

DETERMINANT OF AUDIT EFFICIENCY IN THE PUBLIC SECTOR IN NIGERIA

TERU, Susan Peter, PhD¹ & USMAN, Tanimu Gadi²

^{1&2}Department of Accounting, Taraba State University, Jalingo

Abstract

The study evaluates the determinants of audit efficiency of public sector in Nigeria. The determinant studied are management support, competent of internal auditors, availability of information technology and organizational independence. The study adopts descriptive survey design while ordinal regression was used for the analysis. From the analysis, it was found that management support, competent of internal auditors and organizational independence has a significant effect on audit efficiency however, information technology has no significant effect on audit efficiency. The study recommends that There should be separation of powers between the appointing authority of internal auditors and those in charge of determining their incentives and remuneration so as to ensure total independence of internal auditors.

Keywords: *Determinant, Audit Efficiency, Public Sector*

1.0 Introduction

In every country that is administered in a democratic policy needs to be accountable in its use of public money and in providing efficient, effective and economical service delivery. To achieve those government objectives ensuring audit efficiency were the major mechanism for controlling the use of all scarce resources available in the public sector (Nordin & Gansberghe, 2003). Public sector offices are part of the public body which is partly or wholly financed by government budget and concerned with providing basic government services to the whole society (Ministry of Finance and Economic Development (MoFED, 2004). The compositions of the public sectors are varied by their function and purposes, but in most cases, they are designed in order to enable the public sectors to achieve their goals. In order to achieve these goals, there must be good monitoring mechanism such as internal audit.

Audit is an independent inspection of an entity where the auditor delivers unbiased results about the appropriation of funds by underlying organization (IFAC, 2001). The first and foremost goal of auditing is to bring transparency and accountability in public or private sector. Audit serves as a tool for making public and private entities responsible and accountable for their duties. Audit brings accountability, transparency, equity and integrity in operations of organizations. According to Karen and Stephen (2003), there is audit efficiency when the auditor bears responsibility for fraud detection. Moatasem and Abdulqawi (2020) look at efficiency as the allocation of capital, human, physical and information resources in such way that the output is maximized for any given set of resource inputs, or input is minimized for any given quantity and output quality.

The development in internal audit profession brings change in the scope and functions of internal audit customers. Previously internal auditors were seen just as an assistant of accountant's and an external auditor but recently internal audit is certainly considered an independent profession, which is playing a significant role in the management of organizations. Internal Audit is part of the internal control system put in place by management to measure, analyzed and evaluates the

efficiency and effectiveness of other controls established by management in order to ensure smooth administration, cost minimization, ensure capacity utilization and maximum benefit derivation (Unegbu & Obi, 2012). Internal audit determines the reliability, reality, and integrity of financial and operational information that comes from different organizational units, on which appropriate business decisions at all levels of management are based. Internal audit is an additional safeguard for proper financial control in the public sector (Ljubisavljevic & Jovanoyi (2011).

Asare (2008) asserts that, in some organizations, the scope of modern internal auditing has been broadened from financial issues to include value for money, evaluation of risk, managerial effectiveness and governance processes. This helps an organization accomplish its objectives by bringing systematic, disciplined approach to evaluate and improve the effectiveness of risk management control, and governance processes. De Anglo (1981) opines that it is necessary to maintain the audit efficiency because it helps to minimize the agency problem in public sector. Agency problem arises when the interests of ministries do not match with the interest of public and government. Wheelen and Hunger (2002) argued that agency problem arises when management is not willing to take responsibility of where they have directed funds to achieve the desired goals. According to Institute of Internal Auditor (2006), the principal-agent relationship exists in public sector. Government is an agent of public because it collects funds from public in the form of taxes. Then, ministries act as an agent of government because they receive funds from government for public welfare. In this dual principal agent relationship, government auditors exist on behalf of government to oversee the working of ministries. So, the audit efficiency/proper is a mechanism to strengthen/weaken the public trust.

Despite the significance of audit efficiency in either public or private sector, it is determined by many factors such as management's support, competent of internal auditors, availability of information technology and organizational independence. The success of Internal efficiency will depend on the strength of management's support for the auditing process. They have to accept the fact that the Internal Audit process is just as critical and important activity as any other process within the organization (Baharud-din & Serjana, 2014).

Competency determines the efficiency of the auditor in setting a systematic and disciplined approach to evaluate and improve the effectiveness of the organization's activities and financial management as well as governance processes. According to Millichamp (2002), management established internal audit system, either directly or by means of external consultants. It follows that management is responsible for designing controls in order to carry on the business of the enterprise in orderly and efficient manner, ensure adherence to management policies, safeguard its assets and secure as far as possible the completeness and accuracy of the records.

There are depths of literatures on the subject matter such as Baharud-din and Serjana (2014), Ahmed (2016), Awinbugri and Daniel (2019), Joshi (2020), Kruger and Kearney (2002), Moatasem and Abdulqawi (2020). However, their studies are from other nations with different public financial management. Also, despite the fact that some of the studies were current, their scope in terms of period is obsolete which renders the findings obsolete also. This cannot aid in policy formulation due to passage of time.

Also, some of the previous studies does not evaluate the combined determinants (management's support, competent of internal auditors, availability of information technology and organizational independence) that this study intends to studied. With this, this study will improve on some of the previous literatures.

The main objective of the study is to examine the determinant of audit efficiency in the public sector in Nigeria with the following specific objectives:

- i. examine the extent to which management's support determine audit efficiency in the public sector in Nigeria.
- ii. evaluate the effect of competent of internal auditors on audit efficiency in the public sector in Nigeria.
- iii. assess the effect of availability of information technology on audit efficiency in the public sector in Nigeria.
- iv. ascertain how organizational independence determines audit efficiency in the public sector in Nigeria.

2.0 Literature Review

2.1 Determinant of Audit efficiency

Management Support

Management support is expressed in terms of supporting the auditing process by fulfilling the necessary resources, finance, transport if required, providing training, introducing auditors with new technology and procedures, budgeting funds for certification and other facilities that facilitate the internal auditing works. According to Ahmet (2021), Management support for internal auditing is vital for the recognition and appreciation of internal audit practices within an institution. Management support is crucial to the operation of internal audit because other determinants strongly depend on it.

The support and commitment of management also have the certain impact to make sure Internal Auditor is functioning effectively. The success of Internal Auditor function will depend on the strength of management's support for the auditing process. They have to accept the fact that the Internal Audit process is just as critical and important activity as any other process within the organization (Baharud-din & Serjana, 2014).

International Standards of Internal Auditing (ISIA), state that internal auditors should be supported by the senior management and board of directors to effectively fulfill their responsibilities. Management support has a far-reaching consequence on IA effectiveness in organizations. For example, Mihret and Yismaw (2007) in their case study of IA effectiveness on public sector shows that the component of management support consists of the response to audit finding and the commitment to strength internal audit which has significance influence on IA effectiveness.

The management support is almost crucial to the operation and internal audit; because all other determinants of IA effectiveness derive from the support of top management, given that hiring proficient IA staff, developing career channels for IA staff, and providing organizational independence for IA work are the results of decisions made by top management (Cohen & Sayag, 2010).

The head of internal audit unit should encourage senior management to be involved in internal audit plan and provide them with a detailed plan of internal audit activities indicating the required resources, including significant interim changes, for senior management to review and approve for further progress with other deciding authorities in the company" (Sobel & Riddle, 2017).

Competent of internal Auditors

According to Baharud-din and Serjana (2014), competency relates to the ability of an individual to perform a job or task properly base on the educational level, professional experience and the effort of the staff for continuing professional development. Auditors' competency determines the effective auditing in the organization. It contributes to the ability of the auditors to perform the systematic and discipline audit approach to improve the effectiveness of Internal Audit. Competency determines the efficiency of the auditor in setting a systematic and disciplined approach to evaluate and improve the effectiveness of the organization's activities and financial management as well as governance processes. The international standards for the professional practice of internal auditing (ISPPA) necessitate that an internal auditing unit of an institution should be independent and that internal auditors be objective while performing their internal auditing activities (Comfort & Oludayo, 2021). Performance management ability audits include determining whether the auditee has the ability to handle its processes and services efficiently and effectively. (Hell stern & Gerd-Michael, 1991).

Information Technology

This century, technology has a rapid development. It is not doubtful that entities will use more technology now and in the future to management and audit. For instance, Krishna (2011) found that "effective use of audit technology tools is critical to the success of audit activity", which will definitely improve the internal audit quality and eventually affect the effectiveness of IA. In addition, the study of Krishna (2011) found that "effective use of audit technology tools is critical to the success of audit activity", which will definitely improve the internal audit quality and eventually affect the effectiveness of IA.

On the other hand, Ahmi and Kent (2013) stated that technological availability could also include both human resources and IT infrastructure. Additionally, Advances in information technology has led to a close collaboration between IT auditors and financial auditors resulting in a higher demand for internal auditors with ERP know-how (Héroux & Fortin, 2013, Kanellou and Spathis, 2011). New IT systems enabled internal auditing to provide management with more relevant information at lower cost and without delay by automated processes, real time facilities and integrated internal auditing (Shin et al., 2013; Sobel & Kapoor, 2012) Therefore, IT will definitely play an important role in influencing the effectiveness of IA.

Attwood and Stein (1986) stated that every business has some kind of accounting system by which transactions are processed and recorded. Millichamp (2002), further stipulates that management established internal audit system, either directly or by means of external consultants. It follows that management is responsible for designing controls in order to carry on the business of the enterprise in orderly and efficient manner, ensure adherence to management policies, safeguard its assets and secure as far as possible the completeness and accuracy of the records. The above responsibility stems from the fiduciary responsibility of management. Brusca and Manes-Rossi (2018) state that auditing guarantees the quality and reliability of public accounting systems

Organizational Independence

Internal audit should report directly to the top management & audit committee of public sectors. A copy of the report should be submitted to the Ministry of Finance and Economics Development to follow up on reported audit findings & recommendations. The audit activity should have

sufficient independence from those it is required to audit, so that it can both conduct & perceived to conduct its work without interference (the role of auditing in public sector Governance, 2nd edition, 2012). Internal audit activity should be free from interference in determining the scope of internal auditing, performing work, and communicating the results.

Independence has no one single meaning and interpretation across the people; However, for the purpose of the case study independent refers to the concept of being free from any management influence while internal auditors perform audit activities and issue report (Ahmed & Tayloe, 2009; Bely, 2007; MoFED, 2004). Individual auditors should have an impartial, unbiased attitude, characterized by integrity and an objective approach to work and should avoid conflict of interest. They should not allow external factors to compromise their professional judgment. Internal auditors should declare any conflicts of interest arising from audit work (MoFED, 2004).

Independence is fundamental to the reliability of auditor's reports. Those reports would not be credible, and investors and creditors would have little confidence in them, if auditors were not independent both in fact & appearance. The assurance service provided by auditors derives their value and credibility from the fundamental assumptions of independence of mind and independence in appearance (Wines, 2012; Stewart and Subramanian, 2010). To maintain objectivity, to increase the reliability of information, to be free from unacceptable risk of material bias, and to issue reasonable and credible audit opinion, auditors should be independent (IIA, 2001). Independence in fact exists when auditors are actually able to act with objectivity, integrity, impartiality and free from any conflict of interest. While the concept of independence in appearance is the auditor should be perceived by the others (the public or other third party) to be independent. In this case, conflict of interest will also exist when a reasonable person, with full knowledge of all relevant facts and circumstances, would conclude that the auditor, or professional member of the audit team, is not capable of existing objective and impartial judgment in relation to the conduct of the audit the audited body. Auditors should be sufficiently independent from those they are required to conduct their work without interference. Coupled with objectivity, organizational independence contributes to the accuracy of the auditor's work and gives employers confidence that they can rely on the results and the reports (Cohen & Sayag, 2010). However, Hellman N. (2011) suggested that CFOs seek to influence audit planning, particularly with regard to internal controls and the selection and scope of entities subject to audit; and this in return impairs the independence of internal auditors.

Audit efficiency

To determine the internal audit efficiency, it is necessary to understand the term "audit". According to International Federation of Accountants (IFAC), audit is an autonomous inspection of an entity where the auditor delivers unbiased results about appropriation of funds by underlying organization. The Institute of Internal Auditors (IIA, 2010) defines internal audit (IA) efficiency as "the extent (including quality) to which established objectives are achieved."

Moatasem and Abdulqawi (2020) look at efficiency as the allocation of capital, human, physical and information resources in such way that the output is maximized for any given set of resource inputs, or input is minimized for any given quantity and output quality. This refers to the relationship between the quality and quantity of goods and services provided and the expense of energy used to manufacture them, in order to achieve the results. The idea of productivity means getting the best out of the resources available. Efficiency finding can be formulated by comparison

with similar operations, with certain ages, or with a model specifically adopted by the organization. Efficiency evaluations may also be focused on factors that are not related to when matters are so complex that standards do not exist.

If auditor maintains integrity and transparency in disclosure of audit findings, the purpose of auditing will be fulfilled. Auditor competency is directly affected by the auditor's integrity itself. The competency, satisfaction and integrity determine the level of audit efficiency (DeAngelo, 1981). Audit is a mode of governance of an entity which took importance after corruption scandals in both the government and private sector (Masood & Afzal 2016). Internal auditors are increasingly expected to cover a variety of responsibilities, including assisting the management to streamline the risk management process. However, quality of internal auditing is of supreme importance in executing those responsibilities (Eulerich & Köhler, 2017).

2.2 Empirical Review

Awinbugri and Daniel (2019) examined the determinants of internal audit effectiveness in Selected Hospitals within the Kumasi Metropolis using qualitative study. Primary data in the form of administration of questionnaire to (60) respondents was used. The discovered that internal audit units of the four selected hospitals were effective in the discharge of their duties and further observed that, the determinants of Internal Audit effectiveness included amongst others (arranged chronologically): Higher salaries and incentives of internal auditors (motivation) with a mean score of 2.10, Organizational Independence also had an average score of 1.77, Effective internal controls scored 1.71 as a third variable of internal audit effectiveness determinant, Adequate internal audit charter and frequent internal audit meetings both came fourth and fifth scoring an average of 1.61 respectively, Competent internal audit staff came sixth with a mean score of 1.35, with last but not least being management support which also scored an average mark of 1.29.

Joshi (2020) assessed the determinants that affect the effectiveness of internal auditing for listed firms in India. A sample of 300 listed companies was drawn. Questionnaires were mailed to the head of audit department, internal audit managers, internal auditor and head of accounts of each company. The overall response rate was 28.3%. The results were derived by applying multiple regression method and the three determinants turned out to be significant. The three determinants are risk-based planning, usage of Big Data and Analytics, and frequency of meetings of internal auditor (IA) with audit committee (AC) respectively. The model explains 42.8% of variations in the dependent variable (IA effectiveness). The study indeed encourages internal auditors to develop their core skills and competencies in the area of risk assessment and Big Data and Analytics for delivering better services to the auditees, the board of directors and the AC members.

The study of Ahmed (2016) ascertained the determinants of internal audit effectiveness. To investigate the effect of Audit Quality, Auditors competency, Top Management Support, Independence of internal audit and Approved Internal Audit Charter on internal audit effectiveness the correlation and regression analysis were used. According to the regression output Audit Quality, Competence of internal audit, Management support, Independence of internal audit and approved Internal Audit Chart were contributed significantly for the internal audit effectiveness.

Taiwo (2019) assessed the internal audit efficiency of public sector in Nigeria with a view of its major determinants. The data used were collected from primary sources of which two ministries were selected using purposive sampling technique because they had almost the same structural and operational characteristics in their internal audit structures. Data gathered were proportionately

stratified through random sampling technique, descriptive statistic and Z-test was used for data analysis. The results of analysis shown that internal audit efficiency has significant effect on the performance of the Nigerian public sector. The results from the respondents to the determinants in the area of public performance on the incidence of irregularities by the appropriate authorities, flaw of audit model and accounting system, inadequacy of the internal control system, non-availability of information technology and non- implementations of routine audit report has contributed to the challenges of internal audit efficiency. Based on the findings on these determinants, internal audit in Nigerian has contribute to the challenges of inefficiency of the internal audit performance in the public sector and the internal audit functions are conducted in conformance with the International Standards for the Professional Practices in Auditing.

Tackie, Marfo-Yiadom and Achina (2016) examine the determinants of internal audit effectiveness in decentralized local government administrative systems of Ghana. Ghana's local government system is structured into metropolitan, municipal, and district assemblies (MMDAs). The study focused on the Ashanti region of Ghana which has the highest number of MMDAs. The motivation for the study is derived from the increased interest in the internal audits of local government units. Using a descriptive survey, the data gathered, through the use of questionnaire, revealed that majority of the internal audit staff of MMDAs in the Ashanti Region of Ghana possess the requisite professional proficiency. Contrary to the perception that audit quality in the public sector is usually compromised, the study revealed that there exists high quality of audit work due to compliance with the international standards on auditing and local audit legislations. Professional proficiency, organizational independence, and career advancement were found to have statistically significant positive relationship with internal audit effectiveness, while top management support was found to have no effect on internal audit effectiveness.

Karrar and Elbashir (2018) examined the determinant of internal audit effectiveness activities in the Sudan public sectors. The data collected using a Likert-Scale type questionnaire were distributed on a sample of the population of the study and filled out by 41 internal auditors and 27 managers. Descriptive analysis, correlation analysis, and multivariate regression model through Excel and SPSS evaluates the relevance between the effectiveness of internal audit department and its five main determinants: (management support, management's perception of internal audit values, organizational independence of internal auditors, placement of adequate and competent internal audit staff, and the presence of approved internal audit charter). The results display that there was a significant positive relationship among the factors analyzed in this study such as management's support and placement of adequate and competent internal audit staff to the internal audit effectiveness

2.3 Stakeholder Theory

Auditing is a medium for the government to send a signal to stakeholders such as international lending and donor organizations that it is a reliable manager of resources. A credible independent audit of government activities helps provide assurance and boosts the confidence and trust of taxpayers, lenders, and donors to make rational decisions (Hay & Cordery, 2016). The audit process is a way of supporting good governance by providing assurance over the reliability of the financial statements and bringing issues of financial malpractice and wasteful spending to the attention of governing bodies (Hay & Cordery, 2016). Goodson and Lapointe (2012) note that audit provides an unbiased assessment of how public resources are managed. It helps public sector organizations achieve accountability and integrity, improve operations, and instill confidence

among citizens and stakeholders. A study commissioned by the Financial Reporting Council (FRC) of the UK finds that stakeholders groups such as financial directors, CFOs, audit firms, accounting bodies, and audit committee chairs who are most closely involved in the audit process show the highest level of confidence in audit (FRC, nd). However, in the absence of an audit, financial statements produced by public organizations may not be considered reliable and credible by stakeholders who lower their confidence levels as well. This does not also show whether public officials are exhibiting ethical behavior in managing the public dollars entrusted to them since there will be no third-party attestation for their activities. Stemming from an agency theory explanation, the voters who are considered the principals can work in interest groups (Kurtenbach & Roberts (1994) or through a legislative process to mandate public organizations to implement an improved accounting system that facilitates audit to monitor the behaviors of public officials.

3.0 Methodology

The study adopts a descriptive survey design. The target population is the employee in the MDAs in Abuja. Specifically, the study looks at audit efficiency in National Primary health Agency Headquarter Abuja. The sample is drawn from the target population of 300. This research adopts the Taro Yamani formulation. The study has an estimated population of 300 staffs from the study area.

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

$$N = \frac{300}{1 + 300(0.05)^2}$$

$$N = \frac{300}{1 + 300(0.0025)}$$

$$N = \frac{300}{1.75} = 171.42$$

The sample size of this study is one-hundred and seventy-one (171) respondents.

The study survey utilizes tool like questionnaires to ascertain the needed information for analysis while ordinal regression method was used for the analysis. The model for the hypothesis is presented below;

$$AE_i = a + \beta_1 MS_i + \beta_2 CIA_i + \beta_3 AIT_i + \beta_4 OI_i + \epsilon_i$$

Where;

AE = Audit efficiency

MS = Management's support

CIA = Competent of internal auditors

AIT = Availability of information technology

OI = Organizational Independence

a = Constant term

β_1 - β_4 = Estimates of the regression parameters

ε = Stochastic error

4.0 Analysis and Results

Table 4.1: Model Fitting Information

Model Fitting Information				
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	410.772			
Final	.000	410.772	12	.000

Link function: Logit.

Source: Field Survey, 2022

The result above explains the fitness of the determinants of audit efficiency of public sector in Nigeria. The variable combination in the model is fit. Therefore, the p-value of 0.00 shows that the model is a very good finding on how well does the model fits the data.

Table 4.2 Goodness of Fit Result

Goodness-of-Fit			
	Chi-Square	df	Sig.
Pearson	.042	24	1.000
Deviance	.084	24	1.000

Link function: Logit.

Source: Field Survey, 2022

From the value of Pearson and Deviance in the result above, the study fails to reject the null hypothesis in order for the model to be a good fit. The result shows that the goodness of fit is significance which indicates that the model is fit since the Pearson significance values are all greater than 5% significance level (95% confidence level).

Table 4.3 Pseudo R-Square

Pseudo R-Square	
Cox and Snell	.909
Nagelkerke	.976
McFadden	.896

Link function: Logit.

Source: Field Survey, 2022

The Nagelkerke Pseudo R-square explained odd ratio variation of 97.6% on audit efficiency while the remaining variation is explained by other independent variables not included in the model.

Table 4.4 Test of Hypotheses

		Parameter Estimates					95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[AE = 1.00]	-38.350	5.922	41.933	1	.000	-49.958	-26.743
	[AE = 2.00]	-25.096	5.006	25.131	1	.000	-34.908	-15.284
	[AE = 3.00]	-15.242	4.549	11.226	1	.001	-24.158	-6.326
	[AE = 4.00]	-6.296	4.002	2.475	1	.116	-14.139	1.547
	[MS=1.00]	-28.372	12.424	5.215	1	.022	-52.722	-4.022
	[MS=2.00]	-28.372	10.164	7.793	1	.005	-48.292	-8.452
	[MS=3.00]	-15.626	6.463	5.846	1	.016	-28.293	-2.959
	[MS=4.00]	-5.512	2.607	4.471	1	.034	-10.621	-.403
Location	[CIA=1.00]	3.478E-015	4.068	.000	1	1.000	-7.972	7.972
	[CIA=2.00]	0 ^a	.	.	0	.	.	.
	[CIA=3.00]	-10.114	4.551	4.939	1	.026	-19.033	-1.195
	[CIA=4.00]	-5.316	4.059	1.716	1	.190	-13.270	2.639
	[AIT=1.00]	-7.435	12.691	.343	1	.558	-32.309	17.439
	[AIT=2.00]	-7.435	5.420	1.882	1	.170	-18.059	3.188
	[AIT=3.00]	3.816E-015	4.029	.000	1	1.000	-7.896	7.896
	[AIT=4.00]	-5.596E-015	2.578	.000	1	1.000	-5.052	5.052
	[OI=1.00]	-8.550	12.104	.499	1	.480	-32.274	15.173
	[OI=2.00]	-8.550	3.676	5.411	1	.020	-15.755	-1.346
	[OI=3.00]	-4.467	3.840	1.353	1	.245	-11.993	3.059
	[OI=4.00]	-4.467	1.662	7.227	1	.007	-7.724	-1.210

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Source: Field Survey, 2022

Discussion of Findings

HO1: Management's support has no significant effect on audit efficiency in the public sector in Nigeria

The study found that management support has a significant effect on audit efficiency. This indicates that increase in management support will improve audit efficiency because it is the management who shapes the organization strategic move and if they see internal audit as a strategic point for the organization, they will provide all the necessary input for the successful accomplishment of internal audit. The management can support in terms of providing resources, giving trainings, introducing with new technologies, providing enough facilities and encourages the internal audit process with commitments to promote and communicate their added value for the effectiveness of internal audit work in their office contributes for the effectiveness of the internal audit work. The result is supported by the following studies Karrar and Elbashir (2018),

Ahmed (2016), Musah, Gapketor and Anokye (2018), Dellai and Omri (2016), Masood and Afzal (2016) but not supported by Tackie, Marfo-Yiadom and Achina (2016).

HO2: Competent of internal auditors has no significant effect on audit efficiency in the public sector in Nigeria

On the issue of competent of internal auditors and audit efficiency, the study found significant effect of internal auditors on audit efficiency of public sector with p-value of .026. This indicates that increase in the competent of internal auditors will improve audit efficiency because if audit staffs are free to make their work without biased, fraud will be minimized and they can do their work professionally as a result the efficiency of internal audit. The result is supported by the finding of Karrar and Elbashir (2018), Ahmed (2016), Musah, Gapketor and Anokye (2018), Mwangi (2017), Mustika (2015)

HO3: Availability of information technology has no significant effect on audit efficiency in the public sector in Nigeria

The study found that information technology has no significant effect on audit efficiency of public sector in Nigeria. However, provision of computer aided software enables the competency and efficiency of audit in the public sector. For information to be relevant, it must be identified, captured and communicated in a form and time frame that enable people to carry out their responsibilities. Information systems produce reports containing operational, financial and compliance-related information that make it possible to run and control the business. The result is supported by the following studies Taiwo (2019), Joshi (2020).

HO4: Organizational independence has no significant effect on audit efficiency in the public sector in Nigeria

The study found that organizational independence has significant effect on audit efficiency of public sector in Nigeria because the level of independence, reporting level, direct contact to the board and senior management, conflict of interest, interference, the unrestricted access to all departments and employees, appointment and removal of the head of internal audit, and performing non-audit activity may not be equally perceived. But, without the relevant senior management support simply the independence of the organization to the internal auditors may not be enough to add value and to identify the noncompliance activities performed in their office. The result is supported by the finding of Ephraim and Yidana (2019), Wakil, Alifiah and Teru (2020), Tackie, Marfo-Yiadom and Achina (2016), Musah, Gapketor and Anokye (2018), Dellai and Omri (2016) however, the finding of Mihret and Yismaw (2007), refute the finding that organizational independence affects audit efficiency.

5.0 Conclusion and Recommendations

The study concludes that the study concludes that the determinants have a significant effect on audit efficiency. This indicates that increase in determinants will improve audit efficiency. From the conclusion of the study, the following recommendations were provided that: Management of public sector should support their internal auditors by allowing them to improve their professional certification in line with the institute of internal audit standards and

organizational guidelines and by introducing themselves with modern technologies that improve their internal audit function for their office.

Auditors should be encouraged to go for regular training relating to internal audit functions. This will enable them to embrace changes on the internal audit functions and improve their efficiency where necessary.

Based on the findings, an awareness has to be maximized on employees to better cooperate with internal audit staff to improve the applications of internal audit standards.

Reference

- Ahmed, F. B. (2016). Determinants of internal audit effectiveness in roads construction sector, case study in Ethiopian roads authority. Ethiopian. A thesis submitted to St. Mary's university, school of graduate studies in partial fulfillment of the requirements for the degree of master of business administration in accounting and finance
- Appah, E. & Oyadonghan, J.K. (2011). Mandatory Rotation of Auditors on Audit Quality, Cost, and Independence in South-South Nigeria. *Journal of International Business Management*, 5(3), pp. 166 – 172.
- Asare, T. (2008). *The role of Internal Auditing in the public sector of Ghana: Governance and Accountability*. MSc Dissertation, Birmingham City University Business School, Birmingham, UK.
- Awinbugri, A. E., & Daniel, Y. (2019). Determinants of Internal Audit Effectiveness in Selected Hospitals within the Kumasi Metropolis. *International Journal of Research and Innovation in Social Science (IJRISS)*, III (VII)
- Badara, M. A. S., & Saidin, S. Z. (2014). Empirical Evidence of Antecedents of Internal Audit Effectiveness from Nigerian Perspective. *Middle-East Journal of Scientific Research*, 19, 460-471.
- Bednarek, P. (2017). The Relationship between Organisational Attributes and Internal Audit Effectiveness. Research Papers of the Wrocław University of Economics/Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, No. 474.
- Bednarek, P. (2018). Factors Affecting the Internal Audit Effectiveness: A Survey of the Polish Private and Public Sectors. In T. Dudycz, G. Osbert-Pociej
- Brusca, I., Caperchione, E., Cohen, S., & Manes-Rossi, F., (2018). IPSAS, EPSAS and Other Challenges in European Public Sector Accounting and Auditing. *The Palgrave Handbook of Public Administration and Management in Europe*, 198(1) 165-185.
- Charles, B. K., & Oluoch, O (2017). Determinants of the effectiveness of the auditor general in Kenya in public financial management oversight. 4, 2(7). 98 – 112.
- Cohen, A., & Sayag, G. (2010). The Effectiveness of Internal Auditing: An Empirical Examination of Its Determinants in Israeli Organisations. *Australian Accounting Review*, 20, 296-307.
- Comfort, M. S., Epizitone, A., Lulu, F. J., & Oludayo. O.O. (2021), Determinants of Internal Auditing Effectiveness In A Public Higher Education Institution, *Academy of Accounting and Financial Studies Journal*, 25(2).
- Dellai, H., & Omri, M. A. B. (2016). Factors Affecting the Internal Audit Effectiveness in Tunisian Organizations. *Research Journal of Finance and Accounting*, 7, 208-221.

- Ephraim, A. A., & Yidana, D. (2019). Determinants of Internal Audit Effectiveness in Selected Hospitals within the Kumasi Metropolis, *International Journal of Research and Innovation in Social Science*, (IJRISS), III(VII).
- Eulerich, M., Henseler, J., & Köhler, A.G. (2017). The internal audit dilemma – the impact of executive directors versus audit committees on internal auditing work. *Managerial Auditing Journal*, 32(9), 854-878.
- Gathuki. S. M (2017), Determinants of Internal Audit Effectiveness in Decentralized Governments in Kenya: A Case of selected counties.
- Gurama. Z., Muzainah Mansor. M., & Ibrahim. M. (2020). Internal audit strategy: a key determinant for auditing efficiency and effectiveness in tax administration. *International Journal of Business and Technopreneurship*, 10 (1), 1-12
- Hay, D., & Cordery, C. (2018). The value of public sector audit: Literature and history. *Journal of Accounting Literature*, 40, 1-15.
- Hay, D., Simpkins, K., Cordery, C. (2016). The Value of Public Audit – How Do Supreme Audit Institutions Deliver Value? A Review of Literature and SAIs' Reports, Victoria University of Wellington, New Zealand, 68.
- Joshi. P.L, (2020) Determinants Affecting Internal Audit Effectiveness, *emerging Markets Journal*, 10(2), Indian.
- Kagaba, J., & Mulyungi, P. (2016). Determinants of Internal Audit Effectiveness of Public Sector; A Case Study Rwanda Revenue Authority. *International Journal of Science and Research (IJSR)*, 7(11).
- Karrar, S. F., & Elbashir, I. F. A. (2018). Determinants of Internal Audit Effectiveness: Case of Sudan Public Sectors. *Research Journal of Finance and Accounting*, 9(12)
- Kruger. H. A., Steyn. P.J. and Kearney.W. (2002). Determinants of internal audit efficiency, *South African Journal of Business Management*, September 2002 DOI: 10.4102/sajbm.v33i3.705, South Africa.
- Masood, A., & Afzal, M. (2016). Determinants of audit quality in Pakistan. *Journal of Quality and Technology Management*, Volume XII, Issue II, Pakistan
- Moatasem M. Q, and. Abdulqawi . M. (2020), The Determinants of Performance Audit in the Public Sector in Yemen. *International Journal of Business and Management Invention (IJBMI) ISSN (Online): 2319-8028, ISSN (Print):2319-801X www.ijbmi.org*, 9(4). Ser. II. Nigeria.
- Musah, A., Gapketor, E. D., & Anokye, F. K. (2018). Determinants of Internal Audit Effectiveness in State-Owned Enterprises (SOEs) in Ghana. *The Journal of Accounting and Management*, 8, 52.
- Mustika, A. C. (2015). Factors Affecting the Internal Audit Effectiveness. *Jurnal Akuntansi dan Auditing*, 12, 89-109.
- Mwangi, S. G. (2017). Determinants of internal audit effectiveness in decentralised governments in kenya: a case of selected counties. A dissertation submitted in partial fulfillment of the requirements for the award of master of science commerce (finance and accounting) in the school of business and public management at KCA university.
- Rudhani, L. H., Vokshi, N. B., & Hashani, S. (2017). Factors Contributing to the Effectiveness of Internal Audit: Case Study of Internal Audit in the Public Sector in Kosovo. *Journal of Accounting, Finance and Auditing Studies*, 3, 91-108.
- Shamki, D., & Alhajri, T. A. (2017). Factors Influence Internal Audit Effectiveness. *International Journal of Business and Management*, 12, 143-154.



- Tackie, G., Marfo-Yiadom, E., & Achina, S. O. (2016). Determinants of Internal Audit Effectiveness in Decentralized Local Government Administrative Systems. *International Journal of Business and Management*, 11, 184-195.
- Tackie, G., Marfo-Yiadom, E., & Achina, S. O. (2016). Determinants of Internal Audit Effectiveness in Decentralized Local Government Administrative Systems. *International Journal of Business and Management*; 11 (11), 184-195
- Taiwo, I. B. (2019). An Assessment of the Determinants of Internal Audit Efficiency in the Nigerian Public Sector, 9 (1).