 26 were deleted leaving 63 items remaining.

However, the researcher retains the 26 items deleted from the pilot test for the main survey for a number of reasons as supported by DeVellis (2003). Firstly, the pilot sample is small and thus carries with it associated risk of unstable covariation that may affect an item's true contribution to coefficient alpha. Secondly, a low ratio of respondents to items may render the reliability results superfluous and be influenced by chance which may not hold true when the sample is increased. Finally, there is the fear of pilot sample being non-representative of the study population. Although the pilot study provided some insight on the instrument, for the reasons noted above and in the interest of pursuing generalizability, the uses the 89 items in the full-scale survey for evaluation using a much larger sample.

After the pilot test, the study undertook an evaluation of the items from a larger and more representative sample in order to further purify the scale and retain only items that justified the appropriateness of their inclusion in the instrument. This is conducted through an exploratory interdependence analysis using two methods; principal component analysis with varimax rotation and principal axis factoring with direct oblimin rotation. Following Hair *et al*., (2010), the EFA techniques are pursued to assess the dimensionality of the variables by identifying common

underlying structures among the variables and the principal components which account for majority of the variance and are hence able to represent the other factors in explaining the data. According to DeVellis (2003), this is a necessary stage in scale development as it helps in refining the items on variables to achieve psychometric balance by eliminating items that do not significantly contribute to the shared variance of variables. Two techniques (PCA and PFA) are both explored and compared for more robustness in order to select the best fit. This finds support from Pett *et al.,* (2003) and Williams *et al.,* (2010) who advocate for examining and comparing various methods of factor analysis to select best fit.

Thus, the 89 items were factor analyzed following an iterative process that eliminated items which did not meet the minimum factor loadings, communalities and the remaining items rerun until the minimum benchmarks were attained. A total of 9 factors having 37 items remained after the EFA. Compared to the PCA, the PAF results yielded the best fit with eight of the constructs loading strongly on one factor with minimum of three items and was therefore adopted. This is supported by prior studies (e.g. DeVellis, 2003; Costello & Osborne, 2005; Hooper, 2012) which report that PAF is more rigorous, appropriate and superior for instrument development as its results are more generalizable.

The EFA results demonstrated PAI consist of two dimensions (independence in fact and independence in appearance which are in turn measured by nine constructs; perceived objectivity, perceived integrity, perceived professional skepticism, self

interest threat, self review threat, familiarity threat, intimidation threat, advocacy threats avoidance and safeguards implementation. Following Lu, Zhang and Wang (2009) the cronbach alpha and item to total correlations for the 37 items remaining was examined and no item was deleted as all met the benchmark (Hair *et al*., 2010).

As EFA is only exploratory and therefore not sufficient to establish findings, confirmatory factor analysis (CFA) was undertaken to confirm the PAI measure proposed. This finds support from various theoretical assertions that EFA only enables exploration, consolidation and generation of models which need to be tested and verified (Tabachnich and Fidell, 2007; Hair *et al*., 2010). Following Preez, Visser and Noordwyk (2008) each dimension is subjected to CFA separately to allow for further investigation and scale purification. This provided further insight for assessing model fit and deletion of items. This also finds support from Yang, Cai, Zhou and Zhou (2004) and Byrne (2010) who recommend that first order constructs be specified and assessed before second order constructs in a hierarchical model. Model fit was assessed based on examination of the three categories of goodness of fit (GOF) indices for both first and second order constructs; absolute fit indices, incremental fit indices and parsimonious fit indices. Two items were deleted from each dimension's first order CFA and the model respecified before the second order model with both dimensions was specified. The final model with 33 items yielded a good fit thus confirming the existence of the two dimensions of auditor independence (IIF and IIA) as measured by nine constructs. Convergent and

discriminant validity test showed all constructs had convergent validity and discriminated from each other reasonably well (Fornell & Larcker, 1981).

Put together, the findings from the CFA confirm those of the EFA, having reasonably met all validity and reliability yardsticks that the PAI measure consists of two dimensions that as measured by nine constructs. Moreover, the PAI measure also follows the pattern of other perceptual scales developed in behavioral research to assess perceptions about latent variables such as SERVQUAL for measuring perceptions of service quality (Parasuraman, *et al.,* 1988). Others are the measure of unethical behavior in the workplace (Kaptein, 2008) from stakeholders' perspective and store image scale development (Preez, *et al.,* 2008) and the guidelines for scale development by DeVellis (2003).

5.2.3 Assessing the Applicability of the PAI Measure among Financial Directors of Listed Companies in Nigeria

The third objective of the study was to evaluate the applicability of the PAI measure established in the study among financial directors of Listed Companies in Nigeria. Even though the previous section 5.2.2 demonstrated the reliability and validity of the measure, the researcher needed to assess the utility of the PAI measure to determine its predictive validity. This follows Nunnally (1978) recommendation that researchers need to ascertain the predictive validity of measures. This third objective examines the robustness of the PAI measure by testing financial directors' perception of auditor independence. In addressing this issue, the researcher conducts

a small survey with the aim of assessing the capacity of the PAI measure in predicting AI perceptions. This is also similar with Kaptein (2008) study that also assessed the predictive validity of the measure of unethical behavior in the work place that they had developed in an earlier study.

Because of the small sample size, partial least square structural equation modeling (PLS SEM) using SmartPLS 2.0 (Ringle *et al.*, 2012) was used to conduct the analysis and this is supported by Hair *et al.*, (2013) and Chin (2010). The measurement model also demonstrated adequate reliabilities, convergent and discriminant validities. Equally important was that the model's predictive power (R^2) was all within acceptable limits and exceeded Cohen (1988), and Falk and Miller's (1992) 10% minimum benchmark. Furthermore, the Q^2 measure of predictive relevance indicated that both dimensions had predictive relevance and predicted the constructs well.

The findings from the PLS results further confirm the earlier results from the EFA and CFA. Collectively, they show that the PAI measure constitutes nine factors (perceived integrity, perceived objectivity, perceived professional skepticism, self-interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation) as defined by two dimensions (independence in fact and independence in appearance). In other words, independence in fact (IIF) and independence in appearance (IIA) are second order constructs which are reflectively

measured by nine constructs in a hierarchical model to determine the perceived auditor independence (PAI). The findings are similar to Akter *et al.*, (2011) who also used PLS in a hierarchical model to confirm and validate trustworthiness as a second order reflective construct.

In general, the findings are as expected as regulators teach and expect professional accountants to possess both forms of independence when rendering attest functions (IFAC, 2012: 290.4). The ethical code for professional accountants details the requirements for ensuring professional independence so that auditors conduct their duties with highest sense of integrity, objectivity and professional skepticism while ensuring that they avoid or manage all circumstances that may make informed users doubt they are capable of rendering fair opinions. This is especially important for Nigerian auditors because they provide all forms of non-audit services that predispose them to all the various types of threats that may hamper their professional and perceived independence. The study develops the PAI measure in order to facilitate the internalization of professional independence.

The PAI measure is not a substitute to professional code of conduct but provides a useful guide for auditors, client management and shareholders. For the auditors, it serves as a performance measure for enhancing adherence to independence frameworks. For other stakeholders, it serves as a monitoring tool for assessing perceptions of auditor independence. The PAI measure emphasizes both dimensions of auditor independence and the results showed that in reality Nigerian stakeholders

did assess auditors' independence from their own perceptions. The study has thus provided empirical support and a means for monitoring PAI, which invariably implies that usage of the measure will help both auditors and stakeholders in evaluating perceptions of auditor independence and adherence to independence frameworks.

5.3 Contributions of the Study

This study followed a rigorous instrument development procedure to establish the PAI instrument which measures stakeholders' perceptions of auditor independence. The findings of the study provide insights for the practicing auditors, informed users, regulators and academics and contributes to the body of knowledge in theory, practice and methodology. The theoretical, practical and methodological contributions are discussed in the following subsections.

5.3.1 Theoretical Contributions

The study contributes theoretically to the body of knowledge by empirically identifying the constituents of auditor independence based on stakeholders perspective. Before this study, most studies on auditor independence focus on factors affecting auditor independence and not primarily defining the auditor independence concept in terms of its constituents. This is despite the fact that regulatory frameworks conceptually define this concept but empirical research up to now has basically relied on proxies as direct measures of auditor independence. Thus, the conceptualization and empirical assessment of the constituents of auditor

independence through interdependence exploratory and confirmatory analysis provides a significant contribution that provides a stepping stone for future research in this direction.

Additionally, the findings on the applicability of the PAI measure is also a significant contribution to knowledge. The study has shown that this measure is applicable as assessed by financial directors of listed companies in Nigeria. This finding couldn't have come at a better time in Nigeria with the recent establishment of the financial reporting council and corporate governance codes. Thus the instrument will prove very useful to the FRC which is the regulatory organ of Government charged with regulating financial reporting practices alongside the professional bodies in monitoring auditor independence in order to structure and monitor compliance to independence frameworks. As mentioned, this is the first study in Nigeria to provide a comprehensive instrument for measuring stakeholders perceptions of auditor independence compared to the other studies focusing on factors influencing auditor independence.

Furthermore, this study expanded on Shaub (2004) potential measure by including other constituents of the auditor indepenence measure such as perceived objectivity, perceived integrity (Brown *et al.*, 2007) perceived professional skepticism (Hurtt, 2010) and safeguards implementation (IFAC, 2012) and empirically operationalizes the meassure. Thus, the study adds to existing body of knowledge by following the IFAC guideline to establish a holistic approach in developing a measure for PAI

from the perspective of Nigerian stakeholders. This represents a novel contribution to knowledge because prior to this study no other study has proposed and operationalized a measure of auditor independence to the best of the researcher's knowledge. This gap which this study fills has existed because previous studies focused only on individual or group of factors influencing auditor independence or using indirect proxies to represent auditor independence and not on the constituents of auditor independence.

Apart from identifying the constituents of PAI from the factual and appearance dimensions, this study also contributes to knowledge by establishing how these two dimensions interdependently measure auditor independence through stuctured and rigorous methods employed to refine the PAI measure. In addition to this, the study confirms the existence of a hierarchical model explaining auditor independence in terms of its two dimensions (IIF and IIA) as measured by nine constructs. This provides a useful framework for evaluating the auditor independence concept.

5.3.2 Methodological Contributions

Past studies on auditor independence have employed various analytical techniques in analyzing the relationships they proposed. Also, most of the interdependence studies on factors influencing auditor independence such as Beattie *et al.,* (1999), Al-Ajmi and Saudagaran (2011) and Irmawan *et al.,* (2013) employed only one method of Factor Analysis. This study used two types of Factor Analysis (Principal Component Analysis and Principal Axis Factoring) following recommendations by prior studies

to compare various methods of factor analysis and choose the one that offers the best fit for confirmatory analysis.

Similarly, none of these studies to the best of the researcher's knowledge, employed Structural Equation Modelling using both covariance based SEM and PLS-SEM as analytical tools for developing and validating an auditor independence measure. The covariance based SEM in addition to PLS-SEM using Amos 16 (Arbuckle, 2007) and SmartPLS 2.0 (Ringle *et al.*, 2005) are powerful and sophisticated tools that combine to provide a rigorous assessment of models proposed. In addition, SmartPLS enabled the assessment of predictive capacity of the model proposed.

Furthermore, the study has also been able to refine some measurement items adapted from prior studies through the exploratory and confirmatory factor analysis conducted which eventually resulted in fewer items specific to the Nigerian environment. For example, perceived objectivity and integrity which were adapted from Brown *et al.,* (2007), professional skepticism by Hurtt (2010), self-interest, self-review, familiarity, intimidation and advocacy threat avoidance adapted from Bartlett (1993), Beattie *et al.,* (1999) and Shaub (2004) and Safeguards implementation adapted from IFAC (2012) code. All adapted items were refined starting from the Delphi expert panel, the Exploratory Factor Analysis and Confirmatory Factor Analysis and items failing to achieve minimum benchmarks were dropped until the remaining ones met minimum required threshold. The 33 retained items met the standards and were therefore significant to the measure.

5.3.3 Practical Contributions

The study has developed and tested empirically a PAI measure for external auditors from Nigerian stakeholders perspective. The measure developed will immensely benefit auditors, regulators, academics and other stakeholders of audit quality in Nigeria. For the auditors, the measure could serve as a quality control tool and performance measure which they could periodically use to assess their independence, thus helping them improve their appearance of independence and compliance to independence frameworks. For the regulators as Financial Reporting Council (FRC) and Professional Bodies (ANAN & ICAN), the measure provides a consistent means of measuring and monitoring perceptions about auditor independence. This will help them stucture policy frameworks on auditor independence and appropriate response to perceived non-compliance to frameworks.

The PAI measure is also of geat relevance to academics since it represents the first attempt at measuring PAI. Its limitations will provide a stepping stone and open up oppurtunities for further research and improvement on the instrument. For informed users the instrument provides a means of evaluating auditors' perceived independence which will help them make more informed decisions based on their assessment of auditor objectivity. For creditors, shareholders and bank loan officers, this assessment instrument will help them make more informed lending and investment decisions based on how they assess the auditor's objectivity in rendering fair opinions.

5.4 Limitations of the Study

Despite the significant contributions to knowledge made by this study in developing a PAI measure for external auditors based on stakeholders' perceptions, it is not without limitations. In this regard, this section discusses the practical and methodological limitations.

5.4.1 Practical Limitations

Firstly, the study's results may not apply to other countries having different socio-economic, cultural, political and financial reporting systems as Nigeria. This is in line with Irmawan *et al.,* (2013) assertion that perceptions differ across countries because of differences in social interactions and regulations concerning environmental peculiarities, auditing and financial reporting practices. Since contextual factors within countries may differ and shape how citizens and other professionals perceive certain relationships, this study focused on Nigerian stakeholders perceptions. In this respect, the results may not be applicable to other countries within Africa and beyond.

Secondly, this study focused on only two places Lagos and Abuja in Nigeria because all the headquarters of the stakeholders' organizations domicile there, with only smaller branches across the country. Thus, other demographic factors such as culture and environmental development may influence perceptions and make them differ even across the country.

Thirdly, since informed users of accounting information are diverse and in pursuing parsimony,the study only focused on professional accountants, Financial Reporting Council officers, Federal Inland Revenue Service officers, members of Corporate Governance Body, Financial Directors and shareholders. Despite the heterogenity, the study did not examine differences in perception among the groups studied. Fourthly, even though the focus of the study was auditor independence, the study did not investigate the degree of auditor independence. This is also important, as it will provide more information on the level at which stakeholders' rate auditor objectivity.

5.4.2 Methodological Limitations

Some of the limitations were primarily methodological. For instance, the survey method suffers from many deficiencies some of which may include social desirability response bias of responding to please researcher, false response from respondents or misunderstanding and misinterpretation of questions which according Zikmund (2003) are common in social science surveys. In order to reduce these occurrences, questionnaire items formulated follow an extensive evaluation through expert review to ensure they were as clear and understandable as possible to the target respondents. In addition, respondents were reassured of the confidentiality and anonymity of their participation and responses in order to elicit reliable and objective opinions. However since the threat may not be eliminated and may likely influence results, future studies may consider combining survey with other qualitative approaches to provide more support for findings.

Secondly, the constructs differed with respect to variance they accounted for. For example, while perceived integrity, perceived professional skepticism, self-interest threat avoidance and intimidation threat avoidance explained a large portion of their variances (0.62, 0.83, 0.81 & 0.75), perceived objectivity, self-review, familiarity and advocacy threats avoidance and safeguards implementation variance accounted for was low (0.26, 0.21, 0.20, 0.29 & 0.36). However, the low R^2 exceeds Cohen (1988) and Falk and Miller's (1992) 10% as minimum benchmark (weak) for acceptability, they are an indication that other factors outside the model explain some portion of the variance. Hence, future studies may improve the model by exploring other indicators outside the IFAC framework that may also measure some aspect of auditor independence and incorporate these into the model.

Thirdly, the study may have also been influenced by other limitations and errors associated with instrument building and surveys. Although extensive testing and validation were conducted to ensure validity, reliability and instrument generalizability, Robinson and Bennett (1995) note that validation is almost never final as instruments are often subject to further improvement. Future studies are therefore required to confirm the validity of the PAI measure from various countries and in various contexts.

5.5 Suggestions for Future Studies

The limitations of this study identified in 5.4 above provide avenues for future studies on auditor indepnedence. Firstly, as this study represents a first attempt for an AI measure, more studies are required to confirm and validate the measure. Secondly, since the study focused on certain group of stakeholders, future studies may extend this scope by including the other stakeholder groups omitted such as brokers, financial journalists and employees to see whether they share similar perceptions. Similarly, the scope could be broadened to include other states and regions in Nigeria. On an even broader scope, future studies could be carried out in other African countries and beyond having similar socio-economic and political systems in order to determine the applicability and generalizability of the PAI measure developed.

With regards to the deficiencies of surveys, future studies should consider combining survey with other qualitative approaches such as interviews and case studies to gather more in-depth insight and provide greater support for findings. Future studies may also improve the instrument by including a section where stakeholders rate the degree of perceived auditor independence to provide an overall score of perceived independence. Furthermore, since the study focused on various stakeholder groups, an investigation about group differences will also provide more insight on individual group perceptions. Finally, the low R^2 reported for some constructs indicate that some portion of the variance is explained by other factors not included in the study.

Future studies should explore other factors that may also measure some aspect of auditor independence and incorporate these into the instrument.

5.6 Conclusion

Although research on auditor independence (AI) has spanned many decades, more scholarly and regulatory attention has been drawn to it in the wake of high profile corporate failures. Most of the studies on AI have however relied on proxies such as non-audit fees ratio, audit to total fees ratio or client importance to measure AI. Since regulatory frameworks define AI along two dimensions (Fact and Appearance), an AI measure is only complete when it embodies both dimensions. This study questioned the use of proxies for measuring AI and the absence of a measure to evaluate AI. It has brought to fore the need to measure AI empirically by developing a PAI measure for Nigerian external auditors based on stakeholders perceptions. In doing this, the study was able to answer the research questions raised and achieve the research objectives set.

The study followed the procedure for instrument development by generating items from existing literature and professional codes of ethics and subjecting the item pool to expert review for content and face validity. Following this, a pilot study was conducted to test the instrument and gain more insight before the full scale survey was conducted. During the survey, data was collected from practicing auditors and other stakeholders comprising Financial Reporting Council officers, officers of the Federal Inland Revenue Service, members of the Corporate Governance Body, bank

loan officers and shareholders in Abuja and Lagos, Nigeria. The collected data was coded and subjected to data screening after which Exploratory Factor Analysis was carried out. Reliability tests was also conducted and followed by Confirmatory Factor Analysis using Amos Version 16 (Arbuckle, 2007). The refined instrument's applicability was then tested on a small survey of Finanncial Directors of Listed Companies in Nigeria.

Data collected from the survey of financial directors was analyzed using SmartPLS 2.0 (Ringle *et al.,* 2005). Findings of the study were supported by previous studies on auditor independence and others on instrument development. The study thus found support for all the nine hypotheses raised. Based on this, the study concludes that the PAI measure consist of nine constructs, three reflected by Independence in Fact dimension (perceieved objectivity, perceived integrity and perceived professional skepticism) and six reflected by the Independence in Appearance dimension (self interest threat avoidance, self-review threat avoidance, familiarity threat avoidance, intimidation threat avoidance, advocacy threat avoidance and safeguards implementation). The study revealed that of these factors, some are perceived to have more influence than others in determining auditor independence. For instance, self-interest threat avoidance, intimidation threat avoidance and safeguards implementation have more influence on independence in appearance compared to self-review, familiarity and advocacy threat avoidance. Similarly, perceived integrity and perceived professional skepticism determine independence in fact more than perceived objectivity. The findings also reveal that the PAI measure is

applicable in the Nigerian environment. Based on this, the study concludes that the findings have answered the research questions raised and achieved the study objectives set.

In sum, the study was able to adress the four important gaps in the auditor independence literature:

1. Previous studies focused on examining individual or group of factors affecting auditor independence and not what auditor independence is, what it constitutes and how it can be measured.
2. Although a study by Shaub (2004) proposed a potential measure for auditor independence, the study did not encompass both dimensions of auditor independence and more importantly did not operationalize the proposed measure.
3. This study developed a holistic measure that encompassed both dimensions of auditor independence as defined by the IFAC framework and tested its applicability on a small sample to determine its utility.
4. Although some of the studies used exploratory factor ananlysis (e.g. Beattie, Fearnley & Brandt, 1999; Al-Ajmi & Saudagaran, 2011; Irmawan, Hudaib & Haniffa, 2013), none of them used confirmatory factor analysis using both covariance based method (Amos 16 by Arbuckle, 2007) and parlial least squares structural equation modeling (SmartPLS 2.0 by Ringle *et al*., 2005) to the best of the researcher's knowledge.

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