

Sudan University of Science and Technology

College of Graduate Studies

Deanship of Quality and Development

**Factors Affecting Internal Audit Effectiveness in Sudanese
Public Sector**

العوامل المؤثرة في فعالية التدقيق الداخلي بالقطاع الحكومي السوداني

A dissertation submitted for fulfillment degree of M.Sc. in
Total Quality Management and Excellence

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2018

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

الآية

قال تعالى

(قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ)

سورة البقرة الآية (32)

DEDICATION

To.....

My mother soul.....who worked hardly for us,

To my father.....for supporting and encouraging me to believe in myself

To my husband and my daughters Duaa and Aala and my son Mohamed

To my sisters, brother and their children,

To My friends and colleagues

With my love and respect

ACKNOWLEDGMENT

First of all, I would like to thank my almighty God for his great support to accomplish this research work and for his infinite support in my entire life success.

Secondly, I would like to express my genuine thanks to **Pro. Ibrahim Fadul Elmula Elbashir** for his continuous comments and support to make this research paper and for the information given that is very valuable for my study.

And also, I would like to thank Sudan University of Science &Technology, College of graduate studies for the chance given to and direct to make this research paper based on the topics that I select.

Nevertheless Finally, I would like to thank all the people who support me by giving different materials and for sharing their ideas to complete this study, my father for his continuous encouragement and support during this study, my kids and all my best friends who have highly supported me to proceed this study.

Abstract

The main purpose of this study is to investigate on the factors that affecting internal audit effectiveness in the selected Sudan public sector offices. This investigation is focused on 4 purposely selected public-sector offices that are expected to represent all other sectors (**Sudan Water Generating Company limited, Sudanese Standards and Metrology Organization, Sudanese Petroleum Pipelines Company, Sudan Customs**). Five hypotheses using a survey way were developed and tested. The source of the required data to the researcher was the Internal Audit staff and managers across the 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 dependent variable:(effectiveness of internal audit department) and its five main independent variables: (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).

A number of results were reached by the study; some of the most important ones were:

- 1- The management supports and the presence of adequate and competent IA staff in the public-sector offices are positively related to the internal audit effectiveness in the public-sector offices.
- 2- The internal auditors of public sectors are focusing their activities on compliance with laws and regulations and Operational/performance audit.
- 3- Little attention was paid to financial audit, internal audit system evaluation and risk assessment which led to difficulty to the sector to improve organizational performance.

Based on these results, the researcher recommends that the internal auditors of the public-sector office should maintain and improve their effective contribution for the IAE in their office, by using the supports from their offices management team appropriately, by improving 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 IA function for their office and also recommended to work in accordance with the available internal audit charters, it helps the internal auditors to provide the appropriate reports and to know the extent of their relationships with the managements, briefly describes their rights and duties IA and the employers.

مستخلص

الغرض الرئيسي من هذه الدراسة هو التحقيق في العوامل التي تؤثر على فعالية المراجعة الداخلية في مؤسسات القطاع العام في السودان المختارة. ويركز هذا التحقيق على أربعة مؤسسات منتقاة بشكل عام من القطاع العام يتوقع أن تمثل جميع المؤسسات الأخرى (الشركة السودانية لتوليد المياه المحدودة ، المؤسسة السودانية للمواصفات والمقاييس ، شركة خطوط أنابيب البترول السودانية ، الجمارك السودانية). تم تطوير واختبار خمس فرضيات تستخدم طريقة المسح. كان مصدر البيانات المطلوبة للباحث هو فريق التدقيق الداخلي والمديرين عبر المؤسسات العامة. تم توزيع البيانات التي تم جمعها باستخدام استبيان نوع مقياس ليكرت على عينة من سكان الدراسة وشغلها 41 من المدققين الداخليين و 27 من المديرين. يُقَم التحليل الوصفي وتحليل الارتباط ونموذج الانحدار متعدد المتغيرات من خلال Excel و SPSS العلاقة بين المتغير التابع: (فاعلية قسم التدقيق الداخلي) والمتغيرات الخمسة الرئيسية المستقلة: (دعم الإدارة ، إدراك الإدارة لقيم المراجعة الداخلية ، الاستقلالية التنظيمية للمدققين الداخليين ، كفاءة موظفي المراجعة الداخلية الكافية والمختصة ، ووجود ميثاق التدقيق الداخلي المعتمد).

تم التوصل إلى عدد من النتائج من خلال الدراسة ومن أهمها:

- 1- يرتبط دعم الإدارة و وجود موظفين مؤهلين في مكاتب القطاع العام بشكل إيجابي بفعالية المراجعة الداخلية في مكاتب القطاع العام.
- 2- يركز المدققون الداخليون للقطاعات العامة أنشطتهم على تدقيق التطابق معالقوانين واللوائح ومراجعة العمليات / الأداء
- 3- تم اعطاء القليل من الاهتمام للمراجعة المالية، تقييم نظام التدقيق الداخلي وتقييم المخاطر مما أدى إلى صعوبة تحسين الأداء التنظيمي للقطاع.

وبناءً على هذه النتائج توصي الباحثة بأن يقوم المدققون الداخليون في مكاتب القطاع العام بالمحافظة على مساهمتهم الفعالة للمراجعه الداخلية في مؤسساتهم وتحسينها ، وذلك باستخدام الدعم من فريق الإدارة في المؤسسة بشكل مناسب، بتحسين شهاداتهم المهنية حسب متطلبات معهد معايير المراجعة الداخلية والمبادئ التوجيهية التنظيمية ، ومن خلال التعريف عن التقنيات الحديثة التي تعمل على تحسين وظيفة التدقيق الداخلي الخاصة بالمؤسسة، كما أوصت بالعمل وفقاً لميثاق التدقيق الداخلي المعتمد ، الذي يساعد المدققين الداخليين على تقديم التقارير المناسبة ومعرفة مدى علاقاتهم مع الإدارات ، ويصف بإيجاز حقوقهم وواجباتهم.

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Acronyms and Abbreviations

3Es	Effective, Efficient and Economical
ACIAS	Adequate and Competent Internal Audit Staff
AIAC	Approved Internal Audit Charter
CAE	Chief Audit Executive
CEO	Chief executive Officers
CFIA	Competency Framework for Internal Auditing
CFO	Chief Finance Officer
CSR	Corporate Social Responsibility
IA	Internal Auditors
IAE	Internal Audit Effectiveness
IAF	Internal Audit Function
IIA	Institute of internal auditors
INTOSAI	Internal Organisation of Supreme Audit Institution
ISPPIA	International standards for the professional practice of internal auditing
MoFED	Ministry of finance and Economic Development
MP	Management perception
MS	Management Support
OAG	Office of the Audit General
OIN	Organizational Independence
PAT	Positive Accounting Theory
PCAOB	Public Company Accounting Oversight Board
SAP	Statement on Auditing Practice
SPSS	Statistical Package for Social Science

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

In Every country that is administered in a democratic policy needs to be accountable in its use of public money and in providing effective, efficient and economical (3e's) service delivery. To achieve those government objectives applying internal audit function were the major mechanism for controlling and using of all scarce resources available in the corporate organization. Even more large and complex systems require greater competitiveness, thus internal audit has had to become ever more professional (Cecilia Nordin Van Gansberghe, 2003).

In addition, 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 is considered an independent profession, which is playing a significant role in the management of organizations. Besides, independent of internal auditors have always been a sensitive issue while he/she is the employees of the organization, above all, not clearly organized structure or reporting line make the problem more complicated in such offices (Rolandas Rupsye, 2005).

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.

The public sector provides services such as banking service, financing, education, communication service, healthcare, police, transportation, electric services, security and so on, which benefit all of the society and encourage equal opportunity to benefit from those services provided (Mihret and Yismaw, 2007). This research was focused on the determinants of Internal Audit Effectiveness in the selected Public-sector office found in Khartoum. Mostly, the efficiency and effectiveness of the management operations in public sector are ensured by the effectiveness of its employees.

Internal auditors which are the focus of this study and also the key employee of public offices, are expected to work independently and objectively to enhance high

quality of public services, achieve good internal control system, avoid corruption, ensure good corporate governance system, promote accountability and greater transparency (Coram et al, 2008; Van Peurse 2005; Belay, 2007).

Therefore, it is important to have effective internal audit unit as part of modern governance system in public sector offices. In corporate governance internal audit (IA) issue has received increasing attention in recent years, due to different reasons. To mention some of them, internal audit links to the internal control-risk management system; improve organizational efficiency and effectiveness through providing constructive criticism and recommendations about organizations status; reduce information asymmetry during decision making; serves as an important internal assurance in the business and financial reporting process of corporations (Soh and Bennie, 2011; Cohen and Sayag, 2010; Mihret and Yismaw, 2007).

Additionally, in the accounting profession, audits play an important role in serving the public interest by increasing the accountability of managers and reinforcing trust and confidence in financial reporting process and they serve as an important link in the business and financial reporting process of corporations and not for profit providers at organizational level (Reynolds, 2009). In connection with this, internal audit identifies weak links in the system as well as creates potential opportunities for improvement and act as a feedback mechanism for the top management. Hence, organizations seeking a suitable and effective quality management system need to conduct internal audits to ensure that the system functions as intended (Lindow and Race, 2002).

Moreover, the new Institute of Internal Audit's (IIA, 2001), board of directors defined internal audit as:

“An independent, objective assurance and consulting activity designed to add and improve an organization's operations. It helps an organization to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.”

These definitions give us a broad clue about importance and contribution of internal audit functions in the organizations. For example, internal auditing is involved in consulting activities, and value-added contributions for the evaluation and improvement of the effectiveness of risk management and governance process (IIA, 2001). This shows the roles of internal auditing is moving away from the narrow scope of measuring and evaluating the effectiveness of internal controls towards a broader

scope of activities that creates opportunities for the internal auditing profession and to receive more attention in corporate governances.

Even though, the internal auditors have many roles and contributions to the organization and the public interest, it also faces many challenges from the organization they work. Some of the challenges identified by the Ministry of Finance and Economic Development (2004), in their internal audit manual are lack of management respect, lack of independence, assigned of internal auditors to many tasks and being ignored (conflict of interest) and lack of professional development.

In addition, Mihret and Yismaw, (2007) in their case study on Ethiopian public Universities, they argue that internal audit recommendations are not afforded enough management attention and support which adversely affect the effectiveness of internal audit. Moreover, lack of mechanisms in place to follow up the implementation of internal audit recommendations; absence of strategic plan and consistent documentation styles for audit work, lack of resources, poor leadership for internal audit function (IAF), absence of appropriate framework to measure IAF performance, and lack of competent personnel are also some challenges of internal auditors (Mihret and Yismaw, 2007; belay, 2007).

1.2 Statement of the Problem

Internal auditors have the right and ability to access all information in every part of the organization and their function lies at every activity of the corporate governance system. All the stakeholders will therefore benefit from having a strong Internal Audit Function (IAF) which will provide value to the other cornerstones of corporate governance (Smet and Mention, 2011). Because internal auditors can make line managers aware of their responsibility; can act as a consultant in monitoring risk, identifies weakness in internal control system, and facilitates the implementation of risk management as well as IA contributes to the appropriateness of procedures and operations of the audited body (Cohen and Sayag, 2010; Arena and Azzone, 2009; Dittenhofer, 2001).

The internal audit staffs are organized inefficiently with low technical staff proficiency, that does not prepare a strategic plans to conduct their activities to produce effective internal audit output to their organization (Cohen & Sayag, 2010; Arena and Azzone, 2009; Mihret and Yismaw, 2007). Besides this the audit evidences are attached with their annual reports; but due to their limited access for readability, limited distribution to the senior management officers and low level of follow-up for the

implementation of audit recommendations to apply effective internal audit. Moreover, the number of actual audit performed in a period is usually less than the number of audits stated in the annual audit plan is not supporting the effectiveness of the internal auditors in the organization (Mihret and Yismaw, 2007).

With regard to this, the researcher is attempting to:

- To know the weakness of internal audit control system in term of identifying the factors influencing internal auditor's effectiveness in the public-sector offices. Specifically, how management's perception of IA's value, management support, organizational independence, adequate competent internal audit staff, and approved IA charter influence the effectiveness of internal audit in the public offices are examine and answered.
- To know the effectiveness of internal auditors; measuring in terms of internal auditor's ability in identifying non-compliance activities and the added contributions by IA to the Sudan public sector offices which are an important concept to show the influential out puts of the internal auditors. This would have far-reaching implications on the level of IA's effectiveness and competency. Because the percentage of recommendations suggested by the internal auditors are actually implemented by the auditee offices; and the ability to plan, execute and communicate audit findings are the most suitable dimensions to evaluate internal audit effectiveness (Cohen & Sayag, 2010; Arena and Azzone, 2009; Mihret and Yismaw, 2007).

1.3 Objective of the Study

1.3.1 General Objective

The general purpose of this study is to investigate the determinants of internal audit effectiveness in the selected public-sector offices.

1.3.2 Specific Objective

Specifically, this research tried to achieve the following objectives;

- To examine the contributions of management support for IAE in the public-sector offices.
- To assess the contributions of management perception for IAE in the public-sector offices.
- To identify the contributions of organizational independence of internal auditors for IAE in the public-sector offices.

- To bring into light the contributions of adequate and competent internal auditors staff for IAE in the public-sector offices.
- To know the contributions of approved internal audit charter for IAE in the public-sector offices.

1.4 Research Questions

- 1- Does the support given by the management to internal auditors enhance the IA effectiveness?
- 2- Does the management perception matter for internal audit effectiveness?
- 3- Does organizational independence of internal auditors affect IA effectiveness?
- 4- Does the adequate and competent internal audit staff impacts on IA effectiveness?
- 5- Does the presence of approved internal audit charter in the public-sector offices contribute to the internal audit effectiveness?

1.5 Hypothesis

After reviewing the related literatures (Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Arena and Azzone) specifically the relations of management perception, management support, organizational independence of internal auditors, adequate and competent internal audit staff, and the presence of internal audit charter with internal audit effectiveness the study are designed the following directional hypothesis:

H1: The management supports are positively related to the internal audit effectiveness in the public-sector offices.

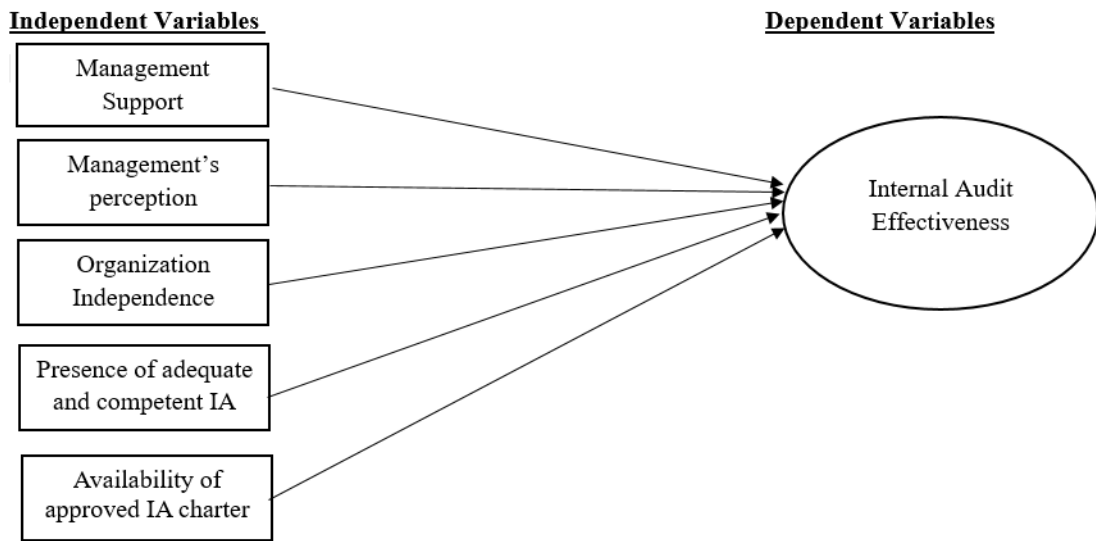
H2: The better the management's perceptions of internal audit values, the higher internal auditors' ability in identifying noncompliance activities and the more added contributions.

H3: The organizational independence for internal auditors positively related to the internal audit effectiveness in the public offices.

H4: The presence of adequate and competent IA staff in the public-sector offices are positively related to the internal audit effectiveness.

H5: The availability of approved IA charter in the public-sector offices have positive and significant impact with the internal audit effectiveness in the public-sector offices.

1.6 research model:



(Design by researcher)

1.7 Significance of the Study

- 1- Study conclusion would be used in internal auditors' effectiveness improvement strategy and policy by public offices management.
- 2- Enable the public sectors management to take corrective measures by specifically identifying significant factors of internal auditor's effectiveness.
- 3- The outcome would contribute to the literature by developing a conceptual understanding of factors affecting internal auditors effectiveness in public sectors

1.8 Scope and Limitation of the Study

The study, focus on the determinants of internal audit effectiveness, it would be more successful if it is conducted in all public-sector offices, and also on all privately-owned organizations. But due to time it is out of the touch of the individual researcher, and due to this the public-sector offices, which are cover under this research work are limited to 4 purposively selected public sectors which are expected to show the effects of all the rest untouched offices. In addition, the intent of this study is to investigate the selected determinants of the IA effectiveness; such as management perception, management support, organizational independence, adequate competent internal audit staff and presence of internal audit charter in the selected public-sector offices.

1.9 Organization of the Study

In addition to the preliminary pages, this research paper consists of five chapters. The first chapter with its sub topics was introductory parts incorporated the

introduction, statement of the problem, research objectives, research questions, research hypotheses, significant of conducting the study, scope and limitation of the study, and the previous studies . The second chapter describes the detail review of related literatures. The third chapter expresses the information regarding the sampling techniques used to conduct the research and the variables which affect the internal audit effectiveness. The fourth chapter is the analysis, discussions and presentation part of the hypothesis test and finally, the last chapter describe about the findings and recommendations of the case study followed by the references and appendixes.

2.1 PREVIOUS STUDIES:

1- Entitled “Effect of Structural and Professional Factors of Internal Audit on the Effectiveness of Internal Auditor Performance in Private Business Enterprises” by اميمة 2015:

The research problem is to know the significance of availability of structural factors represented in the organizational structure of the enterprise, which is the basis of internal control as well as professional factors represented in international standards of internal audit and the levels of technical training and the extent to which such factors affect the performance of internal auditor in the private business enterprises in Sudan.

The research problem can be represented in the following key question:

- Is there any correlation that is statistically significant between the structural factors of internal audit and the effectiveness of internal auditor’s performance in business enterprises?
- Is there any correlation that is statistically significant between the professional factors of internal audit and the effectiveness of internal auditor’s performance in business enterprises?
- Is there any correlation that is statistically significant between the levels of technical training and the efficiency of internal auditor’s performance in business enterprises?

The research used both the historical and the analytical descriptive approaches, based on the nature of the subject and researches and scientific references as well as on the information obtained, and due to the fact that said approaches are widely used in social and humanitarian phenomena studies.

Research findings the most important of which are the following:

- There is a positive correlation between the availability of structural factors of internal audit represented in the organizational structure in support of independence and objectivity and clarification of the extent to which said factors affect the increase of effectiveness of internal auditor's performance in private business enterprise,
- There is a positive correlation between the professional factors of internal audit represented in the professional efficiency arising from the sound application of performance standards such as, well management and organization of internal audit activities, perfect planning and well management of resources and between the contribution of the same to enrich the effectiveness of internal auditor's performance in private business enterprises in the Sudan,
- There is a positive correlation between the levels of advanced technical training and the effectiveness of application thereof, and the efficiency of the internal auditor's performance in private business enterprises.

Research recommendations, chief among which are the following:

- The research fully recommended legislations in the Sudan to pay a keen interest to internal audit and continue to support the fundamentals of the independence of internal auditors, besides, the qualifications of the same, and encourage them to obtain the (CIA) Certified Internal Auditor professional certificate, in order to achieve highest acquisitions to carry out their mission in an optimal manner,
- The research fully recommended establishing of an institute for internal auditors in the Sudan, aware of the significance of professional performance standards and supervises the organization of the profession affairs, as well as the methods to apply the same, along with pursuing the most technical developments that which affect the standards and provide professional and academic support for internal auditors, in order to promote the profession so as to reach its highest international scientific levels,
- The research strongly recommended interesting in advanced training in internal audit sphere, and conducting regular and ongoing workshops, to facilitate the provision of relevant subject for the internal auditor to take cognizance thereof, for instance, laws and internal regulations, in addition to procedures to be adhered in this respect and disclose overall related information and how to deal

effectively with the same, and hence to activate the pivots of constructive discussions aimed at promoting the profession.

2. Entitled “Impact of Internal Audit Characteristics of Internal Audit in Achieving the Efficiency of Tax Accounting Field Study of Commercial Companies” by عثمان 2018

The problem of the study was

- Whether the independence of the internal auditor affects the efficiency of tax accounting.
- Whether the effectiveness of the internal control of the internal auditor helps to achieve the efficiency of tax accounting.
- Whether the professional qualification of the internal auditor affects the effectiveness of the internal audit. In achieving the efficiency of tax accounting.

The study hypotheses.

- There is a statistically significant relationship between the independence of the internal auditor and the efficiency of tax accounting.
- There is a statistically significant relationship between the internal control and the efficiency of tax accounting.
- Professional qualification for internal auditors and the efficiency of tax accounting.

The study reached several important results that help the independence of the internal auditor in achieving the efficiency of tax accounting.

- Internal control affects the efficiency of accounting.
- The professional qualification of the internal auditor helps to achieve the efficiency of tax accounting.
- The internal auditor should give an impartial opinion about the activities being reviewed. The internal auditor should be free to review the files, documents, records and books.
- The internal auditor should be familiar with the developments in the internal audit standards
- And the internal auditor should adhere to by the relevant auditing standards.

3. Entitled “factors affecting the internal audit effectiveness: A survey of the Saudi public sector” by Alzeban, Abdulaziz&Gwilliam, David, 2014

This study assesses factors influencing internal audit effectiveness (IAE) in **Saudi Arabia**. Data were obtained from 203 managers and 239 internal auditors from 79 Saudi Arabian public sector organizations. Multiple regression analysis examines the association between IAE and five principal factors.

Results suggest that:

- Management support for IAE drives perceived effectiveness of the internal audit function from both management's and the internal auditors' perspective.
- Management support is linked to hiring trained and experienced staff, providing sufficient resources, enhancing the relationship with external auditors, having an independent internal audit department. Saudi Arabia is representative of many developed and developing environments, and its recent tradition of governance and audit is mirrored in countries worldwide. Moreover, its specific cultural traditions involving clan and tribal allegiances, and pervasive and core religious beliefs, characterize the GCC countries, the Arab World generally, and indeed, many other developing countries, irrespective of wealth. Thus, links between management support and internal audit effectiveness are likely generalizable beyond the Saudi public sector context.

4. Entitled **“Factors affecting the internal audit effectiveness Study of Java Province, Indonesia”** by **Adhista CahyaMustika, 2015**

This study tests the factors that influence the internal audit effectiveness in **Java Province, Indonesia**, including:

- Internal auditor competencies
- Internal auditor independence
- Auditee support to internal audit activity.
- And the internal and external auditor relationship.

Result:

Using the internal auditor inspectorate in Java Province, Indonesia, we found that:

- The internal audit effectiveness can be attained through increase internal audit competence, independence and strong relationship between internal and external auditor.
- However, this study found that auditee support has no effect on internal audit effectiveness.

5. Entitled **“Factors associated with Internal Audit Effectiveness: Evidence from Greece”** by **Drogalas George, Karagiorgos Theofanis and Arampatzis Konstantinos, 2015**

The study investigates the specific factors associated with internal audit effectiveness in the **Greek business environment**. Empirical evidence was collected by means of a mailed survey. Factor Analysis and regression analysis are used in order to illustrate the gathered information.

The findings indicate that the main factors affecting internal audit effectiveness are: (1) quality of internal audit, (2) competence of internal audit team, (3) independence of internal audit and (4) management support.

The results also reveal that independence of internal audit is the foundation of internal audit effectiveness, as it is the most crucial factor in our model.

Finally, the paper concludes that internal audit is of major importance for Greek business.

6. Entitled “Determinants of internal audit effectiveness in the public sector, case study in selected Ethiopian public sector offices” by JIMMA, ETHIOPIA 2014:

The main purpose of this study is to investigate on the determinants of internal audit effectiveness in the selected **Ethiopian public sector offices**. This investigation is focused on 15 purposely selected public sector offices that are expected to represent all other sectors. The management teams and the internal auditors of the selected public sector office are the source for the required data to the researcher through the questionnaires administered.

The finding of this study is to show the direct relation effects of management perception, management support, organizational independence of internal auditors, adequate and competent internal auditor’s staff and the presence of approved internal audit charter with the internal audit effectiveness on the public sector management.

Finding According to the regression output:

- The management support, the existence of adequate and competent IA staff, and the availability of approved IA charter were contributed for the internal audit effectiveness in the public sector significantly and positively.
- The remaining two variable; the managements perception for the IA value and the organizational independent of internal auditors were positively related with the IAE but their contribution for the IAE were statistically not significance.

All of these five independent variables are making 55.10% of the contributions for internal audit effectiveness in the public sector offices.

Recommendation:

The public sector offices should understand that the contributions of these variables were collectively significant to identify any noncompliance activities in their office and to add values for the IAE in the public sector offices.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

The emergence and development of the audit concept is linked directly to the evolution of accounting and the need for an independent control on information of public interest.

Originally, audit emerged from the State's need to control public finances.

Subsequently, the audit experienced a tendency of diversification and expansion. Audit is a term used to designate a professional verification of information, namely situations for expressing a competent substantiated and independent opinion on the basis of reporting to a quality standard.

The audit must verify whether the necessary conditions are met in order to ensure the balance of an organization, to investigate the dominion of disorder, adaptation to changes and to assess their safety degree and the risks that an entity may encounter.

Internal audit is a well-organized profession with an increasing influence, retrieved in over 90 national institutes which are part of the Institute of Internal Auditors (IIA) created in 1941.

J.B.Thurston, president of the Institute of Internal Auditors, declared in 1941 that the most brilliant perspective of internal audit will be "managerial assistance".

Joseph J Mossis, president of the UK Institute of Internal Auditors said in 1991: "it is clear to those who work within the internal audit function that it has a vital role to play, helping management to take in hand the reins of internal control.

The internal audit function was established in England and France in the early '60s, being strongly influenced by its origins in financial accounting control.

In the '80-'90 the internal audit function begins to take shape in the entities' activities and its evolution continue to this day.

In 2004, the Institute of Internal Auditors completed the definition of internal audit which was given in the year 2000 in compliance with the new context in which the corporate governance has evolved.

Internal audit "is an internal and objective activity of insurance and consulting, designed to create value and improve the operations of an entity. It assists an entity in achieving its objectives by implementing a systematic and disciplined approach in evaluating and improving the effectiveness of risk management, control and governance processes."

The Institute of Internal Auditors (IIA) is the recognized international standard setting body for the internal audit profession and awards the Certified Internal Auditor designation internationally through rigorous written examination. Other designations are available in certain countries. In the United States the professional standards of the Institute of Internal Auditors have been codified in several states' statutes pertaining to the practice of internal auditing in government (New York State, Texas, and Florida being three examples). There are also a number of other international standard setting bodies.

Internal auditors work for government agencies (federal, state and local); for publicly traded companies; and for non-profit companies across all industries. Internal auditing departments are led by a Chief Audit Executive ("CAE") who generally reports to the Audit Committee of the Board of Directors, with administrative reporting to the Chief Executive Officer (In the United States this reporting relationship is required by law for publicly traded companies)

Auditing is an independent examination of an expression of opinion on the financial statement of an enterprise or organization by an appointed auditor in pursuance of that appointment and in compliance with any relevant statutory obligation. It aims at providing solution to the inevitable problem of credibility in report and accounts. It prevents and detects errors and frauds and also produces a report of the true and fairness of the financial statement. They also obtain full understanding of the operations under review.

The role of internal audit has grown tremendously in most organizations in the recent past. This can be attributed partly to the growth of the organizations, which entails widely extended operations and the need to ensure that the organizations policies and basic accounting controls are observed at every facet of the organization.

Again, it can be observed as a measure by management to ensure that the government regulations concerning the operations of organizations, both public and

private are duly complied with so as to guard against conflicts and inconsistency with the law.

As the organization expands and supervisory responsibility broadens, the head can no longer have personal knowledge of every aspect of the organization.

It becomes impossible for him to control or monitor the continuing effectiveness of all controls. This calls for the delegation of this responsibility to a separate department called the internal audit department. Internal Audit Department is a department set up by management, usually manned by a chartered accountant, as established in section 358 of the companies Act 1976, to review the activities of other employees thereby enhancing controls in the organization.

The expectation, particularly from the independent auditors, is that the auditing activities should be done objectively according to the written regulations on the one hand, and according to ethical values and with responsibility on the other hand.

The more the independent auditor takes these factors into consideration in his/her report, the more useful the results will be.

Various studies have been made on internal audits. These studies were on auditor responsibilities in internal audit (Liu et al. 1997) and internal relationship between internal audit and senior management (Sarens and De Beelde2006). The results of these studies revealed that the success in internal audit can be improved with the support of the executives.

Van Peurseem (2004) studied on how internal auditors perceived their jobs and whether auditors faced role conflicts or not.

Kerler III et al. (2008) measured and examined the effect of trust on auditors' decisions, Rasmussen and Windsor (2003) concerned and fears inventory manipulation, De Smet et al. (2011) examined the functionality of internal audit and Johnson (1982) looked into internal audit activities and the sufficiency of business management.

The boards of directors are increasingly recognizing the value of audit committees as instruments of control (Sawyer 2003). It is believed that while the existence of an audit committee is a pre-requisite for good corporate governance, effectiveness is the key. By keeping communication channels open, the audit committee chair can foster a healthy relationship with internal auditors.

The Institute of Internal Auditors (IIA 2013a) explained the relationship among audit committee, the management and the internal auditing by saying that: because the audit committee is responsible to the board for oversight of management reporting on

internal control, and the key role they play in assessing and reporting on risk management and internal control, these two share a healthy interdependence, and the critical connection between the audit committee effectiveness and internal auditing mandates that audit committee members maintain an in-depth understanding of internal audit best practice, and how their internal audit activity is functioning. Also, the IIA (2013b) mentioned that “the audit committee responsibilities include ensuring the internal auditors access to the audit committee, encouraging communication beyond scheduled committee meetings, and reviewing internal audit plans, reports, and significant findings, and review with management and chief audit executive the charter, plans, activities, and staffing. The audit committee must review and concur in the appointment, replacement, or dismissal of the chief audit executive, and on regular basis, meet separately with the chief audit executive to discuss any matters that the committee or internal auditing believes should be discussed privately”.

Internal audit has been identified as the most effective mechanism to improve the performance of the organizations globally. The changes in the business environment, competition from alternative service providers and the need to provide efficient and effective service are the factors that lead to the uprising of the internal audit function (Gupta, 2001 as cited in Mihret, 2011). Effective and economical services are the major drivers of internal audit (Samuel, 2008). Errors may be costly when agents are stewards of large amounts of resources and are responsible for programs affecting citizens’ lives and health (INTOSAI, 2001).

Therefore, the citizens depend upon the auditor to deliver an independent, objective evaluation of the accuracy of the government officials ‘, accounting and to report on whether the government officials, use the resources in accordance with the citizens ‘wishes (Dawuda, 2010). To this end, the audit function has constantly been seen as an essential part of government financial management, and increasingly as a device for improving the performance of the organizations.

Originally the major role of internal auditing concentrated on an accounting oriented function that has been gradually transformed into management oriented profession (Samuel, 2008). Even though internal audit and external audit face interrelated issues, in recent times, there has been a superior interest and more consideration placed on the internal audit, because internal audit gain evidence quickly and discover problems at an earlier stage than an external audit (Samuel, 2008).

Besides, independence of auditors has always been a sensitive issue, especially for internal auditor in which the internal auditor is expected to be independent and qualified, while he/she is the employees of the organization, above all, not clearly organized structure or reporting line make the problem more complicated (Buregaya,2007). Dittenhofer (2001) also discussed that if the quality of internal audit unit/ department is effective it can improve the organizational performance.

2.2The Concept of Internal Audit

Internal auditing is an independent appraisal function established within an organization to examine and evaluate its activities as a service to the organization. The objective of internal auditing is to help members of the organization in the effective discharge of their responsibilities. In view of this, internal audit furnishes them with analysis, appraisal, recommendations, counsel and information concerning the activities reviewed (Institute of Internal Auditors, 1991).

According to Institute of Internal Auditors (1991), the scope of internal auditor is defined as "The examination and evaluation of the adequacy and effectiveness of the organization's system of internal control and the quality of performance in carrying out assigned responsibilities".

Johnson (1996) defined internal audit as an independent appraisal of activities as a service to all level of management. It is a control which measures, evaluate and reports upon the effectiveness of internal control which will be financial or otherwise as a contribution to the efficient use of resources within an organization.

According to Gupta (1999), internal audit is an independent appraisal function established within an organization to examine and evaluate its activities as a service to the organization.

The Institute of Internal Auditors (11A) as cited by Quaden (2001), defines internal auditing as "an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization to accomplish its objectives by bringing a systematic discipline approach to evaluate and improve the effectiveness of risk management, control and governance processes. Dambatta (2004) concludes that a properly conducted internal audit is expected to reveal errors, strengths or weaknesses of internal control system of the organization. Base on his conclusion, there is significant positive relationship between internal audit and internal control.

2.3 Types of Audit

Internal audit can be divided into the following categories, based on audit technique or objective (Aren, 1999; Dandago, 2002 and Sabari, 2003):

2.3.1 System Based Audit

This refers to an in dept evaluation of the internal control system with the objective to assess to extent to which the controls are functioning effectively.

2.3.2 Performance Audit or Operational Audit

This assesses whether the activity, program or body has been managed economically and effectively. A particular performance audit will not necessarily seek to reach conclusions about all three aspects above; it should be clear from the audit objectives, which need to be examined.

2.3.3. Financial or Accounting Audit

This evaluates the accuracy of the accounting and related procedures and practices. It assesses the accuracy and completeness of the financial statements of the activity, program or body being audited, and/or evaluates whether the transactions underling the financial statements are legal and regular. However, according to the definition of internal auditing, internal auditors are mainly evaluating the system of internal control.

2.3.4. Compliance Audit

This evaluates how relevant policies, plans procedures, laws regulations and contracts, usually all audits include the compliance element, because the auditor uses the laws, policies and regulations as a yard stick to measure the performance of the organization.

2.3.5. Management Audit

It involves a review of each and every facet of management activity and its objective is to ascertain whether or not the resources of an organization are used by its management in the most economic way to produce the maximum possible result in the shortest possible time in accordance with its goals.

2.4 Advantages of Internal Audit

Tijjan (2003) as cited in Dambatta (2004) observes that internal audit unit to any organization be it private or public, outright the cost of its maintenance. He summarizes the advantages as improving efficiency in the local government operations; the existence of internal audit creates control, which acts as a deterrent to inefficiency waste and fraud. The internal audit department serves as a “pool” from which high caliber

staffs can be seconded to other units within the organization to fill management posts. An internal audit also makes the works of external auditor easier.

2.5 Functions of Internal Audit

However, other functions as specified by the 1983 guide lines of the auditing practice committee as cited in Damagum (2003) are as follows; Review of accounting systems and related internal controls, Examination of financial and operating information for management, including detailed testing of transactions and balances. Review of the economy efficiency and effective non-financial control, Review of the implementation of corporate policies plans and procedures and special investigations.

2.6 Internal Audit Effectiveness

Different authors were defined the term “effectiveness” as follows; for instance, Arena and Azzone (2009) defined effectiveness as “the capacity to obtain results that are consistent with targets”.

Dittenhofer (2001) “*Effectiveness is the achievement of internal auditing goals and objectives using the factor measures provided for determining such factors*”.

In Mihret and Yismaw, (2007) internal audit effectiveness is defined as “the extent to which an internal audit office meets its supposed objective or the extent to which it meets the intended outcome”.

There are a number of researches had been done in the area of the IA in private and public sector. The fact that effective IA can contribute to the significant impact to the quality of management has raised the interest in researchers to explore into this matter. Effectiveness of IA will contribute to the effectiveness of the client and the organization as a whole. The IA findings and recommendations are clearly crucial to the management of public office to follow through and immediately rectify the problems in the organization.

Mihret and Yismaw suggested public sector organizations are required to have an internal audit function to support effective management in managing public funds. So many findings from the research done linked the effectiveness of the internal auditor contribution to effective management and internal control of the agency. According to Okaforand Ibadin that the internal audit exercises a critical role in improving corporate governance in organizations. In terms of accountability and management relationship, Saren and Beelde found that Internal Auditors are playing a pioneering role in the creation of a higher level of risk and control awareness in managing risk in the

management system. Internal audit is a 'comfort provider' to the Audit Committee especially in its assurance role and its involvement in improving internal control.

2.7 Features of an Effective Internal Audit

Laker (2006) identified the following as the essential features of internal audit.

2.7.1 Structure and Resources

The structure of the internal and function is established and an assessment made about the key audit personnel, their roles responsibilities, skills and experience. Where the function is outsourced focus includes the terms of the outsourced arrangement and how this is monitored.

2.7.2 Independence

The board of the institution should ensure that the independence of the internal audit function is maintained. The internal audit can enjoy the level of independence with that of any department. This independence may become compromised if the function is directly involved in risk management or operational processes. The internal audit function may provide valuable input to those responsible for risk management but the unit should not have direct risk management responsibilities.

2.7.3 Approach

The approach taken by internal audit should be clear and may be one or a combination of; risk based and review based. The focus is on the high risk areas of the institution and on the review of various parts of the institution, usually chosen both at random or in line with the internal audit plan as well as policies and procedures. The board should have endorsed the approach and there should be sufficient scope to changes where arise requiring internal audit involvement.

2.7.4 Internal Audit Plan

The internal audit plan, which usually details the proposed internal audit work for the next twelve months should be documented and endorsed by the board. Importantly, the plan should be consistent with the type of approach to be taken and should be adequate for the scale and complexity of the institution's operations the internal audit unit shall draw up a long-term plan and a proposal for next year, based on risk analysis and taking in account the needs expressed by the administrative units. The proposal for the next year shall be submitted for approval to the board, and the proposed annual plan shall specify the required number of staff.

2.7.5 Reporting

Each assignment shall be followed by a report containing findings, recommendations or remarks, sent to the departments and administrative units responsible, and a summary to the responsible director. The internal audit an assessment of the internal of the facts control system. If necessary, it shall contain recommendations for improving internal control or remarks that indicate which actions or data are not in accordance with the rules. The reports shall be based on adequate working papers. Other prior studies including Woolf 1992, Philip,1996, Millichamp,2000 and Dandago 2002 have similar views that, effective audit features includes; ascertaining the accounting and internal control system, evaluate the control to determine that they are satisfactory in principles to determine whether they had be applied as prescribed throughout the period, test transactions and balances for completeness, accuracy and validity of transactions, review financial statements by conducting analytical principles or review procedures and determination of audits opinion that would be expressed.

2.8The Main Factors Impacting the Effectiveness of Internal Audit Service

2.8.1 Auditors Competency

Competency can be related 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 staffs 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 IA. Mihret and Yismaw concluded in their study that IA office constantly face the problem of low technical staff proficiency and high staff turnover, which would limit it capacity to provide effective service to management. Whereby Angus Okechukw Unegbu, Mohamad Isa Kida found in their study that, IA can effectively carry out their duty in the public sector if there are enough IA personnel with required competencies. Competency of auditors determines the quality of the audit work performed in an organization. Competency is measured in terms of academic level, experience, skill and the effort of the staffs for continuing professional development. 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.

2.8.2 Independence /Objectivity of Internal Auditors

The other factor that may contribute to the effective government audit activities is the need of organizational independence and objectivity which can allow the audit activity to conduct work without interference by any party for the audit task. The independence and objectivity of internal auditing is with respect to both assurance services and consulting for the organization. Independence and objectivity are closely related where the freedom from conditions that may threaten objectivity and no significant quality compromises are made during rendering the audit service. In fact, the audit activity should have sufficient independence from those it is required to audit so that it can both conduct its work without interference and be seen to be able to do so. This is very crucial element in conducting audit because the auditors can access to any document relating to the audit work without favor and fear. This will make the auditors provide the objective report and reliable professional judgment on the auditing work to achieve the mandate given to them with integrity. Independence of auditors would not be considered to be impaired if the auditors do not appear to act in a capacity equivalent to a member of client management or as an employee. In certain extent there is a confusion of the role of IA as internal auditors are part of the management team and at the same time to independently evaluate management's effectiveness and efficiency. However, in more recent years, there has been heightened interest in issues associated with the independence and objectivity of internal audit. This could affect the effectiveness of internal auditing as even though internal auditors are charged with upholding the best interests of their employer, they may be reluctant to counter management, regardless of consequences.

2.8.3 Management Support to the Roles of IA

The support and commitment of management also have the certain impact to make sure IA is functioning effectively. The success of IA function will depend on the strength of management's support for the auditing process. They have to accept the fact that the IA process is just as critical and important activity as any other process within the organization. Some study found that without management approval, support, and encouragement, the IA audit processes are likely to face failure and worse – time and money wasted. AMd Ali, A Ahmi and MH Shahdan on their study on IA in the state and local government of Malaysia found that, the effectiveness of the IA function in State and Local Government appears to be directly related to the management style of organization heads and their links, relationships and position in the social contract.

Some IA function appears to be doing well, the determining factors appear to be the attitude and leadership qualities of the head of an organization and audit reports that are ignored by everyone. Mihret and Yismaw on their study also found that IA recommendations are not afforded enough attention. Though the audit reports are generally well prepared, they do not separately highlight the status of past audit results and they could be presented in a more consistent way. Besides, the audit evidence is attached to the reports. This provides a bulky appearance of the audit reports and reduces readability. The distribution of the audit reports is limited where copies are not provided to other senior management officers to which related to audit report. Their study also concluded that management supports to internal audit as a determinant of internal audit effectiveness.

2.8.4 Management's Perception of IA's Value

Perception is the process of attaining awareness or understanding of sensory information or it is the mental image or intuitive recognition of experience when aware of the elements of the environment (Woodard C.A, 2002). To function effectively, internal auditors and the customers of audit services should possess a similar understanding of what makes internal auditing a value-added activity. The failure to reach this understanding could result in the perception that internal audit is simply an obstacle to achieving production objectives. This can result in underutilized audit services and ignored audit recommendations which adversely influence the effectiveness of IA (Arena and Azzone, 2009). When employees at all levels perceive that the top management assigns importance to the function of IA, they will cooperate and support these processes (Cohen and Sayag, 2010). This implies that internal audit staffs are more motivated and encouraged to perform audit activities given good management's awareness of IA values.

2.8.5 Approved Internal Audit Charter

Internal audit charter is defined by the IIA as "a formal written document that defines the activity's purpose, authority and responsibility. The charter should be (a) establish the internal audit activity's position within the organization; (b) authorize access to records, personnel and physical properties relevant to the performance of managements; and (c) defined the scope of internal audit activities" (IIA, 2001). Additionally, an internal audit charter typically includes the responsibilities of the IA in broad terms, the standards followed by the IA; and the relationship between the IA and the audit committee. It may also define access to the information (documents, records, systems, and personnel) necessary to perform and reach conclusions on the work, and it is a vehicle for asserting that there are no unreasonable limitations on the scope of the auditor work. The charter should

clearly identify and record any limitations and alter to actual or potential changes on internal and external conditions that affect its ability to provide internal control assurance from a forward-looking perspective.

The Conceptual framework showing the interdependence between the variables is depicted below as follows:



Figure 2.1: Frame work of Factors Influencing Internal Audit Effectiveness

2.9 Theoretical Framework for Auditing

This chapter provides an overview of the existing, explaining theories on accounting and auditing. Auditing theory helps explain why society needs auditing: the role and purpose of audit services in communication between a company and its environment.

2.9.1 Theories of Auditing

This paragraph presents some of the theories on the demand concerning auditing. **The agency theory** is the most prominent of the existing theories. Less significant audit theories are the '**policeman theory**' and the '**lending credibility theory**'.

The policeman theory claims that an auditor is responsible for searching, discovering, and preventing fraud. The focus of the audit however, has moved towards the verification of the truth and the fairness of the financial statements and the provision of reasonable assurance. The policeman theory is not able to explain fully the role and the purpose of auditing.

According to the **lending credibility theory**, the primary function of the audit is to add credibility to the financial statements. Audited financial statements increase the financial statement users' confidence in the financial figures and the faith in management's stewardship. The lending credibility does not explain other functions of performing audit services; this theory is limited in explanatory power.

2.9.1.1 Limperg's Theory of Inspired **Confidence**. In 'The PCAOB and the social responsibility of the auditor' (2004), D.R. Carmichael; chief auditor at the Public Company Accounting Oversight Board (PCAOB), comments the social responsibility of the independent auditor and the possible mechanisms for ensuring that audits meet society's needs. Carmichael focuses on the role of the PCAOB and its performances in restoring the confidence of investors in the independent auditors of public companies.

In describing the PCAOB's focus, restoring the public confidence, Carmichael (2004, 128) recalls the work of Professor Theodore Limperg (1879-1961) of the University of Amsterdam. Limperg observed that when the confidence that society has in the effectiveness of the audit and the opinion of the audit is lost, the social usefulness of the audit has destroyed.

According to Carmichael (2004, 129), the principles of Limperg's theory are especially relevant in this phase of the development of the audit function. "We have a particular need in our current environment to try to understand and to appreciate the social significance of auditing and the implications concerning in which way an audit should be performed."

'The social responsibility of the auditor, a basic theory on the auditor's function', by Professor Theodore Limperg (1879-1961) of the University of Amsterdam (Limperg Institute, 1932 [1985]), is a booklet in which Professor Theodore Limperg's essays, exposing his general Theory of Inspired Confidence, are translated in English.

The Theory of Inspired Confidence connects the community's needs for reliability of financial information to the ability of audit techniques to meet these needs, and it stresses the development of the needs of the community and the techniques of auditing in the course of time (Limperg Institute, 1985, 3).

In developing his Theory of Inspired Confidence, Limperg (Limperg Institute, 1985, 16) describes the auditor's function / responsibility as follows: "The auditor-confidential agent derives his general function in society from the need for expert and independent examination and the need for an expert and independent opinion based on that examination. The function is rooted in the confidence that society places in the

effectiveness of the audit and in the opinion of the accountant. This confidence is consequently a condition for the existence of that function; if the confidence is betrayed, the function, too, is destroyed, since it becomes useless.”

One important citation concerning the Theory of Inspired Confidence (Limperg Institute, 1985, 18) is the next. *“The normative core of the Theory of Inspired Confidence is this: the accountant is obliged to carry out his work in such way that he does not betray the expectations which he evokes in the sensible layman; and, conversely, the accountant may not arouse greater expectations than can be justified by the work done.”*

According to the citation could be concluded that The Theory of Inspired Confidence does not prescribe definite rules about the behavior of the auditor in each particular case; the principle-based approach, signaled by Carmichael (2004, 129).

“.. The theory expects from the accountant that in each special case he ascertains what expectations he arouses; that he realizes the tenor of the confidence that he inspires with the fulfillment of each specific function” (Limperg Institute, 1985, 19).

According to the Theory of Inspired Confidence (Limperg Institute, 1985, 3), changes in the needs of the community and changes in the auditing techniques result in changes in the auditor's function. Assessing this statement, Carmichael (2004, 129) states that the touchstone for the auditor is always to perform the work and obtain the evidence necessary to provide the assurance that society needs and reasonably expects.

2.9.1.2 The Information Theory. As described in the ‘agency theory’, financial reporting is central to monitoring purposes. An alternative or complement to the monitoring principle is the information principle, focusing on the provision of information to enable users to take economic decisions.

Investors require audited financial information on behalf of their investment decision-making and assessing of expected returns and risks. Investors value the audit as a means of improving the quality of financial information.

An audit is also valued as a means of improving the financial data used in internal decision- making. Data that are more accurate will improve the internal decision-making.

2.9.1.3 The Insurance Theory. The insurance theory is a more recent explanation for the demand for the role of the audit, that is, the ability to shift responsibility for reported data to auditors lowers the expected loss from litigation to managers, creditors, and other professionals involved in the securities market (Cosserat, 2009, 44). When using

audit services, managers and other professionals can demonstrate that they exercised reasonable care.

2.9.1.4 The Agency Theory. In ‘Theory of the firm: managerial behavior, agency costs and ownership structure’ (1976, 306), M.C. Jensen and W.H. Meckling refer to the firm being a ‘black box’, operated so as to meet relevant marginal conditions with respect to inputs and outputs, thereby maximizing profits, i.e., present value. The authors signaled that no theory exists, explaining the way in which the conflicting objectives of individual participants will brought into equilibrium to succeed in value maximization.

Jensen and Meckling (1976, 308) define an agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent. The authors notice that if both parties are utility maximizers (opportunistic behavior); a good reason exists to believe that the agent will not always act in the best interests of the principal.

According to Jensen and Meckling (1976, 308) divergence exists between the agent’s decisions and those decisions which would maximize the welfare of the principal. Within this principal-agent relationship, owners have an interest in maximizing the value of their shares, whereas managers are more interested in ‘private consumption of firm resources’ and firm growth.

Costs that arise because of the delegation decision-making authority from the principal to the agent, which is due to the ‘separation of ownership and control’ in modern corporations, are referred to as ‘agency costs’. Jensen and Meckling (1976, 308) define as the sum of the agency costs:

- Monitoring costs:
Expenditures by the principal to limit the agent’s aberrant activities;
- Bonding costs:
Expenditures by the agent to guarantee that he did not performed certain actions that would harm the principal; and
- The residual losses.

Agency costs (the agency loss) in addition, has exemplified as the extent to which returns to the owners are below what they would be if the principals, the owners, exercised direct control of the corporation (Donaldson and Davis, 1991, 50).

K.M. Eisenhardt (Agency theory: an assessment and review, 1989, 59) notes: “Overall, the domain of agency theory is relationships that mirror the basic agency

structure of a principal and an agent who are engaged in cooperative behavior, but have differing goals and differing attitudes towards risk.” Eisenhardt (1989, 59) discloses an overview of agency theory as presented in Figure 2.2

Agency Theory Overview

Key idea	Principal-agent relationships should reflect efficient organization of information and risk-bearing costs
Unit of analysis	Contract between principal and agent
Human assumptions	Self-interest Bounded rationality Risk aversion
Organizational assumptions	Partial goal conflict among participants Efficiency as the effectiveness criterion Information asymmetry between principal and agent
Information assumption	Information as a purchasable commodity
Contracting problems	Agency (moral hazard and adverse selection) Risk sharing
Problem domain	Relationships in which the principal and agent have partly differing goals and risk preferences (e.g., compensation, regulation, leadership, impression management, whistle-blowing, vertical integration, transfer pricing)

Figure 2.2: Agency Theory Overview (Eisenhardt, 1989, 59)

The ‘model of man’ underlying the Agency Theory is that of a rational actor who seeks to maximize his or her utility with the least possible expenditure. Both agents and principals seek to receive as much possible utility with the least possible expenditure. Thus, given the choice between two alternatives, the rational agent or principal will choose the option that increases his or her individual utility (Davis et al., 1997).

According to Eisenhardt (1989, 60), the agent is more risk averse than the principal. Agents, who are unable to diversify their employment, should be risk averse and principals, who are capable of diversifying their investments, should be risk neutral.

Eisenhardt (1989, 61) cites two main aspects of the agency theory, that is, ‘moral hazard’ – the agent usually has more information about his or her actions and intentions than the principal does (information asymmetry) and ‘adverse selection’ – the principal cannot completely verify the agent’s skills and abilities, either at the time of hiring or while the agent is working.

Subsequent to unobservable behavior (moral hazard or adverse selection), the principal could choose to contract on outcome (Eisenhardt, 1989, 61). According to Eisenhardt (1989, 61) an outcome-based contract motivates behavior by co alignment of the agent’s and principal’s preferences, but at the price of transferring risk to the agent. Opposite, the principal could choose to contract on behavior, i.e., investing in information systems (reporting systems, boards of directors etc.), which reveal the agent’s behavior to the principal.

Davis et al. (1997, 23) put forward the executive compensation schemes, being an example of mechanisms to ensure agent-principal interest alignment and to minimize agency costs. Those financial incentive schemes provide rewards and punishments aiming aligning principal-agent interests. Following Davis et al., incentive schemes are particularly desirable when the agent has an informational advantage and monitoring is impossible.

Deegan and Unerman (2006, 215) notice that within the agency theory literature, the firm itself is considered to be a ‘nexus of contracts’. These contracts are used with the intention of ensuring that all parties, acting in their own self-interest, are at the same time motivated towards maximizing the value of the organization.

According to Donaldson and Davis (1991, 50), a major structural mechanism to restrict managerial opportunism is the board of directors, which provides a monitoring of managerial actions on behalf of the shareholders. The authors assert that an unbiased review will occur more fully, where the chairperson of the board is independent of executive management.

Davis et al. (1997, 23) further mention that the application of agency control does not imply that all managers’ decisions will result in increased wealth for principals; it implies only that managers will strive to attain outcomes favorable for the principals. According to Davis et al., there are many reasons other than poor motivation for agents’ failing to deliver high performance, e.g. low ability, lack of knowledge and poor information.

Agency Theory and the Role of Audit

A principal-agent relationship arises when principals engage another person as their agent to perform some service on their behalf. Delegation of responsibility is helpful in promoting an efficient and productive economy, however delegation also means that the principal needs to place trust in an agent to act in the principal's best interests.

Because of information asymmetries between principals and agents and differing motives, principals may lack trust in their agents and may consequently need to put in place mechanisms to reinforce this trust.

As described in an earlier part of this paragraph, applying 'executive compensation schemes' and monitoring through information systems are examples of mechanisms using in aligning agents' and principals' interests. Another monitoring mechanism is the audit. An audit provides an independent check on the work of agents and of the information provided by an agent, which helps to maintain confidence and trust (Audit quality, 2005, 7).

On behalf of the principal, the auditor assesses whether the financial statements, prepared by the agent, present a true and fair view of the company and are prepared in accordance with general accepted accounting principles. The financial statement audit makes management accountable to shareholders for its stewardship of the company.

"Auditors are engaged as agents under contract but they are expected to be independent of the agents who manage the operations of the business. The primary purpose of audited accounts in this context is one of accountability and audits help to reinforce trust and promote stability" (Audit quality, 2005, 9).

2.9.1.5 The Assurance Theory

An assurance service is a service in which a public accountant expresses a conclusion about the reliability of a written assertion that is the responsibility of another party (Cossierat, 2009, 20). Elder et al. (2010, 8) define an assurance service as an independent professional service that improves the quality of information for decision makers.

Individuals responsible for making business decisions seek assurance services to help improve the reliability and relevance of the information used as the basis for their decisions.

Following Elder et al. (2010, 9), one category of assurance services provided by auditors is ‘attestation services’. Performing attestation services, the auditor issues a report about the reliability of an assertion used by another party. Five categories of attestation services are distinguished:

2.10 Audit of Historical Financial Statements

An audit of historical financial statements is a form of attestation service in which the auditor issues a written report expressing an opinion about whether the financial statements are fairly stated in accordance with the applicable accounting standards. Financial statement users value the auditor’s assurance because of the auditor’s independence from the client and knowledge of financial statement reporting matters.

2.11 Audit of Internal Control over Financial Reporting

An audit of internal control over financial reporting is a form of attestation service in which the auditor evaluates management’s assertion that internal controls have been developed and implemented following well-established criteria. The auditor’s evaluation increases user confidence about future financial reporting, because effective internal controls reduce the likelihood of future misstatements in the financial statements.

2.12 Review of Historical Financial Statements

Performing an audit of historical financial statements, the auditor provides a high level of assurance. For reviews of financial statements, the auditor provides only a moderate level of assurance. Because less evidence will be needed, reviews of financial statements can be performed at a lower fee than an audit.

2.13 Attestation Services on Information Technology

Performing attestation services on information technology, the auditor evaluates management’s assertions about the reliability and security of electronic information.

2.14 Other Attestation Services that may apply to a Broad Range of Subject Matter

Numerous of other attestation services can be performed. In each case, management must provide an assertion before the auditor can provide the attestation.

Eilifsen et al. (2010, 630) provide examples of specific subject matter information, including reporting on sustainability, internal control, greenhouse gas, and pro forma financial information included in prospectuses.

Corporate social responsibility (CSR) reports (sustainability reports) for example, include information on the environment, social and economic performance of the reporting entity. The auditor is engaged to add credibility to sustainability reports. As basis for the sustainability assurance engagement, the auditor uses sustainability reporting guidelines, for example guidelines of the Global Reporting Initiative (GRI). An external assurance of sustainability reports can contribute to their quality, credibility, and reliability.

2.15 Other Theories

In this paragraph, the **Positive Accounting Theory (PAT)** and the **legitimacy theory** will be commented. PAT and legitimacy theory do not necessarily explain the demand concerning auditing. These accounting theories however, underlie the practice of financial accounting and consequently are valuable in understanding the demand for and provision of financial accounting information and the interests and behavior of different parties. In addition, this paragraph presents a description of the stewardship theory.

2.15.1 Positive Accounting Theory (PAT)

In *'Towards a Positive Theory of the Determination of Accounting Standards'* (1978), Watts and Zimmerman seek to develop a positive theory of the determination of accounting standards. "Such a theory will help us to understand better the source of the pressures driving the accounting standard-setting process, the effects of various accounting standards on different groups of individuals and the allocation of resources, and why various groups are willing to expend resources trying to affect the standard-setting process" (Watts and Zimmerman, 1978, 112).

According to Watts and Zimmerman (1990), Positive Accounting Theory (PAT) is concerned with explaining accounting practice. It has designed to explain and predict which firms will and which firms will not use a particular method.

PAT focuses on the relationship between the various individuals involved in providing resources to an organization and in which way accounting can assist in the functioning of these relationships (Deegan and Unerman, 2006, 207). PAT is based on the central assumption that all individuals' action is driven by self-interest and that individuals will always act in an opportunistic manner to the extent that the actions will increase their wealth.

According to Deegan and Unerman (2006), Watts and Zimmerman greatly relied upon the 'agency theory' when developing the Positive Accounting theory. Agency

theory provided a necessary explanation of why the selection of particular accounting methods might matter, and hence was an important facet in the development of Positive Accounting Theory.

An agency relationship comes into existence when a principle engages an agent to perform some service on his behalf. When decision-making authority is delegated, this can lead to some loss of efficiency and consequent costs; agency costs. Based on the central assumption of PAT, managers behave opportunistic and intent to perform self-serving activities that could be opposite to the economic welfare of the principal.

Because of the opportunistic behavior of individuals, organizations will try to put in place mechanisms that have to align the interests of the agents and the principals. Contracts for example are used with the intention of ensuring that all parties, acting in their own self-interest, are at the same time motivated towards maximizing the value of the organization (Deegan and Unerman, 2006, 215). These mechanisms however, will not always be effective to avoid earnings management by managers. The agency problem will cause that managers are able to give a misrepresentation of the earnings figure, either in positive or in negative manner, without the opportunity of stockholders and others to see through (agency risk).

To compensate themselves for the ‘agency risk’, the expectation that the agent’s self-interest will diverge from the principals’ interest, investors will require a higher rate of return, i.e., they will pay less for the shares than their intrinsic value.

Financial reports (public disclosures) which give an account of the agent’s performance have adopted as being a monitoring mechanism. To reduce further the agency risk, principals could apply for an independent audit of these reports. The value of an audit will be recognized if the costs involved are less than the agency costs; the increase in the cost of the company’s share capital if no audit was conducted (Cosserat, 2009, 43).

2.15.2 Legitimacy theory

According to Deegan and Unerman (2006, 271), legitimacy theory asserts that organizations continually seek to ensure that they are perceived as operating within the bounds and norms of their respective societies, that is, they attempt to ensure that their activities are perceived by outside parties as being ‘legitimate’.

Legitimacy theory relies upon the conception of a ‘social contract’ between the organization and the society in which it operates. “The concept is used to represent the

multitude of implicit and explicit expectations that society has about in which way the organization should conduct its operations” (Deegan and Unerman, 2006, 271).

Deegan and Unerman (2006, 272) assert that legitimacy from society’s perspective and the right to operate go hand in hand. Society allows the organization to continue operations to the extent that it generally meets their expectations. Legitimacy theory predicts that management will adopt particular strategies to assure the society that the organization is complying with the society’s values and norms, for example the disclosure of information in annual reports.

Legitimacy theory is one example of many theoretical perspectives, adopted in explaining and predicting accounting practice. Even though this research is about audit services and the audit report, it is worth considering the legitimacy theory. The essence is about information disclosure, accountability, value relevance and the information needs of users. Legitimacy theory could also be signaled as an explanation of the need for an independent opinion on the truth and on the fairness of the company’s’ reporting.

2.15.3 Stewardship Theory

According to Donaldson and Davis (1991, 51), stewardship theory holds that there is no inherent, general problem of executive motivation. “The executive manager, under this theory, far from being an opportunistic shirker, essentially wants to do a good job, to be a good steward of the corporate assets.”

According to stewardship theory, performance variations arise, not from inner motivational problems among executives, but from whether the structural situation in which the executive is located facilitates effective action by the executive (Donaldson and Davis, 1991, 51).

Donaldson and Davis (1991, 52) pretend that stewardship theory focuses not on motivation of the CEO but rather facilitative, empowering structures. Contrary to the agency theory, stewardship theory holds that fusion of the roles of CEO (executive management) and chair of the board of directors will enhance effectiveness and produce superior returns to shareholders than separation of the roles of CEO and chair.

“Agency theory provides a useful way of explaining relationships where the parties’ interests are at odds and can be brought more into alignment through proper monitoring and a well-planned compensation system” (Davis et al., 1997, 24). According to the authors however, to explain other types of human behavior, additional theory is needed.

Following Davis et al. (1997, 21), in stewardship theory, the model of man is based on a steward whose behavior is ordered such that pro-organizational, collectivistic behaviors have higher utility than individualistic, self-serving behaviors. The stewardship theory defines situations in which managers are not motivated by individual goals. They are rather stewards whose motives with the objectives of their principals are aligned.

“Stewardship theorists assume a strong relationship between the success of the organization and the principal’s satisfaction. A steward protects and maximizes shareholders’ wealth through firm performance, because, by so doing, the steward’s utility functions are maximized” (Davis et al., 1997, 25).

Stewards are motivated by intrinsic rewards, such as reciprocity and mission alignment, rather than solely extrinsic rewards. The steward, as opposed to the agent, places greater value on collective rather than individual goals; the steward understands the company’s success as his own achievement.

According to Davis et al. (1997, 37), the primary difference between agency theory and stewardship theory lies in the assumptions about human nature. According to the agency theory, people are individualistic, utility maximizers. According to stewardship theory, people are collective self-actualizers who achieve utility through organizational achievement. Davis et al. summarize the main differences between the two theories as presented in Figure 2.3.

Comparison of Agency Theory and Stewardship Theory		
	Agency Theory	Stewardship Theory
Model of Man	Economic man	Self-actualizing man
Behavior	Self-serving	Collective serving
Psychological Mechanisms		
Motivation	Lower order/economic needs (physiological, security, economic)	Higher order needs (growth, achievement, self-actualization)
Social Comparison	Extrinsic	Intrinsic
Identification	Other managers	Principal
Power	Low value commitment Institutional (legitimate, coercive, reward)	High value commitment Personal (expert, referent)
Situational Mechanisms		
Management Philosophy	Control oriented	Involvement oriented
Risk orientation	Control mechanisms	Trust
Time frame	Short term	Long Term
Objective	Cost control	Performance Enhancement
Cultural Differences	Individualism	Collectivism
	High power distance	Low power distance

Figure 2.3: Comparison of Agency Theory and Stewardship

In answer to the question: ‘Given the advantage of stewardship to principals, why isn’t there always a stewardship relationship?’ Davis et al. (1997, 26) explain that

within the governance contract between owners and executives, owners must decide how much risk they are willing to assume. Risk-adverse owners consequently will perceive that executives are self-serving and will prefer agency governance prescriptions.

Stewardship Theory and the Role of the Audit

The agency model assumes a principal-agent relationship in which differing motives and information asymmetry lead to concern about the reliability of information. Within the agency theory, the role of the audit is to reinforce trust and confidence in financial reporting.

Unlike the agency theory, the stewardship theory holds that no inherent, general problem of executive motivation exists. The model of man is based on a steward whose behavior is pro-organizational and collectivistic.

Following the basic thoughts of stewardship theory, there is no need of implementing monitoring mechanisms. There is no need of engaging audit services in order to secure the reliability of information. However, within stewardship theory an audit could be of value as a means of assisting the executive's stewardship.

According to stewardship theory, the executive manager places greater value on collective rather than individual goals. The executive is motivated to be a good steward of corporate assets and an audit could help to express good stewardship. Displaying audited financial statements, the steward expresses truth and fairness of financial and non-financial performances.

2.16 Summary

This chapter provided a theoretical framework for auditing, describing theories on auditing. The 'agency theory' is the most prominent of the existing theories on auditing and explains the purpose of audit services in communication between a company and its environment.

Perceiving the principal-agent relationship in which the principal and the agent have partly differing goals and risk preferences, the financial statement audit is functioning as a monitoring mechanism. The audit makes management accountable to shareholders for its stewardship of the company.

Limperg's Theory of Inspired Confidence (1932); a basic theory on the auditor's function, stresses the social responsibility of the auditor. According to Limperg, the auditor derives his general function in society from the need for expert and independent examination and independent opinion based on that examination.

Other theories (principles) on the role of the audit focus on, for example, the provision of audited information to enable users to take economic decisions. Here, the audit is valued as a means of improving the quality of financial information.

CHAPTER 3

Material and Methodology

3.1 Introduction

An important part of the research activity is to develop an effective research design which shows the logical link between the data collected, the analysis and conclusions to be drawn. This design satisfies the most suitable methods of investigation, the nature of the research instruments, the sampling plan and the types of data (De Wet, 1997). In this section the research design, sampling type, research instrument, the dependent and independent variables applied throughout the research, and finally the model specifications used for data analysis which are applicable and use in the study are included.

3.2 Materials

3.2.1 Research Design

The study is expected to investigate on the determinants of internal audit effectiveness in the selected public-sector offices. The data used to conduct this study are the primary data obtained through the questionnaires. The questionnaires were distributed both to the organizations senior management team and for their internal auditors. The study areas are selected using purposive sampling method from the federal level public sector offices which have greater impact to influence the country's overall economy.

3.2.2 Study Area

The target populations for this research were the federal public-sector offices which are found in Khartoum city of the Sudan federal government. In Khartoum there are many public sectors, while most of them have internal audit staff but some public sectors haven't internal audit staffs. Due to the difficulty of covering all the total existing public sector, the researcher obliged to minimize its study area by focusing only on 4 purposively selected public-sector offices that are expected to be used as a representative of other sectors.

These sector offices are selected purposively, because the use of purposive sampling enables the researcher to generate meaningful insights that help to gain a deeper understanding of the research phenomena by selecting the most informative participants that is satisfactory to its specific needs.

Therefore, the researcher focused on these public sectors which have enough internal audit staffs, very popular in nature and have greater impact to influence the country's overall social, political and economic issues.

The selected public sectors are as follows:

- 1- **Sudan Water Generating Company limited:** conduct internal audit plan once a year according to the requirement of ISO 19011:2002 standard.
- 2- **Sudanese Standards and Metrology Organization:** conduct internal audit plan once a year according to the requirement of ISO 9001:2008 standard.
- 3- **Sudanese Petroleum Pipelines Company:** conduct internal audit plan twice a year according to the requirement of ISO 9001:2015, 14001:2015 and OHSAS 18001:2007.
- 4- **Sudan Customs:** conduct internal audit plan twice a year according to the requirement of ISO 9001:2008 and 19011:2011.

3.2.3 Study Population

The questionnaires are distributed for these selected public-sector offices to get appropriate responses.

To obtain the adequate responses through questionnaire the researcher believes that distributing the questionnaire for senior managers; in total (27) respondents who use the audit result are appropriate.

And also, to get adequate response from the public sectors internal audit staffs regarding the factors affecting the effectiveness of internal audit in the public sector from each sector and total (41) respondents are believed appropriate to make analysis regarding the effectiveness of IA in the selected public-sector offices.

3.2.4 Sampling and Sampling Techniques

The data collection was conducted based on a survey from the selected public-sector offices that have internal audit team in their offices. From each public-sector office, the management members; chief executive officers (CEO), chief finance officer (CFO) and their respective deputy senior managers who have been used the audit result are participated for the responses distributed. The internal auditors of those purposively selected public-sector offices also participated for the questionnaires administer.

3.2.5 Inclusion Criteria

Internal auditors in public sectors were included.

3.2.6 Exclusion Criteria

External auditors and private sectors has been excluded.

3.2.7 Ethical Consideration

Permission of this study was obtained from Sudan University of Science and Technology/ College of Graduate Studies.

The objectives and benefits of the study were explained to the participants before filling the questionnaire (Appendix –I)

3.3 Methodology

3.3.1 Data Collection Instrument

The primary data were used to accomplish the study, and to collect the data from the respondents included in the sample questionnaires were distributed. The questionnaires were distributed to the managers and the internal auditors of the public-sector office. But, the questions are different for the managers and the IA according to their profession and responsibility. The questionnaire for the manager deals about the effectiveness of the offices internal auditing process, while the questionnaires for the internal auditors are about the independent variables which determine the effectiveness of internal auditors.

The questionnaires was adopted and modified from the prior author and literature review (Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Arena and Azzone, 2009), an approach which is recommended in methodological literature for studies of this nature (Bryman and Bell, 2007) and those questionnaires are prepared in the form of Likert-Scale type (showing respondents agreement or disagreement) by constructing into five point scale where the lowest scale represent strongly disagree and the highest scale represent strongly agree (Likert, 1932). The questionnaires distributed to the respondent are organized in to two parts; the first part comprises the demographic question regarding the respondents, and the second part contains items relating to the effectiveness of IA and its determinants.

3.3.2 Variables used in the Research

3.3.2.1 Dependent Variable.

The dependent variable for this research is the *internal audit effectiveness*. In here the internal audit effectiveness are measured in terms of internal auditors' ability to identify non-compliance activities with the offices procedures and policies, and the contributions added by IA to the public offices. Compliance audit is a type of audit service that mostly performed by internal auditors of the organization (Fadzil, F.H et

al, 2005). Compliance is defined as ‘adhering to the requirements of laws, industry and organizational standards and codes, principles of good governance and accepted community and ethical standards’. Compliance also involves ascertaining the extent of compliance with established policies, plans, procedures, laws and regulations, which could have a significant impact on the organization’s operations (Fadzil, F.H et al, 2005; MoFED, 2004). Therefore, IA is responsible to regularly assess and verify internal operations conformance with organization’s policies and procedures, and then issue compliance report to the concerned body (MoFED, 2004). The added contribution by IA to organizations can be measure in terms of value creation (e.g. its role in the avoidance of corporate failures) and cost saving (Soh and Bennie, 2011; Cohen and Sayag, 2010).

In this case study the researcher was measured the IA effectiveness by implementing the internal audit effectiveness of the public-sector offices with the country’s auditing environment in which the internal auditor’s ability in identifying non-compliance activities and the added contribution by the IA to the public offices. To understand the level of the manager’s perception of IA effectiveness a 5-scale point Likert-type of 15 different item questionnaires were constructed and distributed to the respondents. The researcher has been used the summative score technique for the questions in each factor for each participant. This is because Likert scale is the common summative scores (Balnaves and Caputi, 2001).

3.3.2.2 Independent Variable. This study was focused on five independent variables that might have an impact on the internal audit effectiveness in the public-sector offices. Those predicted variables investigated in this research are:

- The managements support for the IA activity,
- The management’s perception of IA’s value,
- Organizational independence of the IA work,
- The adequate and competent internal audit staff
- The presence of approved internal audit charter.

It should be noted that the data for the independent variables were collected from the internal auditors of the selected public-sector offices. Therefore, the independent variables represent the perceptions of the internal auditors regarding these concepts. Similarly, with the dependent variable items, all of the independent variables items

were measured on a five-point Likert-scale where the lowest scale represent strongly disagree and the highest scale represent strongly agree (Likert, 1932).

As shown in Appendix I, twenty-four different item questionnaires were constructed to identified each of the independent variables of the management support, the management's perception, organizational independence and the availability of adequate and competent internal audit staff, and four items were constructed for the presence of approved internal audit charter; and the internal auditors were asked to express their opinion for those items.

3.3.3 Data Analysis Method

Data analyses are conducted through a descriptive statistic to provide details regarding the demographic questions and the various factors that affect the effectiveness of IA in the public sector. To evaluate the effects of various factors on the effectiveness internal auditors in the public sector the correlation analysis was used.

And also, the Statistical Package for Social Sciences (SPSS) version 16 and Excel were used for the data analysis.

In order to assess the **reliability and consistency** of the instrument the **Cronbach's alpha method** (α) analysis was conducted. Whereas, to determine the relationship among the variables and to test the research hypothesis correlation and regression analysis method are used by meeting the ordinary least square (OLS) assumptions of the linear regression.

3.3.4 Model Specification

The following model is formulated for this research in order to test the research hypothesis set earlier. Most of the independent variables included in the model are extensively used in prior audit researchers (Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Arena and Azzone). So the reliability and validity of the model was recognized and used in this research is to analyze and interpret the result of the study.

$$IAE = \alpha + \beta_1 MS + \beta_2 MP + \beta_3 OIN + \beta_4 ACIAS + \beta_5 AIAC + e_i$$

Where:

IAE → The effectiveness of internal auditors' in identifying non-compliance activities and the added contributions of IA to the public sector offices,

MS → The Managements Support,

MP → The management's perception of IA's value,

OIN → The organizational independence,

ACIAS→ The adequate and competent internal audit staff,

AIAC→ The existence of approved internal audit charter.

α → is a constant, represents the effectiveness of IA when every independent variables are zero.

β_{1-5} → is the coefficient, in which every marginal change in variables on internal auditor's effectiveness affects correspondingly.

e_i → the error term

CHAPTER 4

Data analysis and Discussion

4.1 Introduction

As indicating in the previous chapter, the main attempt of this study is to investigate the determinants of internal audit effectiveness in the public sector. Therefore, this chapter presents the analysis and discussions for research findings obtained from the questionnaires. It reports the investigation results obtained from senior managers and internal auditors of the public-sector offices covered in the questionnaire. The discussion begins with the questionnaires' response rate followed by the descriptive statistics of the respondents related questions; like the gender, age, profession, and level of education. The results of the reliability analysis and the regression assumption test also reported and finally the results of hypothesis testing are presented.

4.2 Descriptive Statistics

4.2.1 Response Rate

The questionnaires were distributed to both the senior managers and the internal auditors of the selected federal level public sector offices. For these, 100 questionnaires are distributed both to the senior managers and internal auditors and from which 68 questionnaires were collected (27 responses from managers and (41) from internal auditors) giving the response rate of 68%. This shows good response rate both for the managers and internal auditors.

4.2.2 Respondents Profile

The tables given below describe the general findings regarding the respondents age, sex, field of study and level of education for both the senior managers and the internal auditors.

Table (4.1): Respondents General Profile

Demographic Questions		Responses			
		Managers		Internal Auditors	
		Frequency	Percentage	Frequency	Percentage
Gender	MALE	18	69.2	12	48
	FEMALE	8	30.8	13	52
	Total	26	100	25	100
Age	30 TO 39	3	11.5	2	7.7
	40 TO 49	11	42.3	9	34.6
	50 TO 59	11	42.3	10	38.5
	ABOVE 60	1	3.8	5	19.2
	Total	26	100	26	100.0
Field of study	Accounting	3	12	2	8
	Management	3	12	11	44
	Economics	1	4	3	12
	Other	10	40	7	28
	Engineer	8	32	2	8
	Total	25	100	25	100
Level of education	Diploma	1	3.8	2	7.7
	Bachelor's Degree	14	53.8	12	46.2
	Master's Degree	9	34.6	8	30.8
	PHD	2	7.7	1	3.8
	Other	0	0	3	11.5
	Total	26	100	26	100.0
	Indicate your sector	public business enterprise [for profit]	18	69.2	18
public office /bureau [Not for profit]		8	30.8	8	30.8
Total		26	100	26	100.0

SOURCE: SURVEY DATA, 2018 SPSS OUTPUT

As shown in Table (4.1) above:

Gender: The respondents from the senior managers 18 (69.2%) were males and 8 (30.8%) were females, while from the internal auditors category 12 (48%) were males and 13 (52%) were females. Here in manager's categories the shares of males are higher than females while in internal audit's categories the shares of females are higher than males.

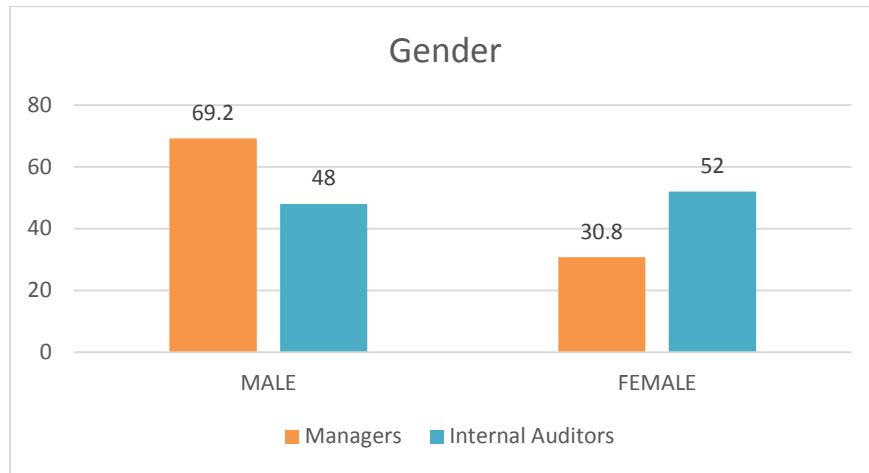


Figure 4.1: Gender distribution

Age: The majority of the ages of respondents of the managers are fall under the age of 40-49 (11, 42.3%),50-59 (11,42.3%), and the rest falls in the age interval of 30 to 39 (3, 11.5%) and above 60 (1, 3.8%); and in the internal auditors category the majority are fall in the age of 50-59 (10, 38.5%) and 40-49 (9,34.6%) and the rest falls in the age of 30 to 39 (2, 7.7%) and above 60(5,19.2%) respondents.

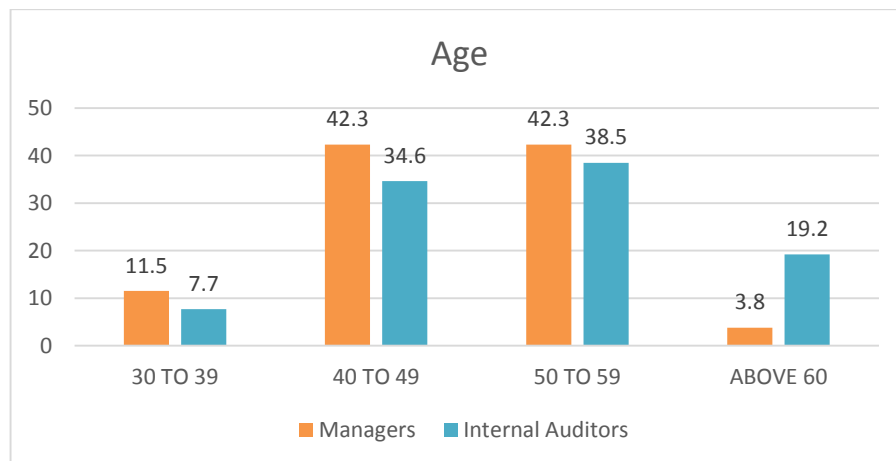


Figure 4.2: Age distribution

level of educational: In terms of the level of educational background, most managers and internal auditors have bachelor's degree (14, 53.8%) and (12, 46.2%) respectively followed by master's degree (9, 34.6%) for managers and (8, 30.8%) for internal auditors. followed by diploma (1,3.8%) for managers and (2,7.7%) internal auditors. Followed by PHD (1, 3.8%) for managers and (2, 7.7 %) internal auditors. from internal auditors categories there were (3, 11.5%) who had other level of educations. These shows the majorities of the respondents were educated /or professional and can contribute more for the effectiveness of their intended work.

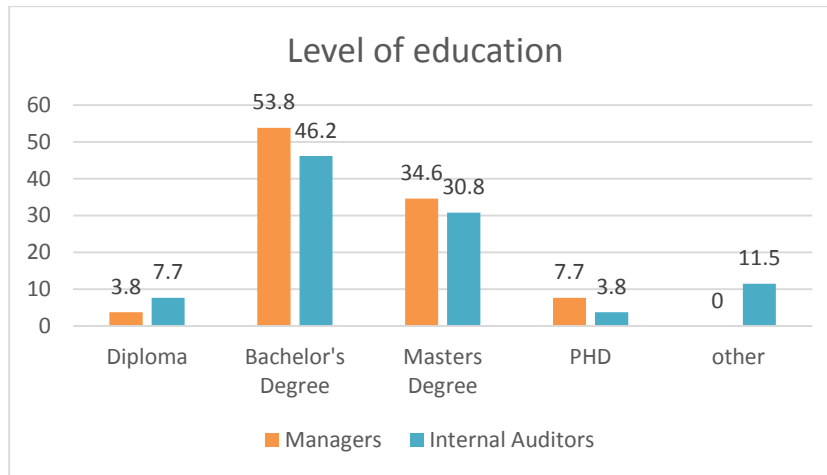


Figure 4.3: Level of educations distribution

Field of study: the respondents were composed of from Accounting (3, 12%), Management (3, 12%), Economics (1, 4%), others fields (10, 40%) and engineer (8, 32%) for managers, while the IA's were composed of from Accounting (2, 8%), Management (11, 44%) economics (3, 12%) other fields (7, 28%) and engineer (2, 8%). Here, the majority of internal auditors were studied management which shows the good assignment of professionals for their appropriate job.

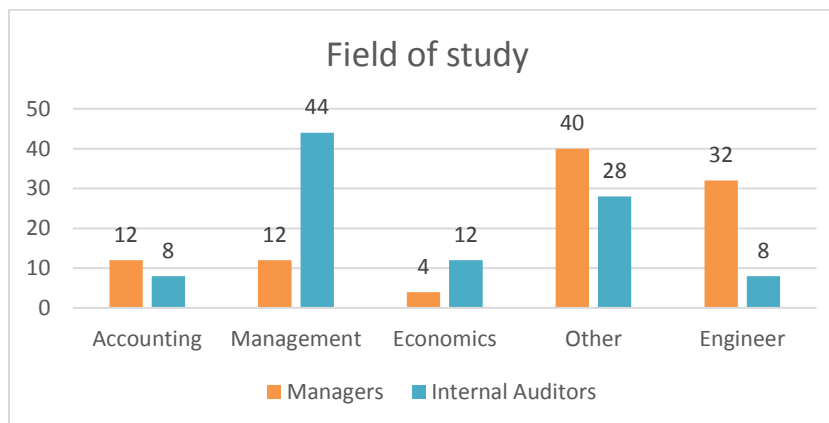


Figure 4.4: Field of study

4.2.3 Internal Auditors Response

The internal auditors, who are the main participants in the internal audit effectiveness were requested separately to response the questionnaires regarding the activities carried out by them, professional certification, experiences working as IA and the presence of audit committee in their sector office as shown in tables 4.2 and 4.3 below:

Table 4.2: Internal Auditors Response

activities carried out by IA in your office/sector

		Frequency		valid percent	
		NO	YES	NO	YES
Valid	Compliance audit	7	19	26.9	73.1
	Financial audit	19	7	73.1	26.9
	Operational/performance audit	9	17	34.6	65.4
	Internal control system evaluation	13	13	50	50
	Risk assessment (analysis) audit	14	12	53.8	46.2
	Total	62	68		

SOURCE: SURVEY DATA, 2018 SPSS OUTPUT

Table 4.3: Internal Auditors Response

		Frequency	Valid Percent
audit committee	valid YES	20	76.9
	NO	6	23.1
	Total	26	100.0
Professional certification	valid Certified Internal Auditor (CIA)	21	80.8
	Certified Public Accountant (CPA)	1	3.8
	OTHER	4	15.4
	Total	26	100.0
experience	valid less than 5	13	50
	5 to 9	9	34.6
	10 to 14	4	15.4
	Total	26	100

SOURCE: SURVEY DATA, 2018 SPSS OUTPUT

The present of Audit Committee, about (n = 20, 76.9 %) public sector offices had audit committees and (n= 6, 23.1%) public sector offices had no audit committees in their office. The availability of audit committee in the public sector have the benefits of monitoring and controlling the internal audit activities and objectives, ensuring the independence, reviewing the internal audit program, ensuring the adequacy of the scope of internal audit activities and monitoring managements actions in terms of financial, risk management and internal control (MOFED, 2004).

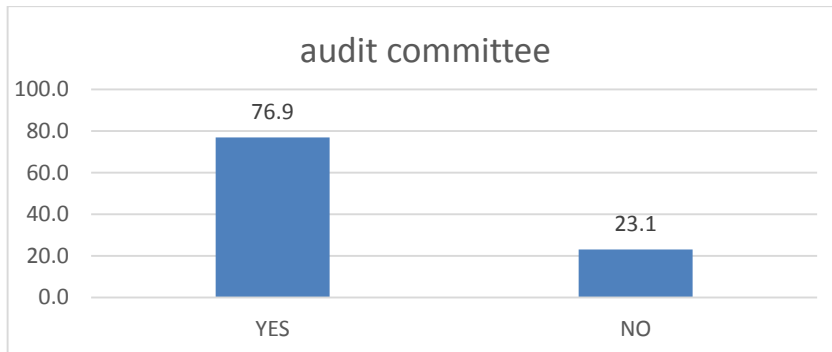


Figure 4.5: The present of Audit Committee

The professional certification of the internal auditor; 21 (80.8%) Certified Internal Auditors (CIA), 1(3.8%) Certified Public Accountants (CPA), ZERO (0%) have Certified Management Accountants (CMA) and also the other 4 (15.4%) are with other certifications.

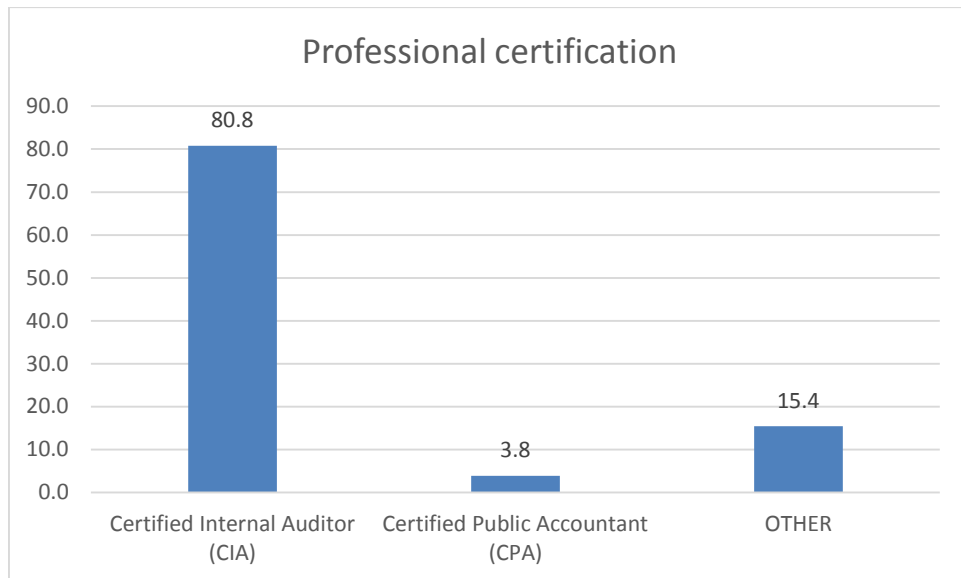


Figure 4.6: The professional certification of the internal auditor

The internal auditors work experience ranges from one year up to 15 years, but the majority of the respondents are in the range of 1 to 5years (13, 50 %) and 5-9 (9, 34.6%) years of work experience followed by 10 to 14 years (4, 15.4%). Here the majority of the IA are well experienced and can perform their auditing activities by using their past audit experiences.

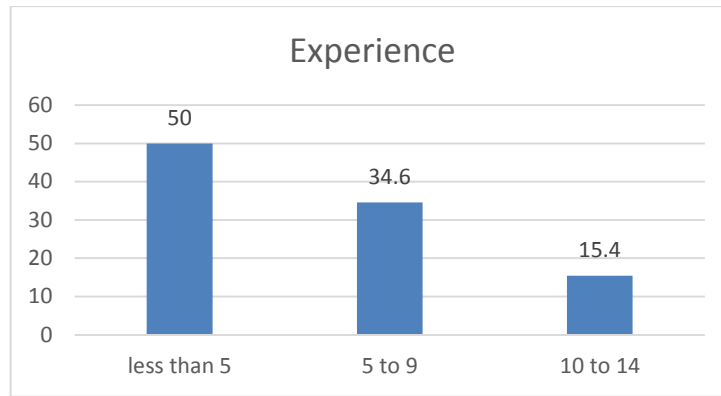


Figure 4.7: The internal auditors work experience

4.3 Statistical Method used in the Analysis

4.3.1 Reliability Analysis

Cronbach's Alpha Method. To measure the consistency of the questionnaire particularly the Likert-type scale the reliability analysis is essential in reflecting the overall reliability of constructs that it is measuring. To carry out the reliability analysis, Cronbach's Alpha (α) is the most common measure of scale reliability and a value greater than 0.700 is very acceptable (Field, 2009; Cohen and Sayag, 2010) and according to Cronbach's (1951), a reliability value (α) greater than 0.600 is also acceptable.

Table 4.4: Cronbach's alpha method

No.	Variable	Reliability
1	internal audit effectiveness IAE	0.799
2	The management supports MS	0.698
3	management's perceptions MP	0.722
4	The organizational independence for internal auditors OI	0.758
5	The presence of adequate and competent IA ACIA	0.756
6	availability of approved IA charter AIAC	0.727
Total		0.884

SOURCE: SURVEY DATA, 2018 SPSS OUTPUT

From table (4.4) above, the value for Cronbach's Alpha (α) was 0.884 for all variables. When these calculated reliability values are greater than 0.7000, and compared with the minimum value of alpha 0.600 advocated by Cronbach's (1951), then the responses generated for all of the variables' used in this research were reliable enough for data analysis.

4.3.2 Assessment of Ordinary Least Square Assumptions

4.3.2.1 Assessment of Normality

In order to test the normality of data, Kolmogorov-Smirnova test of normality was used and conducted on SPSS 16. According to Field (2009), when the test is non-significant ($p > 0.05$) it shows that the distribution of the sample is not significantly different from a normal distribution. Accordingly, the result of test showed in table 4.5 below and Appendix III that all variables were found to be normal and the presence of normality was accepted at $p > 0.05$.

Table 4.5 Test of Normality

		IAE	MS	MP	OI	ACIA	AIAC
N		26	26	26	26	26	26
Normal Parametersa	Mean	58.04	21.35	20.81	20.38	18.92	15.12
	Std. Deviation	9.489	2.607	2.593	3.287	3.752	3.963
Most Extreme Differences	Absolute	0.194	0.16	0.145	0.15	0.179	0.165
	Positive	0.104	0.093	0.13	0.097	0.139	0.118
	Negative	-0.194	-0.16	-0.145	-0.15	-0.179	-0.165
Kolmogorov-Smirnov Z		0.99	0.817	0.739	0.765	0.91	0.843
Asymp. Sig. (2-tailed)		0.281	0.517	0.646	0.602	0.378	0.477

SOURCE: SURVEY DATA, 2018 SPSS OUTPUT

4.3.2.2 Assessment of Multi co linearity

Multi collinearity exists when there are strong correlations among the predictors and the existence of r value greater than 0.80, tolerance value below 0.10 and Variance Inflation factor (VIF) greater than 10 in the correlation matrix are the causes for the multi collinearity existence (Field, 2009; Myers, 1990; Pallant, 2007). Tolerance is a statistics used to indicate the variability of the specified independent variable that is not explained by the other independent variables in the model.

Table 4.6: Co linearity Statistics

Variables	Co linearity Statistics	
	Tolerance	VIF
Management Support	0.861	1.162
Management Perceptions	0.546	1.832
Organizational independence	0.283	3.537
Adequate and Competent IA Staff	0.587	1.704
Approved IA Charter	0.435	2.297

SOURCE: SURVEY DATA, 2018 SPSS OUTPUT

As shown in the collinearity table (4.6) above, the tolerance levels for all variables are greater than 0.10 and the VIF value are less than 10, and also the correlation matrix of all the variables have the paired values among the predictors are less than 0.80 as shown in table (4.6) below indicates that there were no multi collinearity problems that alters the analysis of the findings, rather it leads to the acceptance of r value, tolerance and VIF value.

Table 4.7: Pearson Correlations Matrix

		Correlations					
		IAE	MS	MP	OI	ACIA	AIAC
IAE	Pearson Correlation	1	0.630**	-0.044	0.071	0.410*	-0.169
	Sig. (2-tailed)		0.0005	0.833	0.729	0.037	0.408
	N	26	26	26	26	26	26
MS	Pearson Correlation	0.63	1	0.206	0.0212	0.314	0.224
	Sig. (2-tailed)	0.0005		0.314	0.918	0.119	0.27
	N	26	26	26	26	26	26
MP	Pearson Correlation	-0.044	0.206	1	0.352	0.566**	0.575**
	Sig. (2-tailed)	0.833	0.314		0.0781	0.003	0.002
	N	26	26	26	26	26	26
OI	Pearson Correlation	0.071	0.0212	0.352	1	0.061	-0.182
	Sig. (2-tailed)	0.729	0.918	0.0781		0.768	0.375
	N	26	26	26	26	26	26
ACIA	Pearson Correlation	0.410*	0.314	0.566**	0.061	1	0.21
	Sig. (2-tailed)	0.037	0.119	0.003	0.768		0.302
	N	26	26	26	26	26	26
AIAC	Pearson Correlation	-0.169	0.224	0.575**	-0.182	0.21	1
	Sig. (2-tailed)	0.408	0.27	0.002	0.375	0.302	
	N	26	26	26	26	26	26

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

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

SOURCE: SURVEY DATA, 2018 SPSS OUTPUT

Table 4.7 above depicts the correlation between the independent variables and also with the dependent variable. The result shows the acceptable reliability of the research variables in which, the correlation among predictors were not high indicates there are no Multi co linearity problems among variables.

4.3.3 The Regression Results and Hypothesis Testing

The regression result that are obtained by regressing the internal auditors effectiveness in identifying noncompliance activities and the internal auditors ability in adding value for their organization on the managements support (MS), managements perception (MP), organizational independence (OIN), adequate and competent internal audit staff (ACIAS) and the existence of approved internal audit charter (AIAC) were analyze and reported. Finally, the hypothesis tests were undertaken based on the proposed hypothesis and the regression output results.

4.3.3.1 Regression Results for IAE

The regression result explores the necessary indicators of the internal audit effectiveness by using the variables identified in the model. As indicated in the model summery (table 4.8) the appropriate indicators of the variable used to identify the IAE were explored. That is, the value of R square used to identify how much of the variance in the dependent variable (IAE) identify by the model. The larger the value of R square, the better the model is.

The overall contribution of managements support, management’s perception, organizational independence, adequate and competent internal audit staff and the existence of approved internal audit charter to the IAE accounted for 62% ($R^2 = 0.62$) of the variation in the IAE, the rest 38% are other variables not included in this study.

Table 4.8: Model summery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.788a	0.62	0.525	6.537

a. Predictors: (Constant), MP, OI, MS, ACIA, AIAC

SOURCE: SURVEY DATA, 2018 SPSS OUTPUT

Table 4.9: ANOVA(b)

Model		Sum of Squares	df	Mean Square	Sig.
1	Regression	1396.225	5	279.245	.001a
	Residual	854.737	20	42.737	
	Total	2250.962	25		

a. Predictors: (Constant), MP, OI, MS, ACIA, AIAC

b. Dependent Variable: IAE

SOURCE: SURVEY DATA, 2018 SPSS OUTPUT

Table 4.10: Regression result for IAE

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	16.541	14.68		1.127	0.273		
	MS	2.162	0.541	0.594	3.999	0.001	0.861	1.162
	MP	-1.461	0.949	-0.399	-1.541	0.139	0.283	3.537
	OI	0.415	0.519	0.144	0.8	0.433	0.587	1.704
	AIAC	-0.35	0.5	-0.146	-0.701	0.491	0.435	2.297
	ACIA	1.194	0.472	0.472	2.531	0.02	0.546	1.832

a. Dependent Variable: IAE

SOURCE: SURVEY DATA, 2018 SPSS OUTPUT

The beta (β) sign shows the +ve and -ve strength of the relationship of the independent variables coefficient over the dependent variable. And as shown in table 4.7 above, beta sign of some independent variables shows the positive effect over the predicting dependent variable while others show negative effect. That means, any increase in the independent variables lead to increase in the dependent variable internal audit effectiveness for +ve (β) sign and any increase in the independent variables lead to decrease in the dependent variable internal audit effectiveness for -ve (β) sign. This finding is consistent with most of the previous studies that are identified in this paper (Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Arena and Azzone, 2009; Al-Twaijry et al. 2004).

Therefore, based on the coefficients of the dependent variable (β sign) some of the hypotheses proposed by the researcher are acceptable because they stated the positively relationship with the dependent variable are meet (MS, ACIAS and OI). But based on the statistical significances of the independent variable over the dependent variable at 5% level of significance, only two independent variables (MS, ACIAS) are significantly contributed for the IAE at ($P < 0.05$) level of confidence.

Thus, this implies the MS and ACIAS are the most important determinants of IAE in which the public sector office should give more emphasis in their IA function. Besides this, even if the relationship is positive the independent variable (OI) has not significant contribution for the predicted dependent variable (IAE) because it has a sig. value of greater than 5%. The variable with the level of significance (sig) value less than 5% could make a significance unique contribution to the predicted value of the dependent variable, beyond this level of sig. the variable are not making a significance

contribution for the prediction of the dependent variable (Pallant, 2007; Somekh and Lewinn, 2005).

4.4 Hypothesis Test and Discussion

The regression analysis whose results are presented in tables above provides more comprehensive and accurate examination of the research hypothesis. Therefore, the results obtained from the model were utilized to test these hypotheses. The hypotheses sought to test for a significant influence of management support (MS), management perceptions (MP), organizational independence (OIN), adequate and competent internal audit staff (ACIAS) and the existence of approved internal audit charter (AIAC) on the direct effect of internal audit effectiveness which was measure in terms of internal auditor's ability to identify the noncompliance activities and by their added contributions to the public sector.

As can be seen in table (4.7) above, p value for the factors that affect the effectiveness of internal audit are statistically significant at ($p < 0.05$) which support internal auditors' ability in identifying non-compliance activities and the added contribution by internal audit to the sector.

H1: The management supports are positively related to the internal audit effectiveness in the public-sector offices.

The first hypothesis of this research posted that the effectiveness of the internal audit is directly related with the extent of the management support it receives. Showing the strongly correlated relationship between the IAE and the management support, the positive beta sign and a statistically significant result of management support related with the internal audit effectiveness ($\beta = 2.162$, $t = 3.999$, $P < 0.05$) support the proposed hypothesis acceptable. The management 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 IAE..

The result were consistent with the previous auditing research works of (Mihret and Yismaw, 2007; Cohen and Sayag, 2010) they find that the top management support was the critical determinants of internal audit effectiveness in audit finding and the commitment to strength internal audit through hiring proficient internal audit staff, developing career channels for internal audit staff, and providing internal audit work independence. Similarly, in this research finding the managements

support in terms of trainings, resources and through other necessary facilities to the internal auditors the top management can contribute to the effectiveness of internal audit works for their office.

Therefore, the management support can contribute for the effective result of the internal auditors through their support in terms of continuous training for their IA staff, fulfilling the necessary materials and facilities that the IA staff needs; and this in turn strongly supports the first proposed hypothesis (H1).

H2: The better the management perceptions of internal audit values, the higher internal auditors' ability in identifying noncompliance activities and the more added contributions.

The second hypothesis of this research revealed that there were no direct relationship between the management's perception and the effectiveness of IA in the way of identifying noncompliance activities and the ability of IA to add value to the IAE.

This hypothesis were not supported by the regression result as of the regression results insignificant related with the IAE at ($P < 0.05$). As shown in table 4.7 above the coefficient of MP ($\beta = -1.461$) were negatively related and statistically ($t = -1.541$, $\rho > 0.05$) not significant related with the internal auditors effectiveness by identifying noncompliance activities and in adding more values to the IA works of the public sector offices.

But this hypothesis needs a caution; in that insignificance of the management's perception in determining the IA effectiveness didn't mean that it doesn't completely contribute to the effectiveness of IA. This result may be happened due to the management's support and the available of adequate and competent IA staff highly contributed for the IAE in the public sector offices. This makes the contribution of the MP to the IAE insignificance.

Therefore, the spirit of good perception of the management to the effectiveness of internal audit function in identifying the noncompliance activities and their ability to add value to their office were nothing without the appropriate management support to the internal audit functions and without the existence of adequate and approved IA staffs in the office. Furthermore, the supports from the management and the availability of the adequate and competent IA staff may overshadow in the determinants of the management's perception for the internal auditor's value.

The results were consistent with the previous auditing research works of (Flesher and Zanzig, 2000) they find that to function effectively, internal auditors and

the customers of audit services should possess a similar understanding of what makes internal auditing a value-added activity. The failure to reach this understanding could result in the perception that internal audit is simply an obstacle to achieving production objectives. This can result in underutilized audit services and ignored audit recommendations which adversely influence the effectiveness of IA (Arena and Azzone, 2009).

When employees at all levels perceive that the top management assigns importance to the function of IA, they will cooperate and support these processes (Cohen and Sayag, 2010). This implies that internal audit staffs are more motivated and encouraged to perform audit activities given good management's awareness of IA values. Sarens and Beelde (2006) used a case study approach of five Belgian firms to explore the expectations and perception of both senior management and internal auditors with respect to the relationship between these two parties. They find that, when internal audit operates primarily in a management support role, there is a lack of perceived objectivity and the relationship with the audit committee is weak. However, senior management's expectations significantly influence internal audit and that the perception of senior management is critical to the acceptance and appreciation, to promote value added and to the maturity of internal audit function with the organization.

H3: The organizational independence for internal auditors positively related to the internal audit effectiveness in the public offices.

The third hypothesis of this research which is assumed to be the determinants of IA effectiveness is the independence of the organization in which internal audit work were conducted.

As shown in table above the coefficient of OIN ($\beta = 0.415$, $t = 0.8$) were positively related with the effectiveness of IA. But, because of its statistical result ($P > 0.05$) the regression output result haven't statistically significant relationship between the organizational independence and the IA effectiveness reveals not to support the third hypothesis.

Whereas, it is consistent with the previous studies conducted by (Cohen, and Sayag, 2010; Van Peurse, 2005) they find that, the more organizational independence to the internal auditors plays the vital role in assurance of internal audit effectiveness by freely access of necessary documents, information and data about the organization for

audit work, and can provide audit finding /report/ freely and directly to the responsible body, and this all supports the IA effectiveness in their sector.

Stewart and Subramaniam (2010) review under organizational status the IAF should be given the appropriate status in the organization to enable the function to exercise organizational independence and individual internal auditors to act objectively since internal auditors found in a unique position as employees of an organization with responsibility to assess and monitor decisions made by management. This in turn leads to make the result of OIN for the IAE insignificant contribution and not to support the proposed hypothesis (H3).

H4: The presence of adequate and competent IA staff in the public-sector offices are positively related to the internal audit effectiveness.

The fourth hypothesis of this research posted that the effectiveness of the internal audit is directly related with the presence of adequate and competent IA staff in the public-sector offices. Showing the strongly correlated relationship between the IAE and the ACIA, the positive beta sign and a statistically significant result of ACIA related with the internal audit effectiveness ($\beta = 1.194$, $t = 2.531$, $P < 0.05$) support the proposed hypothesis acceptable. But, this result was inconsistent with some previous auditing researches (Arena and Azzone, 2009; Cohen and Sayag, 2010) they argued that there were no correlation between professional proficiency and adequacy with the IA effectiveness.. The previous research was conducted in terms of the number of internal auditors, professional certification and level of education, whereas this research was conducted the effects of IA by considering the overall abilities of the internal auditor staffs and the availability of adequate and certified internal auditors in terms of their performance to proceed the required auditing activities by matching with the audit standards and organizational objectives by using modern technologies when compared to those previous studies.

Therefore, the existence of adequate and competent IA staff in the public-sector office results with positively relationship with IAE and with high contribution for the IAE by performing their activities on time, cover the planed scope of auditing activities by using the computerized data tools and specific IA software. This results with the overall contribution of internal audit effectiveness and its positive relationship with IAE leads to highly support the proposed hypothesis (H4).

H5: The availability of approved IA charter in the public-sector offices have positive and significant impact on the internal audit effectiveness in the public-sector offices.

The last hypothesis which is proposed to support the effectiveness of internal audit is the existence of approved internal audit charter in the public-sector office. A well drafted IA charter is a crucial ingredient for the successful internal auditing functions. This hypothesis were not supported by the regression result as of the regression results insignificant related with the IAE at ($P < 0.05$). As shown in table 4.7 above the coefficient of AIAC ($\beta = -0.35$) were negatively related and statistically ($t = -0.701$, $\rho > 0.05$) not significant related with the internal auditors effectiveness by identifying noncompliance activities and in adding more values to the IA works of the public sector offices.

In addition, the result of this hypothesis was consistent with the prior audit researches conducted by (Peurseem, 2005; O'Regan, 2002). According to the authors a well drafted IA charter helps the internal audit function to perform its roles of management influence objectively and used as a way of getting access to the information (documents, records, systems, and personnel) that are necessary to perform and reach conclusions on the work. The MoFED (2004) also directs all the public sectors to have approved IA charters that are used as a working manual.

Therefore, the existence of approved internal audit charter in the public-sector office contributes for the effectiveness of internal audit works by facilitating the activities of internal auditors and to make their purpose and authority in line with the standards for the professional practices formulated by the institute of internal auditors in accordance to the rules and regulations of the organization. This strongly supports the proposed hypothesis of the positively related relationship between the availability of AIAC and its significant impact for the internal audit effectiveness (H5)

Chapter 5

Results and Recommendations

5.1 Results

From this study we can conclude that:

- 1- **Management support** was positively contributed for the effectiveness of internal audit functions in selected SUDAN public sector offices in term of full cooperation with auditor to access records and information, they give the necessary resources (facilities) that help the auditors to perform auditing activities as needed, supports the auditors by providing training in order to improve their skill and update with the field.
- 2- **The existence of adequate and competent IA staff**, was positively contributed for the effectiveness of internal audit functions in selected SUDAN public sector offices because most of them have certification in auditing as showed in table 4.3, that mean the internal audit staff number & their skill matches the scope of office's/sector's internal. Therefore, the public-sector office should give emphasis to use these determinant variables to make their service delivery effective, efficient and economical throughout their offices.
- 3- The evidence from the study indicates that the internal auditors of public sector are focusing their activities on **compliance with laws and regulations and Operational/performance audit** as shown in Table 4.2, but regarding Financial audit, internal audit system evaluation and risk assessment Little attention was paid. Risk management is now the modern trend of internal audit and if internal audit unit does not pay much attention to it, it is difficult to the sector to improve organizational performance.
- 4- The internal auditors lack experience and expertise to provide quality work as shown in Table 4.3.

5.2 Recommendations

After watching the research findings and achieved results with regard to the main objective of this study to identify the major determinants of IAE in the public-sector offices and also to prove the hypotheses, the researcher provides the following recommendations to the public-sector offices and to the internal auditors.

- the public-sector office should support more for the internal audit functions by facilitating the IA works, should recruited more adequate and competent IA staff and give sufficient training and professional certification for the existing IA staffs, and should maintain the approved IA charter and workable manuals for their office because it directs the overall activities of the internal auditors in line with IIA standards and the office policies and guidelines.
- The internal auditors of the public-sector office should recommend to maintain and improve their effective contribution for the IAE in their office, by using the supports from their offices management team appropriately, by improving 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 IA function for their office.
- The internal audit staffs of the public sector also recommended to work in accordance with the available internal audit charters, it helps the internal auditors to provide the appropriate reports and to know the extent of their relationships with the managements, briefly describes their rights and duties IA and the employers.
- The researcher also recommends that internal auditors should have to follow the modern definition of internal audit which means, they have to concern on risk assessment and management.
- Further the data are limited to the perceptions of internal auditors, and are not as comprehensive as they would have otherwise been if we had included other stakeholders, such as external auditors. For this reason, perhaps, a future study could be undertaken to explore the perception of other parties such as external auditors on the internal audit's effectiveness. Also, other independent variables could be modeled.
- Finally, further alternative methods such as interviews may help to further explain factors affecting internal audit effectiveness.

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المراجع العربية

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Appendix I
Questionnaires

Sudan University of Science and Technology

College of Graduate Studies

MSc in Management of Quality and Excellence

Research for MSc

Title: Determinants of Internal Audit Effectiveness

Dear Participant:

The intent of this questionnaire is to explore information regarding the determinants of Internal Audit (IA) effectiveness and to conduct Master Thesis (Research) for the partial fulfillment of Master Degree in Management of Quality and Excellence at Sudan University of Science and Technology.

The questionnaires are distributed to the federal level public sector offices that found in Khartoum city. The results of the study are expected to contribute to identify the determinants of internal audit effectiveness.

The conclusions of the study will be drawn in aggregate terms, without any reference to specific office or individual respondents. Please, do not write your name on the questionnaire.

I would also like to assure you that the information you provided will be treated as strictly confidential and used only for the purpose of this research only.

Your honest and thoughtful response is valuable

Thank you in advance for your support and participation.

With best regards,

Salma Farouk Fadel Karrar,

I. Questionnaire Administered to Managers

Objective of the Questionnaire

Effective internal audit function is an important management tool to monitor and direct the internal operations of an organization effectively and appropriately. Therefore, the purpose of this research is to assess and identify factors that affect the effectiveness of internal audit which will be measured in terms of internal auditors' ability in identifying non-compliance activities and the added contribution by internal audit to the sector in different public business enterprises.

In line with this, you are kindly requested to give your response to your personal profile, and to each statement related with the internal auditors' ability in identifying non-compliance activities in your sector and the added contribution by internal audit to your sector as provided in the table below.

A. The personal profiles

General Instruction: Please indicate your choice by putting “√” mark in the bracket.

1. Sex/Gender/:

- i. Male (_____)
- ii. Female (_____)

2. Age (in year):

- i. 20 to 29(_____)
- ii. 30 to 39(_____)
- iii. 40 to 49(_____)
- iv.50 to 59(_____)
- v. above 60 (_____)

3. Your field of study:

- i. Accounting (_____)
- ii. Management (_____)
- iii. Economics (_____)
- iv.Otherspecify_____

4. Level of education:

- i.. Diploma (___)
- ii. Bachelor's Degree (___),
- iii.Masters Degree (_____)
- iv. or others specify_____

5. Indicate your sector:

- i. public business enterprise [for profit] (_____)
- ii.public office /bureau [Not for profit] (_____)

6. Current position in your office/sector_____

7. Number of workers in your office/sector_____

8. Number of internal auditors in your office/sector_____

B. The questionnaire items (questions)

The Questionnaire is prepared in Likert-scale form with five (5) point scales. I ask you to tick (√) or circle the appropriate scale (point) that indicates your opinion in table below. The values of scales are

5 = strongly agree, 4 = Agree, 3 = Neutral, 2= Disagree, 1 = strongly disagree

Sr. No	The effectiveness of internal auditors' in identifying noncompliance activities and added contributions to the organizations	S	C	A	L	E
1	Internal auditors can effectively identify and report any noncompliance activities with my office's/sector's policies and procedures.	5	4	3	2	1
2	Internal Auditors provide useful recommendations and constructive criticisms on non-compliances activities or control systems of the office/sector.	5	4	3	2	1
3	I use the recommendations, criticisms and information provided by internal auditor for decision making.	5	4	3	2	1
4	My office/sector has put its confidence on internal audit staffs, because they may face any problems (non-compliance activities).	5	4	3	2	1
5	The non-compliance reports provided by internal auditors are reliable and significant to my organization/sector.	5	4	3	2	1
6	The internal auditors have confidence to issue audit report because they are capable to determine the nature and frequency of noncompliance activities.	5	4	3	2	1
7	The number of complaints (doubts) about the internal auditors' finding (report) is very low because their report is correct and reasonable.	5	4	3	2	1
8	Internal audit ensures the economical, effective and efficient use of resources in my office/sector.	5	4	3	2	1
9	In my office/sector internal audit ensures activity performed is compliance with established policies, procedures, laws and regulations.	5	4	3	2	1
10	The recommendations of internal audit department provide practical, cost-benefit solutions for correcting the problems that were found.	5	4	3	2	1
11	Internal auditors have the experience and expertise to address corporate risk management problems within the organization	5	4	3	2	1
12	The existing role that the internal audit is playing sufficient enough to address the very purpose for which it is established	5	4	3	2	1
13	Internal auditors in your company are capable of carrying out internal control function under current corporate governance rules	5	4	3	2	1
14	The existence and findings (reports) of Internal Auditors meet my expectations.	5	4	3	2	1
15	The internal auditor reports are highly considered for decision making and internal controls by the management	5	4	3	2	1

II Questionnaire Administrated to Internal Auditors

Objective of the Questionnaire

Effective internal audit function is an important management tool to monitor and direct the internal operations of an organization effectively and appropriately. Therefore, the purpose of this research is to assess and identify factors that affect the effectiveness of IA function in different public offices.

In line with this, you are kindly requested to give your response to your personal profile and each statement related with the management's perception of internal audit function, the management support, the organizational independence, the adequate competent internal audit staff and the approved internal audit charter as provided in the table below.

A. The personal profiles:

General Instruction: Please indicate your choice by putting “√” mark in the bracket.

1. Sex/Gender/:

i. Male (_____)

ii. Female (_____)

2. Age (in year):

i. 20 to 29 (_____)

ii. 30 to 39 (_____)

iii. 40 to 49 (_____)

iv. 50 to 59 (_____)

v. above 60 (_____)

3. Your field of study:

i. Accounting (___)

ii. Management (___)

iii. Economics (___)

iv. other specify _____

4. Level of education:

i. Diploma (___)

ii. Bachelor's Degree (___),

iii. Masters Degree (_____)

iv. or others specify _____

5. Professional certification (if any):

i. Certified Internal Auditor (CIA) (___)

ii. Certified Public Accountant (CPA) (___)

iii. Certified Management Accountant (CMA) (___)

iv. Other (specify) _____

6. Number of years of experience you work as an internal auditor: _____

7. Does your organization/sector have audit committee?

i. YES (_____)

ii. NO (_____)

8. Indicate your sector: -
 i. Public business enterprise [for profit] (___)
 ii. Public office /bureau [Not for profit] (____)

9. What are the activities carried out by IA in your office/sector? You can select more than one.

- i. Compliance audit (___)
 ii. Financial audit (___)
 iii. Operational/performance audit (___)
 iv. Internal control system evaluation (___)
 v. Risk assessment (analysis) audit (___)

B. The questionnaire items (questions)

The Questionnaire is prepared in Likert-scale form with five (5) point scales. I ask you to tick (√) or circle the appropriate scale (point) that indicates your opinion in table below. The values of scales are
 5= strongly agree, 4= Agree, 3= Neutral, 2= Disagree, 1= strongly disagree

Sr	The Management Support	S	C	A	L	E
1	I receive full cooperation, access to records and information from my office/sector	5	4	3	2	1
2	I can get the necessary resources (facilities) that help me to perform auditing activities as needed.	5	4	3	2	1
3	The office/sector supports me by providing training in order to improve my skill and update with the field.	5	4	3	2	1
4	The office/sector supports me to introduce myself with new technology, policy or procedures when it is necessary.	5	4	3	2	1
5	The office/sector supports Internal Auditing staffs by budgeting funds for certification to have relevant education in auditing that allows them to audit all of the organization's/sector's systems.	5	4	3	2	1
	Management's perception of internal audit function					
6	The office/sector has enough awareness and good perception about internal auditing roles.	5	4	3	2	1
7	The office/sector considers internal auditing practices as a value adding activity and I work smoothly & regularly with the management.	5	4	3	2	1
8	The office/sector encourages me to implement my recommendations, to promote value-added activities and to strength internal audit function.	5	4	3	2	1
9	The position/status of internal audit is clearly recognized by the management in my office/sector.	5	4	3	2	1
10	The office/sector see internal auditing as providing internal assurance through investigations, check & assessment, and consultants & adviser particularity into controls associated to management performance and internal operations	5	4	3	2	1
	Organizational independence					
11	Perform the auditing activities without any interference from anybody and without any influence from the office/sector.	5	4	3	2	1

12	I freely decide the scope, time and extent of auditing procedures based on auditing standards and the office's/sector's policy.	5	4	3	2	1
13	objectively examine auditing issues only meeting on reliable audit evidence and no management interest is involved for adjustment beyond auditing standards & values	5	4	3	2	1
14	I feel free to include any audit finding in my audit work and report directly to responsible body.	5	4	3	2	1
15	I can freely access necessary documents, information and data about the organization/sector for my audit work.	5	4	3	2	1
	The adequate competent internal audit staff					
16	My office/sector has sufficient skilled internal auditors. Most of them have certification in auditing.	5	4	3	2	1
17	It is possible to audit and review each activity on time, and cover the planned scope of auditing activities.	5	4	3	2	1
18	The audit procedures and evidence collections are completed on time, since enough and skilled internal auditors are available or employed.	5	4	3	2	1
19	The internal audit staff number & their skill matches the scope of office's/sector's internal operations.	5	4	3	2	1
20	The work of internal audit is performed with modern technology that uses computerized data tools and specific IA software	5	4	3	2	1
	The approved internal audit charter					
21	Internal audit charter is maintained (available) in my office /sector.	5	4	3	2	1
22	The purpose and authority of internal audit is clearly defined in charter.	5	4	3	2	1
23	The purpose and authority of internal audit charter is in line with "Standards for the Professional Practice" formulated by the Institute of Internal Auditors	5	4	3	2	1
24	The IA charter specifies the internal audit activity's position within the office; authorized access to records, personnel, and physical properties relevant to the performance of engagements, and the defined scope of IA activities	5	4	3	2	1

Appendix II

The Arbitrators

Name	Position
Dr.Abdalsalam Adam Hamid	Lecturer/Business Administration Department/ Sudan University of Science and Technology
Dr. Abbas Ibrahim	Associate Professor/Deanship of Quality &Development/ Sudan University of Science and Technology