

INTERNAL AUDIT FUNCTIONS OUTSOURCING VERSUS THE INDEPENDENCE OF THE EXTERNAL AUDITOR: SEPARATION OF STAFF OF AUDIT FIRM TO THE RESCUE?

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Abstract

The debate on whether the external auditor of a client organization would not compromise his independent position and remain impartial in the face of obvious pressures from top management of an organization has not abated. The study therefore joined the foray by examining if separating staff of an audit firm would affect the perception of the auditor's independence when he provide internal audit services to a client organization. The objective of the study was to ascertain if the separation of an audit firm staff contracted to perform outsourced internal audit functions would affect the perception of auditor independence impairment. The population of the study consists of 861 persons in seven categories of Academics, Auditors, Analysts, Bankers, Investors, Managers and Regulators. A manageable and acceptable sample size of 550 respondents was logically selected for the study using a stratified and random sampling technique. Descriptive statistic backed by econometric qualitative model response was used to test the hypothesis. The study found a significant positive relationship between separation of staff of an audit firm and the independence of the external auditor, hence an auditing firm that engages in separation of staff between those who perform attest functions and those that perform outsourced internal audit functions tend to enjoy a better auditor independence perception. In conclusion, the separation of staff between those who perform outsourced internal audit functions and those that perform attests functions promote the independence of the external auditor. This study therefore, recommends the separation of staff of an accounting firm between those who perform attest functions and those that perform outsourced internal audit functions, as this would likely improve the perception of auditor independence. The implication of this is that staff should be specifically engaged to perform internal audit functions for client organizations.

Keywords: Auditor independence, internal audit, internal audit functions outsourcing, separation of staff

Introduction

The business evolution of separating the management of a profit oriented organization from the founders or promoters as well as other interest holders of such corporate entities as stipulated by the laws of almost all the countries in the world necessitated the need for both internal and external audit. The external auditor is statutorily mandated to express an independent opinion on the genuineness

and veracity of the financial statements prepared by management thereby affirming authenticity and adding validity and legitimacy to them. The External auditor also provides assurance services against fraud and misrepresentation of the financial information. The external auditor plays the role of an unbiased umpire and arbiter between the management of the entity and the various stakeholders. This enables users of financial statements to reckon with and rely on the company's financial statements for their decisions. The role of the external auditor is therefore basic in mediating between the management and other stakeholders of the enterprise who do not take part in the day to day running of the business.

The vital role played by external auditing is not just limited to the financial system but extends to the economy as a whole. The evidence of the importance of external audit is hinged on the fact that it is statutorily required for all publicly quoted companies to have their financial statements audited on an annual basis so as to give credence to the claims of management regarding what the financial statements purport to represent. The external audit is also a stewardship process whereby the performance of the management of an organization can be assessed.

Internal auditing on the other hand is a self reliant, autonomous and objective assurance and consulting activity designed to supplement the value of the financial report and improve an organization's operations. It helps an organization accomplish its objectives by bringing a procedural, analytical and disciplined approach to appraise and strengthen the capability of risk management, control, and policy performance. The internal audit function therefore is an in-house non-mandatory but very desirable organizational activity designed to assist in achieving the objectives of the organization.

The internal audit functions were originally in-house arrangement whereby an internal audit unit is set up to provide advisory services to management. However, in the last three decades, many corporate entities started contracting the external auditor to perform these important management responsibilities. Some other organizations modified the practice of outsourcing the internal audit functions by identifying key internal audit functions, which they feel should be performed in-house. This brought the concept of total outsourcing or partial outsourcing of internal audit function scan be performed by either the staff of the organization (in-house) or completely contracted to external parties (outsource) either in part or in total. The practice of outsourcing internal audit functions has been embraced by many corporate entities in recent times. A number of organizations out source their internal audit functions because they lack the professional expertise to execute the functions in-house. The practice of outsourcing internal audit functions is more common with small business enterprises who find it quite expensive maintaining internal audit units. Furthermore, there were instances where companies that can afford to create and maintain internal audit units outsource the internal audit functions because they regard such functions as being non-core business activity.

One of the key factors that distinguish the auditor in the performance of his statutory duties is independence and without independence users of financial statements cannot rely on the auditor's

report. The external auditor through his final audit output that is, the audit opinion, adds credibility to the financial statements so that users can rely on the information presented. This in turn complements the entire financial reporting system. Furthermore, independence is the core of any attestation or assurance services responsibilities.

Auditor independence can further be described as taking an unbiased viewpoint in the performance of audit tests, the rating of the results and the communication of audit reports. Independence includes the qualities of probity, neutrality, objectivity and impartiality. Independence can also be viewed from the perspective of the ability of the auditor to resist client pressure.

In the light of what has been said above about the near indispensable nature of internal and external audit and the need for the auditor to be independent, opinions vary on the issue of outsourcing internal audit functions to the external auditor who performs attest functions for a client organization. Much concern has been expressed about the likelihood of the auditor's independence being impaired when his audit client outsources internal audit functions to him. However, the practice of outsourcing internal audit functions to an entity's external auditor has become widespread. It is no longer an issue for debate that outsourcing of internal audit functions has permeated every economic activity of human endeavour. The fear of independence impairment if the internal audit functions are outsourced to the same external auditor who carries out attestation for an enterprise still remains a major contentious issue in the outsourcing saga. A few studies have been conducted on the issue of separating staff of the audit firm between those to be engaged in performing internal audit functions and those that perform the conventional attest functions.

Statement of problem

The external auditor is supposed to be independent to be able to carry out his attestation mandate satisfactorily. However, some audit firms are beginning to add internal audit functions to their attestation functions. There is the fear that the inclusion of internal audit functions to be performed by the same external auditor may jeopardize his independence. A number of studies have been conducted on how best to prevent a conflict of interest if the auditor performs internal audit functions. Some of the studies have suggested outlining specific audit functions to be outsourced to the external auditor; others have suggested partial outsourcing while retaining the in-house audit personnel. Some have even suggested outright restriction and prevention of the auditor from performing internal audit functions. None of these suggestions have been able to stop the debate on the auditor's possible independent impairment perception. If this trend persists, non-accounting professionals and other users of accounting information might lose faith in the quality of audit work carried out by the auditor. This problem might escalate and cause a division within the accounting profession. There is the need for a general consensus as to how best to ensure that the auditor maintains his independence given that he performs internal audit functions outsourced to him. This study therefore is a contribution on the ways of ensuring auditor's independence by assessing the impact of separation staff of audit firms in ameliorating auditor's independent impairment perception. The study is one directional as it focuses

on the issue of separating the staff of an audit firm as a way of resolving the fear of independence impairment when internal audit functions are outsourced to an entity's external auditor.

Objective of the Study

The main objective of this study is to determine the extent to which separating the staff of an audit firm would ameliorate the fear of independence impairment perception when an entity's external auditor undertakes to perform internal audit functions in addition to his statutory attest functions.

Research Questions

To what extent would separating the staff of an audit firm involved in internal audit functions outsourcing ameliorate the fear of the external auditor's independence impairment perception?

Statement of hypothesis

There is no significant relationship between the separation of audit firm staff involved in internal audit functions outsourcing and amelioration of auditor's independent impairment perception.

Scope of study

This study covers the period of 2001 to 2017. The choice of this period was premised on the various financial scandals arising from the external auditor's involvement in various internal audit functions both within and outside Nigeria. The Author Andersen and Enron saga is still fresh in the minds of people. There were similar incidents in Nigeria involving Cadbury and African Petroleum. Lagos, Abuja and Kano were chosen for this study because of their strategic locations and their commercial relevance in Nigeria. Lagos and Abuja house the headquarters of most commercial enterprises as well as home to all the regulatory agencies in Nigeria, apart from the number of academic institutions that litter the cities. Kano is the most visible commercial centre of the Northern part of the country.

Literature Review

Internal Audit and Internal Audit Function

The Institute of Internal Auditors (IIA, 2009) defines internal audit as 'an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. Lenz, Sarens and D'Silva (2013) views internal audit function (IAF) as an input process. The implication of the above definitions is that they identify the internal audit as a unit or department of an organization whether public or private and whether profit making or non-profit making. The defined responsibilities of internal audit unit make it and its functions an important part of the organization process. The internal audit function is therefore part of the governance process, which demands that institutions and their officials function responsibly, transparently and with accountability (Barakan, 2013). IIA (2011) posits further that the internal audit functions help an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.

The hitherto narrow perception of internal auditing role has given way to the present and strongly held belief that internal audit is concerned with issues of control, risk management and governance process, hence the need for the internal audit unit to be proactive (Spira & Page, 2003; Allegrini D'onza, Melville & Sarens 2011). As far back as 1947, the IAF has as its objective, the evaluation of the accuracy of financial transactions while assisting members of the organization in discharging their duties effectively (Bou-Raad, 2000). The important role of the internal audit functions in an organization raises doubts as to the assertion by some organizations that regard internal audit functions as non-core functions or activity of an organization. It is debatable whether a segment of an organization's operations that is fundamental to the achievement of its objectives can still be described as non-core activity. It is the position of this study that internal audit functions can be described as core activity of an organization without prejudice to its outsourcing.

International Professional Practices Framework (IPPF, 2013) of the Institute of Internal Auditing is the blueprint that contains the definition of internal auditing, the code of ethics of the profession, practice advisories and the professional practices of internal auditing international standards. It is therefore binding for individuals and corporate entities that provide internal audit services to adhere and comply with the rules and guidelines stipulated in the framework by the IIA. However, the extent of compliance with this professional practices framework by individuals and corporate organizations is yet to be addressed by most studies (Selim & Yiannakas, 2001; Selim, Sudarsanam, & Lavine 2003; Melville, 2003). Compliance to standards and guidelines is very important as it makes individuals and organizations transparent, honest and accountable, these features of which are key ingredients to good corporate governance (Aruwa & Mohammed, 2012).

Lenz and Sarens, (2012) express the need for clarity in terms of purpose and proportion of internal auditing functions. This can be achieved by identifying what specific tasks that constitute the internal audit functions. Gray and Manson (2011) identified the following as the internal audit functions.

(a) Monitoring of internal control through the review of the internal control mechanism put in place by management; and (b) evaluating the workings of the various controls and recommending appropriate improvements.

The internal audit function also centres on evaluation of financial and operating information. This entails assigning the review of the means used to recognize, classify, analyze and report financial and operating information through specific inquiry and testing of individual items, transactions and balances. The internal audit also reviews the economy, efficiency and effectiveness of operating various organizational tasks, including non-financial matters of a corporate entity.

Furthermore, the internal audit functions deal with assessment and management of risk is yet another identifying and evaluating significant exposure to risk and contributing to the improvement of risk management and control systems. The internal audit should ascertain the extent of risk the organization might be exposed to and capable of handling. This function of the internal audit unit is fundamental in the face of a dynamic and volatile business environment caused by technological changes and globalization.

Suleiman and Dandago (2014) outlined the following functions of internal audit department: Establishment of accounting system, monitoring and supervision of accounting system; evaluation of accounting system; design of internal control system; custodian of internal control system; soundness, adequacy and application of internal control system, ensuring compliance with policies, plans and procedures, examination of financial report before external audit; ensuring economy, efficiency and effectiveness of operations; verifying the existence of assets; conducting special investigation, detailed tests of transaction and balances, human resources management, security of documents, security of information technology and corporate governance.

However, the above functions of internal auditing as articulated by the authors may not be all embracing and conclusive. The functions of internal audit will very largely depend on the nature of business of the enterprise and the size of the organization as well as the extent of risk exposure of such business undertakings. The functions assigned to the internal audit units will also very largely depending on how the organization hopes to use its internal audit unit to achieve its objectives. The important roles played by the internal audit system further heightens the debate as to the appropriateness of organizational tasks considered germane to the business of a corporate entity.

Internal Audit Functions Outsourcing

The increase in the magnitude of outsourcing of internal audit functions in the last two decades by a substantial number of corporate entities to public accounting firms represents an unending progression. (Brandon, 2010). This trend is more strongly evident in medium and large entities with audit committee participation in contrast to smaller organizations without audit committee participation. Results from previous studies have demonstrated that there is a positive correlation between outsourcing and internal audit functions that is perceived as resource-intensive and non-value adding. Furthermore, it was revealed that the lack of professional skill in the internal audit department is the more compelling force that the internal audit functions would be contracted to an external but more competent and skillful professional the larger the lack of skill sets in the internal audit department (Abdolmohammadi, 2013). This lack of skillful accounting professionals in the internal audit unit, especially in small and medium sized entities, probably accounts for why some companies regard internal audit functions as non core operations that needs to be outsourced. Opponents of outsourcing claim that service providers that are instructed with the internal auditing activities are not equipped with enough business understanding and commitment to the instructor, and thus the outsourced function may not be fulfilled in accordance with the client's requirements. However, outsourcing internal auditing is associated with higher objectivity assessed by external auditors and higher expertise observed by financial directors. (Prawitt, Sharp & Wood, D. 2012)

Vining and Globerman (1999) and Brannemo (2006) reported that outsourcing is an increasingly important initiative and necessity being pursued by organizations to improve efficiency so as to remain competitive and ensure their survival in current volatile globalization era. In today's business environment, companies consider outsourcing as a strategic tool for empowering business concentration, mitigate risks, build sustainable competitive advantage as well as extend technical

capabilities and free resources for core business purposes (Bartell, 1998). Johnson and Schneider, 1995; Lacity and Willcocks, 1998, reported that some companies outsource their core activities on the value chain extensively and other companies in contrast are extensively outsourcing their secondary activities of their value chains such as information technology, accounting systems and distribution.

Juma'h and Wood (1999) defined outsourcing, as the replacement of inputs or value added previously created in-house by an external provider within a long-term contractual relationship within which only some of the expected mutual benefits and obligations are formally defined. It involves very high-level strategic decision that tries attempts to resolve the question: 'what to make and what to buy' (Kakouris, Polychronopoulos & Binioris 2006). The implication of the position of previous studies is that contracting out the internal functions of an organizations' business bears significant impact on the daily operational itinerary of the entity and managerial performance of the organizations as a whole. Therefore, companies must outsource reasonably as outsourcing decisions may affect company's cost structures, long-term competitive situation and can also alter the nature of risks that the company must manage (Brannemo, 2006).

Hence, it is imperative for companies to understand and have a clear visionary template of the outsourcing decision. Furthermore, company must also appreciate the benefits and risks of outsourcing. Outsourcing has long been studied with a focus on manufacturing industries (Markides & Berg, 1998; Mol, Pauwells, Matthyssens & Quintens 2004) and only more recently in the case of services (Kotabe, Murray & Javalgi 1998) who reported that the first services to be outsourced have been Information Technology service. However, outsourcing, especially in the financial circle has attracted tremendous interest of accounting practitioners.

The outsourcing of internal auditing functions and other non-auditing services appears to be the in-thing. Scott McNealy, CEO of Microsystems, in Rittenberg (1999) confirms this when he stated that, "every company is racing to outsource non-core areas." The rationale for outsourcing is simple i.e. the outsourcing provider has identified the service area as a core competency and has positioned the firm to provide better services at the same cost as the client is currently incurring, or alternatively the same services at lower costs (Rittenberg, 1997).

As outsourcing of internal audit functions has become a global practice, the concern of regulators should be how to make rules and provide guidelines that would ensure that none of the accounting firm, the management of an enterprise and stakeholders would take an undue advantage of the situation and circumvent professional and ethical codes of conduct.

Auditor Independence

Independence is considered an important facet of external auditors' attestation job, and to a lesser extent the internal auditor. Both the American Institute of Certified Public Accountants (AICPA) and the Security and Exchange Commission (SEC) of the United States of America as well as other countries have rules, which require auditors to maintain their independence. In fact, the entire debate over

whether audit firms should outsource internal audit functions revolves around the argument that the provision of these services may impair the auditor's independence.

Antle (1984) and Schuetze (1994) reported of the difficulty in defining the concept of auditor independence with exactitude, as it is an emotive concept that lends itself to divergences of interpretation. A few of the meanings ascribed to auditor independence can be seen from the point of view of DeAngelo (1981) who described it as the conditional probability of reporting a discovered breach, while Knapp (1985) see it as the ability to resist client pressure. AICPA (1992), Moizer (1994) and Schuetze (1994) stated that, it is an attitude/state of mind. Magill and Previts (1991) see auditor independence as a function of character, with the attributes of integrity and trustworthiness being key, but the AICPA (1997) White Paper defined it as an absence of interests that create an unacceptable risk of bias, while the ISB (2000) see it as freedom from those pressures and other factors that compromise, or can reasonably be expected to compromise an auditor's ability to make unbiased audit decisions. These sampled definitions all reflect the importance of objectivity (ability to suppress prejudice) and integrity (willingness to express an opinion that truthfully reflects the evaluation of what has been discovered during the audit) as the two major aspects of the auditor. This study sees auditor independence as the ability and character of the auditor to maintain an unbiased position and see things the way they are, despite pressures from management and other interested parties.

The concept of auditor independence has a long history and still remains a contentious issue today. In the early twentieth century, independence of the auditor was aligned with acceptable personal conduct and state of mind of the auditor through persuasion of duty and devotion. Therefore, independence was assumed to mean integrity, honesty, and objectivity, including freedom from the control of those whose records are being attested to. It is indeed an attitude of the mind much deeper than the apparent display of visible standards.

The auditor is expected to avoid entangling himself situations that might cause others to conclude that, they are not maintaining impartiality and objective attitude of mind (Porter et al., 2003). The intangibility of the concept of auditor independence as well as change in the work environment, has led to government and professional auditor independence which was once considered as a moral-ethical position to now be largely conceived as an object that can be regulated through standards promulgated in codes of ethics and/or government regulation, and checked on and verified through reviews (Gendron et al. 2006). This new development is a fall out of the aforementioned global financial scandals that has been sweeping across the world in the last twenty years.

Theoretical framework

Resource Based Thinking (RBT)

The theoretical framework underlying this research is the Resource-Based Thinking (RBT), which states that the company and its employees control an enterprise's resources. According to Barney (1991), Rodriguez and Diaz (2008) and McIvor (2009), the resources being referred to include business

processes, organizational characteristics, aptitudes, information, and knowledge. It also involves the firm's ability to explore and utilize all of its resources to achieve competitive advantage over its business rivals.

The argument of the Resource Based Thinking as expounded by Prahalad and Hamel (1990) and Winter (1998), is that the more limited the basic resources of a business entity, the greater the tendency for the firm to rely on external expertise to overcome this deficiency. According to this approach, a firm should concentrate on those operations that constitute its core competences and outsource the rest of the activities (Rodriguez & Diaz, 2008; Prahalad & Hamel, 1990; Quinn & Hilmer, 1994; Venkatesan, 1992; Quinn, 1999; McIvor, 2009).

This theory therefore supports that organizations should contract their internal audit functions in order to overcome the deficiencies of constrained resources. This theory also supports the corporate entity benefitting from the professional expertise of the external auditor to whom internal audit functions would be outsourced. Furthermore the theory is in support of organizations that claim internal audit functions not to be one of their core operational activities. However, the issue with the proposition of this theory is that it fails to consider the negative implications of corporate entity's outsourcing practice on the quality of work to be done by the auditor. It may be argued that when the auditor of an entity takes up internal audit functions in addition to his attest functions, the auditor may be constrained in terms of manpower, especially now that he needs to split his staff to reduce the independence impairment perception.

Empirical Review

Geiger, Lowe and Pany (1999) reports that previous studies have found that the separation of outsourcing and audit personnel has not only reduced independence apprehension or worries but occasionally has resulted in the highest perceptions of auditor independence, financial statement reliability, and credit/investment decisions. This study therefore expects that a similar separation of personnel performing attest functions from those performing outsourced internal audit functions might also result in positive independence perception by stakeholders. Though the issue of separation of personnel has been a highly debated topic, no benchmark has been established as to the personnel within the accounting firm who are allowed to perform the outsourced internal audit functions. This is probably one of the areas where the professional bodies like the Institute of Chartered Accountants of Nigeria (ICAN) and Association of National Accountants of Nigeria (ANAN) may have to make their input in differentiating between individuals assigned to the financial statement audit engagement and those performing the outsourced internal audit.

Studies conducted by Lowe et al. (1999) centered on personnel arrangement in internal audit functions outsourcing as a proposition of possible solution to the joint provision of services dilemma. It is often referred to as experimental or behavioral study. Other studies in the same direction are Swanger and Chewning (2001), Hill and Booker (2007), and Abbott et al. (2007). Similar to Pany and Reckers (1984) and Lowe and Pany (1995), these authors investigated bank loans officers' perceptions of

external auditors' independence under five different scenarios, including: (1) joint provision of the conventional external audit and outsourced internal audit to the same client by the same Audit firm using different personnel team and (2) the provision of the two types of services by two distinct audit firms. Surprisingly, Lowe et al. (1999) found that an external auditor's independence was perceived as better (perceived as not impaired) when the same Audit firm performed jointly both services (score = 7.39 on an 11-point scale) than when two distinct firms performed the external audit and the outsourced internal audit respectively (score = 6.71 on an 11-point scale).

In contrast however, Swanger and Chewning (2001) found mean independence variables significantly higher when the internal audit was outsourced to a different Audit firm than when the same Audit firm performed jointly both functions. Specifically, analysts in Swanger and Chewning (2001) thought that independence in appearance was significantly better (not perceived impaired) under a two-firm scenario (score = 7.64 on an 11-point Likert scale) than under a single firm scenario (score = 6.43 on an 11-point scale). In the same behavioral perspective, but concentrating rather on non-governmental establishments, Hill and Booker (2007) used functioning members of state boards of public accountancy as proxies for regulators. They found a significant negative difference in perceived auditors' independence when the same Audit firm is providing jointly external audit and internal audit to the same non-governmental client without separate personnel team.

In an attempt to address this staffing issue and assess whether shareholders and other interested parties contrastingly view engagements with different staffing arrangements, this study therefore examined the following related research issue concerning external auditor involvement with a client: Does the distinct separation of individuals within accounting firm that performs the attest functions from those that perform the outsourced internal audit affect stakeholders' opinion of auditor independence?

Methodology

Population of the Study

The population of this study consists of all staff and personnel of seven-selected categories of people in Nigeria as at the time of the survey. The seven selected groups are: Academics, Financial Analysts, Auditors, Bankers, Investors, Corporate Managers and Regulators. The choice of the population is informed by the nature of the study and the need to target groups that are knowledgeable and well informed about the subject matter, which the chosen population represents.

The various population of this study consists of Heads of Department of Accounting or all Federal Universities in Lagos Universities of Lagos; seven respondent groups were as follows

The population of the academic respondents consisted of all heads of department of Accounting of the three universities in Lagos, Abuja and Kano made up of sixty-eight Professors and Doctors.

The Financial Analysts respondents' population consisted of all senior financial analysts of various print and electronic media who were registered with the Nigerian Stock Exchange which number is put at sixty.

For the auditor group respondents, the population consisted of two hundred and eighty audit partners and managers from seven hundred auditing firms in Lagos, Nigeria

The population of the bankers' respondents group derived from their annual reports, consisted of 62 Executive Directors from 19 deposit money banks listed at the Nigerian Stock Exchange.

The population of the investors group consisted of all shareholders who own more than five percent equity shares in the 128 listed companies that were active on the Nigerian Stock Exchange as at July 2017 estimated at 170.

The managers' group population was made up of all Financial and Human Resources Managers from 128 listed and active companies at the Nigerian Stock Exchange (NSE) estimated at 164.

Regulators' respondents' population consisted of all Directors of the following regulatory bodies whose activities affect the auditing profession: the Institute of Chartered Accountants of Nigeria, Nigerian Stock Exchange, Securities and Exchange Commission (SEC), Corporate Affairs Commission (CAC) and Chartered Institute of Bankers of Nigeria (CIBN). The population of the regulator respondents was put at 59.

Sampling Technique and Sample Size of the Study

In this study, samples were drawn from the identified target population based on a statistically determined, efficient sample size so as to estimate some parameters of the population. Each group of respondents was covered in the sample selection. Moreover, the sampling design is stratified and purposive sampling. In stratified random sampling, the population is divided into a number of sub populations called strata. Samples of predetermined sizes are drawn independently from each stratum by simple random sampling. Purposive sampling involves picking samples that are knowledgeable about the area of research and would be able to give data, which would be useful.

Furthermore, the necessity of stratification is due to convenience and increase in precision of survey results. Thus, each of the seven categories of respondents under study was treated as a stratum. Since a stratified sample consists of units selected separately from each stratum, such a sample is expected to be better representation of the whole population than a simple random sample selected from the entire population. The heterogeneous nature of the population units made this approach appropriate as a simple random sampling technique may omit some elements of a particular target group. Thus, each of the seven categories of respondents was assessed on the effect of internal audit functions outsourcing on the independence of the external auditors from different perspectives. The following table summarizes the sample size allocation in this stratified random sampling.

In order to obtain the most efficient and representative sample for this research, the following Taro Yamane's formula for sample size determination was employed.

$$n = \frac{N}{1 + N(e)^2}$$

Where, n=minimum sample size required, N = population size; 1 = constant while (e) represents the margin of error usually at 5% level of significance. Let us use the population of the academic group to illustrate the determination of the sample size.

$$n = 68 / 1 + 68\{0.05\}^2 = 58.12. \text{ This sample size was scaled down to 50 for convenience}$$

The other groups' population was used in computing their various sample sizes. The total sample size computation of this study using Taro Yamane's formula produced a sample size of 734 respondents, but for the sake of convenience the sample size was trimmed down to a manageable number of 550

Reliability of the Instrument

The reliability of a research instrument is best measured by the Cronbach's alpha statistic. Cronbach's alpha is designed as a measure of internal consistency; that is, a test of whether all items within the instrument measure the same thing. Alpha is measured on the same scale as the Pearson's product-moment correlation coefficient and typically varies between 0 and 1. The closer the alpha is to 1, the greater the internal consistency of items in the research instrument.

In this study, there are 18 construct question items in the questionnaire to assess the implication of separating staff of an outsourced audit firm on the independence of the external auditor in Nigeria. Coefficient alpha is the approximate average correlation between all pairs of question items. The formula that determines Cronbach's alpha is simple and made use of the number of variables or question items in the scale (N), variances (S^2) and the average pairwise covariance between pairs of items (S_{ij})

$$\alpha = \frac{N^2 S_{ij}}{\sum S_{ij} + \sum S^2}$$

Based on the formula of alpha, a rule that applies to most situations for the interpretation of reliability by alpha, which is mostly acceptable is as follows.

Table 1: Rules for Reliability test

Cronbach Alpha	Remark
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

The details of the computations of the Cronbach's alpha based on a study with a sample size of 50 are summarized in table 3 below

Table 2: Reliability Statistics

Cronbach's Alpha	Sample size	Number of Items
0.882	50	18

From table 2 above, the Cronbach's alpha of 0.882 implies that the instrument is reliable. Hence, the instrument has good reliability as far as internal consistency is concerned.

Validity of the Instrument

Validity of the instrument means the ability of the questionnaire to capture exactly the data it was designed to collect so as to be able to address the hypothesis. The content of the questionnaire, after scrutiny by relevant experts, was validated by the researcher through a pilot survey based on a random sample of size 50 using Kendall's coefficient of concordance. Kendall's coefficient of concordance (W) is a measure of the agreement among several (m) quantitative or semi quantitative variables that are assessing a set of objects of interest. If the test statistic ' W ' is 1, then all the survey respondents have been unanimous and each respondent has assigned the same order to the list of objects concerned. If however, ' W ' is 0, then there is no over all trend of agreement among respondents and their responses may be regarded as essentially random.

The Kendall's coefficient of concordance in our study gave a value of ($W=0.42, p=0.00$). This shows some level of reasonable agreement among the various respondents giving the heterogeneous nature of the groups; hence, the questionnaire has both the desired face and content validity.

Method of Data Analysis

The research is descriptive in nature and generally evaluates and assesses issues of perception of auditor independence in Nigeria. In order to effectively conduct a valid analysis in the presentation and analysis of data collected on the research field, the researcher used descriptive statistical methods. However, in order to determine the effects of the selected determinant factor on auditor independence, econometric techniques were employed, using the Qualitative Response Modeling technique. This method is applied since the responses from the questionnaire generated qualitative data which is obtained by taking the average responses of the respondents based on the subsections in the questionnaire. The Ordinary Least squares (OLS) method breaks down the estimation of such data set since the probability distribution of the dependent variable is not continuous. The particular qualitative response modeling technique applied is the Logit method, which estimates the relationships using the Maximum Likelihood approach.

The Probit Regression Method

According to Greene (2003), the Probit regression model is a type of regression analysis used for predicting the outcome of a binary dependent variable (a variable which can take only two possible

outcomes, e.g. "yes" vs. "no" or "available" vs. "not available") based on one or more predictor variables. Logistic regression attempts to model the probability of a "yes/success" outcome using a linear function of the predictors. Specifically, the log-odds of success (the logit of the probability) is fit to the predictors using linear regression. Logistic regression is one type of discrete choice model, which in general predicts categorical dependent variables either binary or multi-way.

Robustness Tests

In order to ensure that the estimated equations are standard and stable across the various cross section in the study, various robustness checks are provided. These are the multicollinearity test, which helps to ensure that independent variable in the estimates is not highly related; the heteroskedasticity test which ensures that the variances among the different cross section in the observations are constant; and the CUSUM of Squares test.

Multicollinearity Test

In a multivariate regression analysis of this nature, there is the probability that the explanatory variable may be very highly intercorrelated which could undermine the regression result by making an otherwise significant variable insignificant. When the explanatory variable has a Correlation coefficient very close to 1, multicollinearity is said to exist, hence the study estimated the extent of multicollinearity using the Variance Inflation Factor (VIF). If the VIF of a variable exceeds 10, it implies that such a variable is highly collinear and this happens when R² exceeds 0.90.

Heteroscedasticity Test

The problem of heteroscedasticity exists when the residual of a regression follows a certain pattern or trend and are not conditionally normally distributed. Linear regression analysis assumes that the variance of all squared error terms is the same. That is there is homoscedasticity or constant variance. The absence of homoscedasticity (Heteroscedasticity) describes a situation where the variance of the error terms is not equal, and in which the error terms may be larger for some observations or periods of the data than for others. The Breusch-Pagan/Godfrey test was employed to test for the problem of heteroscedasticity. The decision rule for Breusch-Pagan/Godfrey test is to infer absence of heteroscedasticity (which implies that there is homoscedasticity) when the corresponding probability value of the observed adjusted R-squared (R²) is greater than 5%. These tests are used to support a researcher's argument that a given specification has no major specification error (Shaibu, 2012). The Breusch-Pagan/Godfrey test is given as:

$$BP = \frac{1}{N} (u-ui)' Z(Z'Z)^{-1} Z' (u-ui)$$

where $u = e^1, e^2 \dots e^N$.

CUSUM of Squares Test

The CUSUM of squares test (provided by Brown, Durbin & Evans, 1975) is based on the test statistic:

$$S_r = \frac{\sum_{r=k+1}^t W_r^2}{\sum_{r=k+1}^T W_r^2}$$

The expected value of under the hypothesis of parameter constancy is:

$$E(S_t) = (t - k) / (T - k)$$

which goes from zero at $t = k$ to unity at $t = T$. The significance of the departure of S from its expected value is assessed by reference to a pair of parallel straight lines around the expected value. The CUSUM of squares test provides a plot of S_t against t and the pair of 5 percent critical lines. Any movement outside the critical lines is suggestive of parameter or variance instability. The cumulative sum of squares is generally within the 5% significance lines, suggesting that the residual variance is somewhat stable (Johnston & DiNardo, 1997).

Model Specification

A simple regression model is used to identify the relationships between audit independence and the independent variable based on the survey method in the study. In this data survey analysis, the categories of respondent are taken into cognizance. Hence, the modeling procedure involves estimation of the equations for the whole sample as well as for the response groups. Given the nature of the data derived for the dependent variable (i.e., either audit independence or no audit independence), the Qualitative Response model is adopted in the estimation of the relationships. Here, we estimate the probability of audit independence given the perception of the respondents. Therefore, the baseline model for the primary data analysis may be specified as:

$$Pr[AUDIND] = f(\text{SoS})$$

Where AUDIND = auditor independence (which is captured as a binary indicator taking the value of 1 when the perception is "auditor independence" and 0 when the [perception is "no auditor independence").

SoS = Separation of Staff

It should be noted that the determination of the variable above is based on qualitative data obtained from the questionnaire. Following Bieren (2008) and Green (2004), the Maximum Likelihood econometric form of the model is written as:

$$Pr[AUDIND_j = 1 | X_j] = \frac{1}{1 + \exp(-\alpha_0 - \beta_0 X_j)}$$

$$\begin{aligned} Pr[AUDIND_j = 1 | X_j] &= 1 - Pr[AUDIND_j = 0 | X_j] \\ &= \frac{\exp(-\alpha_0 - \beta_0 X_j)}{1 + \exp(-\alpha_0 - \beta_0 X_j)} \end{aligned}$$

where the X_j is the explanatory variables and α_0 and β_0 are unknown parameters to be estimated.

Results And Discussion

This section of the study presents the results, analysis and interpretation of the panel data collected for the purpose of testing the models developed in this study. In line with the methodology, two broad forms of analyses are done on the data. The first set comprises various regression analyses to determine the

determinants of auditor independence based on responses from the research instrument. This is done using data from the seven different response groups as well as all the responses pooled together. This allows for checks on the individual robustness of the results obtained. The second set of analyses involves testing the single hypothesis of the study on the basis of the pattern and extent of relationships that exist between auditor independence and separation of staff. The analysis therefore involves the use of both statistical and econometric methods in order to provide a rich background for the investigation.

Descriptive statistics show the summary of data and other basic characteristics within the series. The summary statistics for the variables in the study are presented for individual variables for the combined response groups of the samples in the study in Table 3. The average response for perception of auditor independence is 0.61. This value is closer to 1 (which is an indicator of auditor independence) than 0 (which is an indicator of absence of auditor independence). This thus shows that the responses generally perceive that for the firms they consider, there is more presence of auditor independence than there is absence of it. The median value of 1 shows the level of similarity among the respondents' options.

The standard deviation for the AUDIND variable is 0.49, which is less than the mean value. This shows that across the individuals in the sample, there was not much variability in their perception of auditor independence. The skewness value is low and close to zero. The negative value of the skewness indicator shows that more respondents agreed that there was auditor independence than the mean value indicated. The kurtosis of the dependent variable is also low at 1.2.

For the independent variable, it should be noted that the responses were based on the Likert scale.

Table 3: Descriptive Statistics

	Mean	Median	Max.	Min.	S.D.	Skew	Kurt.	J-B	Prob.
AUDIND	0.61	1	1	0	0.49	-0.45	1.20	92.58	0
SOS	2.26	2	5	1	1.21	0.86	2.82	68.94	0

A special statistic of interest in this study is the Jarque-Berra (J-J) coefficients in the summary statistics. It shows the degree of normality, and hence the heterogeneity of the data series. Highly heterogeneous series are the precursors for cross-sectional estimation tests. The J-B values for each of the variables in all the groups are very high and pass the significance test at the 1 percent level (since their respective probability values are zero). This indicates that the assumption of normality in the data cannot be accepted: the series are non-normally distributed. The implication of this is that the series across individuals or groups are heterogeneous and would actually require a cross-sectional estimation test.

In Table 3, the descriptive statistics variables are presented. This matrix is essential for three reasons. It helps to further examine the background behavioural patterns in the data series in the study, provide background relationship checks for the variables, as well as show the initial pattern of multicollinearity testing for the variables. The unconditional or ordinary correlation analysis is conducted on the data and analyzed. The result from Table 4 shows that there is a positive correlation between auditor independence and separation of staff. The correlation for SoS is significant at the 1 percent level. This indicates that auditor independence v separation of staff is perceived to move in the right direction.

Table 4: Correlation statistics

Variable	AUDIND	
SOS	Cor.	0.19
	t-val	4.58
	p-val	0

Table 5: Regression Results for Perception of Auditor Independence by different groups of respondents

Variable	Academia N = 50			Analysts N = 50			Auditors N = 150			Investors N = 100		
	Coeff.	Z-Stat.	Pr.	Coeff.	z-St.	Pr	Coeff.	Z-Stat.	Pr	Coeff.	Z-Stat.	Pr
SOS	0.242	1.66	0.1	0.566	2.92	0	0.297	3.06	0	0.187	1.43	0.1
H-L Statistic		9.63	0.3		12.4	0.13		6.0	0.6		4.42	0.8
Andrews Statistic		21.5	0.0		28.0	0		15.5	0.1		33.5	0

Table 6 Regression Results for Perception of Auditor Independence (ctd)

Variable	Bankers N = 50			Managers N = 100			Regulators N = 50		
	Coeff.	z-Stat.	Prob.	Coeff.	z-Stat.	Prob.	Coeff.	z-Stat.	Prob.
SOS	0.455	2.78	0.01	0.053	0.44	0.66	0.461	2.18	0.03
H-L Statistic		12.0	0.15		9.36	0.31		6.245	0.62
Andrews Statistic		30.4	0		31.0	0		23.1	0.01

The contribution of the explanatory variable to auditor independence in an organization is determined by considering the coefficients of the variable in terms of signs and significance. The coefficients of separation of staff fail the significance test at the 5 percent level. This shows that for the academia results, separation of staff is not a significant element in auditor independence as revealed in table 6.

For the analysts, the result as presented in table 6 shows that Separation of staff is significant in the model. This implies that analysts consider separation of staff as an important factor that explains auditor independence in an organization. The coefficient of Separation of staff is positive; suggesting that separation of staff has positive impact on auditor independence for the analysts. In the auditors' results, separation of staff is significant at the 1 percent level, since the probability values are all zero. This indicates that the variable is a strong factor that determines auditor independence, as far as the auditors are concerned.

In order to obtain the generalized outcome for the regression analysis, the pooled data from all the groups is used for the estimation of the results. The results are shown in Table 6. The goodness of fit statistics are impressive, with the H-L and Andrews statistics both passing the significance test at the 5 percent level. This reveals that the model has a good fit for the relationships being estimated. Moreover, the independent variables are actually closely related with dependent variable.

The contribution of the explanatory variable to the behaviour of auditor independence in an organization is shown by their respective coefficients. In the results, it can be seen that separation of staff passed the significance test at the 1 percent level. Staff separation therefore has a significant positive coefficient, which reveals that when there is separation of staff in the organisation, auditor independence is enhanced.

Robustness Checks

In order to check for the robustness of the estimates in the study, multicollinearity heteroskedasticity tests are conducted and the results are presented.

Multicollinearity test

The regression models used in the study are numerous with outcomes that may measure the same effects. Multicollinearity test are therefore conducted on the models to ensure that the explanatory variables are not excessively collinear. Apparently, high collinearity tends to amplify the standard errors of the estimates and render the reliability of the estimated model quite low. In Table 7, the result of the multicollinearity test for the model is presented. In the result, only the centred variance inflation factors (VIF) for the variable are reported.

Table 7: VIF Values for Multicollinearity Tests

	Academia N = 50	Analysts N = 50	Auditors N = 150	Investors N = 100	Bankers N = 50	Managers N = 100	Regulators N = 50
SOS	3.68	4.79	3.61	3.48	3.58	3.63	4.05

Heteroscedasticity test

Another robustness test conducted for the models is the test of heteroscedasticity given that data used are cross-sectional. Woodridge (2004) has noted that such investigation gives direction on the appropriate estimation technique to be used in emotion. Apparently, a highly heteroscedastic set of

observations may lose efficiency properties when estimated with the ubiquitous OLS technique. It should be noted that the Breusch-Pagan-Godfrey tests are used for the analysis. Only the F-value for the test results for each of the models in the study is reported in Table 9. The F-statistics for all the results (apart from that of the pooled data and regulators) all have probability values less than 5 percent. This means that the null hypotheses of no heteroscedasticity for each of the models are accepted. The non-significance of the test statistics indicates the presence of homoscedasticity in data series for each of the models. This again, confirms the robustness of the estimates from the models.

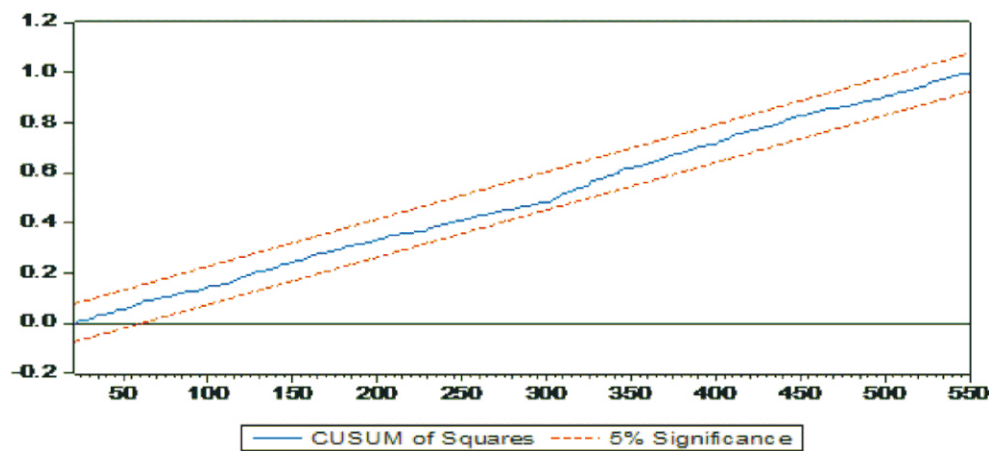
Table 8: Test of Heteroskedasticity Results

<i>Model</i>	F-statistic	Prob.
<i>Academia</i>	1.583	0.18
<i>Analysts</i>	1.355	0.26
<i>Auditors</i>	0.662	0.65
<i>Investors</i>	1.062	0.39
<i>Bankers</i>	1.477	0.22
<i>Managers</i>	0.736	0.60
<i>Regulators</i>	2.905	0.02
All	36.85	0

The CUSUM of Squares Test

This test shows the stability of the data set across the cross sections in the sample. This helps to eliminate doubt about possible outlier regression for any of the groups in the sample. The chart in Figure 1 shows the result of the CUSUM of squares test. It can be seen that the CUSUM of squares line for the result lies entirely within the dotted 5 percent significance bound line throughout the chart. This reveals that the estimation is stable within the analysis.

Figure 1: CUSUM of squares Result



Tests of hypothesis

In this section, the working hypothesis of the study is tested based on the outcome of the results from the estimated model of the study. The model in this regard refers to the model estimated using the pooled data for the overall groups combined. The hypotheses are tested using the coefficients estimated in the model in terms of significance from the z-values.

There is no significant relationship between the separation of audit firm staff involved in internal audit functions outsourcing and amelioration of auditor's independent impairment perception.

For the working hypothesis, focus is on the coefficient of SOS in the model result. The coefficient is also positive and the z-value is high at 0.178. Also note that the z-value is zero, indicating that the coefficient passes the significance test at the 1 percent level. Thus, the null hypothesis is rejected with the implication that a significant relationship exists between separation of staff of an audit firm and the independence of the external auditor. More separation of staff between audit firm and the organization tends to enhance auditor independence in the organization.

The study also showed that a significant positive relationship exists between separation of staff of an audit firm and the independence of the external auditor. An auditing firm that engages in separation of staff between those who perform attest functions and those who perform outsourced internal audit functions tends to enjoy a better auditor independence perception. Therefore, the separation of staff between those who perform outsourced internal audit functions and those that perform attest functions promotes the independence of the external auditor. The idea of staff separation is to create the impression where the two sets of staff would see themselves as coming from different accounting firms and therefore carry out their respective assignments without bias. The argument that led to the hypothesis of staff separation came about when some people believe that separating the staff would seem as if there are two different accounting firms handling the attest functions and internal audit functions respectively. The result of this study is in agreement with the study conducted by Lowe et al. (1999) which centered on personnel arrangement in internal audit functions outsourcing as a proposition of possible solution to the joint provision of services dilemma. Surprisingly, Lowe et al. (1999) found that an external auditor's independence was perceived as better (perceived as not impaired) when the same Audit firm performed jointly both services (score = 7.39 on an 11-point scale) than when two distinct firms performed the external audit and the outsourced internal audit respectively (score = 6.71 on an 11-point scale).

In contrast however, Swanger and Chewning (2001) found the independence to be significantly higher when the internal audit was outsourced to a different Audit firm than when the same Audit firm performed jointly both services. Specifically, analysts in Swanger and Chewning (2001) thought that independence in appearance was significantly better (not perceived impaired) under a two-firm scenario (score = 7.64 on an 11-point Likert scale) than under a single firm scenario (score = 6.43 on an 11-point scale). This result is also in conformity with the principles of the Resource Based theory, which supports the conservation of resources.

Conclusion and Recommendations

From the findings of this study the following conclusions can be reached.

Nigerian business entities outsource their internal audit functions to their external auditors as a business-restrategizing plan. Furthermore, outsourcing of internal audit functions by client organizations to their own external auditor has become a common feature of today's businesses. It can further be concluded that internal audit functions outsourcing as a whole has not been found to be negative, as outsourcing internal audit functions has become a global practice by most corporate entities. The result of the study leads us to the conclusion that separation of staff on internal audit functions outsourced has a positive effect on perception of auditor's independence.

This study therefore recommends the separation of staff of an accounting firm between those who perform attest functions and those that perform outsourced internal audit functions, as this would likely improve the perception of auditor independence. The implication of this is that staff should be specifically engaged to perform internal audit functions for client organizations.

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