

ST. MARY'S UNIVERSITY  
SCHOOL OF GRADUATE STUDIES



DETERMINANTS OF INTERNAL AUDIT EFFECTIVENESS IN THE PUBLIC  
SECTOR, (CASE STUDY IN SELECTED ETHIOPIAN HEALTH SECTOR  
OFFICES)

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ADDIS ABABA, ETHIOPIA

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## Acronyms Used

- ACIAS Adequate and Competent Internal Audit Staff
- AIAC Approved Internal Audit Charter
- CFIA Competency Framework for Internal Auditing
- 3Es Effective, Efficient and Economical
- HAPCO HIV Prevention and control Organization
- IIA Institute of internal auditors
- IA Internal Auditors
- IAE Internal Audit Effectiveness
- MP Management perception
- MS Management Support
- MoFEC Ministry of finance and Economic Development
- OAG Office of the Audit General
- OLS Ordinary Least Square
- OIN Organizational Independence
- PFSA Pharmaceutical Fund and Supply Agency
- SAP Statement on Auditing Practice
- SPSS Statistical Package for Social Science

## **Abstract**

*The main purpose of this study was to investigate on the determinants of internal audit effectiveness in the selected Ethiopian health sector offices. This investigation is focused on 5 purposely selected health sector offices that are expected to represent all other health sectors. The management teams and the internal auditors of the selected health sector office are the source for the required data to the researcher through the questionnaires administered. In addition, 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 health sector management. According to the regression output the management perception, the existence of adequate and competent IA staff, and the availability of approved IA charter were contributed for the internal audit effectiveness in the health sector significantly and positively. The remaining two variable; the managements support for the IA value and the organizational independent of internal auditors were positively and negatively related respectively with the IAE and their contribution for the IAE were statistically not significance. All of these five independent variables are making 39.5% of the contributions for internal audit effectiveness in the health sector offices. The health 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 health sector offices.*

**Key Words:** *Internal Audit; Ethiopian Public sector offices; internal audit effectiveness; determinants of internal audit effectiveness;*

# CHAPTER ONE

## 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. Ever more larger 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 (RolandasRupsye, 2005).

Public sector offices(health sector is one of the public sector) 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 provide 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 andYismaw, 2007).

This research focuses on the determinants of Internal Audit Effectiveness in the selected health sector office found in Addis Ababa mainly federal government offices: Pharmaceutical Fund and supply Agency, ministry of Health, St. Paul Hospital, Ethiopian Health Insurance, Alert

Specialized Hospital, HIV Prevention and control Organization/HAPCO/, Emmanuel Specialized Hospital, Blood Bank, TB Specialized Hospital. Mostly, the efficiency and effectiveness of the management operations in public sector (health 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 Peurseem 2005; Belay, 2007). Therefore, it is important to have effective internal audit unit as part of modern governance system in health sector offices (one of the Public Sector). 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 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 planed 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 activities of the corporate governance system. All the stakeholders were 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 prepared 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, the overall responses by the management to the IA findings and recommendations is generally not adequate in universities, Health sectors, which are part of the public sector. Moreover, the number of actual audit performed in a period was usually less than the number of audits stated in the annual audit plan was not supporting the effectiveness of the internal auditors in the organization (Mihret and Yismaw, 2007).

The area that was looked in this research focus on 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 Ethiopian Health sector 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 was actually implemented by the audited 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).

Accordingly, in this study the researcher was attempted to identify the factors influencing internal auditors 'effectiveness in the Health sector offices that was mentioned above 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 above Health Sector offices was examined and answered.

### **1.3. Objective of the Study**

#### **1.3.1. General Objective**

The general purpose of this study was to investigate the determinants of internal audit effectiveness in the selected Health sector offices those were mentioned above.

### **1.3.2. Specific Objectives**

Specifically, the researcher was try to achieve the following objectives;

- To look at the contributions of management support for IAE
- To inspect the contributions of management perception for IAE
- To scrutinize the contributions of organizational independence of internal auditors for IAE
- To observe the contributions of adequate and competent internal auditor's staff for IAE
- To examine the contributions of approved internal audit charter for IAE

### **1.4. Research Questions**

The research has proposed to answer the following research questions;

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

### **1.5. Research Hypotheses**

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 proposed the following directional hypotheses and was tested:

*H1*: Management support was positively and significantly related to the internal audit effectiveness in the Health Sector offices that are mentioned above.

*H2*: The better the management's perceptions of internal audit values, the higher internal auditors' ability in identifying noncompliance activities in Ethiopian health sector office which was important concepts to show the influential output of the internal Auditors.

*H3*: Organizational independence for internal auditors had significant positive effect on internal audit effectiveness

*H4*: The presence of adequate and competent IA staff had significant positive impact on internal audit effectiveness

*H5*: The availability of approved IA charter had positive and significant impact on internal audit effectiveness

### **1.6. Significance of the Study**

The internal auditors had a significant impact to control any non-compliance activity in line with the established policies, plans, procedures, laws and regulations, set by the government which could have a significant impact on the organization's operations. The internal auditors were also essential to add or create value to the organizations, to avoid failure and to save the operating and administration costs in accordance with the organization's policies and procedures. Therefore, this research was very essential to show the effectiveness of the internal auditors by assessing the factors which determines the Health sectors internal audit effectiveness. In addition this research was important for the Health sector office to examine their policy and procedures and for future researchers to develop a conceptual literature development.

### **1.7. Scope of the Study**



The study, focus on the determinants of internal audit effectiveness would more successful if it was conducted in all Health Sector offices that are found in Addis Ababa under the federal Government (they are eleven in numbers). But, those offices that do not have sufficient internal Audit staffs was excluded by researcher, and due to this the health sector offices which was involved in this research work are limited to 5 purposively selected health sectors (Pharmaceutical Fund and supply Agency, ministry of Health, St. Paul Hospital, Alert Specialized Hospital, HIV Prevention and control Organization/HAPCO). Mostly which are expected to show the effects of all the rest untouched offices.

### **1.8. Limitations of the Study**

The intent of this study was 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 those health sector offices. Other determinates like size of internal Audit staff; the relationship of internal and external Auditors was not involved in this study.

### **1.9. Organization of the Research**

In addition to the preliminary page, 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. The second chapter describes the detail review of related literatures with regard to the internal audit effectiveness and the variables which affect the internal audit effectiveness. The third chapter expresses the information regarding the sampling techniques used to conduct the research. The fourth chapter was the analysis, discussions and presentation part of the research findings and finally, the last chapter describe about the conclusions and recommendations of the case study followed by the references and appendixes.

## **CHAPTER TWO**

### **2. REVIEW OF RELATED LITERATURE**

#### **2.1. Introduction**

Organizations have encountered rapid changes in economic complexity, expanded regulatory requirements, and technological advancements in recent years. In addition to these changes the current corporate scandals and the global financial crisis also pushed the public and regulatory bodies to give unique position to internal audit in corporate governances for internal assurance services (Soh and Bennie, 2011). These changes have given the IA a set of expanded opportunities to support and advice management; evaluate risk exposures relating to the organizations governance, identify internal control system efficiency and effectiveness, safeguarding of assets; and compliance with laws, regulations, and contracts (IIA, 2001; MoFED, 2004). The public sector offices are the major vehicle for economic development due to their engagement in various economic activities; such as Health service, manufacturing industry, banking and financial service sectors, construction sector, hotel and tourism industry, etc. To become efficient and effective in each economic activity the performance of the management should regularly measure and assess to take corrective actions when bad performance is found. Accordingly, the management of the public offices is responsible to follow up the implementation of economic policy and procedure, and submit reports on the performance of the economy (MoFED, 2004). Therefore, the effectiveness of IA should receive the greater attention in research area to enhance the quality of its report. In line with this, the current research will focus on the determinants of IA effectiveness in selected Health sector offices that are found in Addis Ababa at Federal Level.

#### **2.2. Theoretical Review**

##### **2.2.1. Internal Audit and Related Literature**

A simple and more traditional meaning of internal auditing is defined as: an independent appraisal function established within an organization to examine and evaluate its activities as a service to the organization. Later on, the new Institute of Internal Audit (IIA, 2001), 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.* According to this definition the major scope of the internal auditors are making assurance to the organization and giving consultant services to the overall managements of the corporate governance. By providing the independent opinion and conclusions regarding the operation, function, system and wellbeing of the organization the IA can provide assurance services; and by giving the advisory service based on the specified requests of an engagement client the internal auditor can give the consulting service to the organization.

Internal audit are the mechanism through which information about the effectiveness of the quality system is gathered by auditors selected from within the company but, who are independence of the area, function or procedures being audited or the Internal Audit Function (IAF) is the mechanism through which the operation of the quality management system is formally monitored and in accordance with the documented quality system is assured (MoFED, 2004). The Statement on Auditing Practice (SAP-6) of the Institute of Chartered Accountants of India describes internal audit as “the plan of organization and all the methods and procedures adopted by the management of an entity to assist in achieving management’s objective of insuring, as far as possible, the orderly and efficient conduct of its business, including adherence to management policies, the safeguarding of assets, prevention and detection of fraud and error, the accuracy and completeness of accounting records and timely preparation of reliable financial information.

On the other hand, internal audit is a critical appraisal of functioning of various operations of an enterprise including the functioning of the system of internal check. Exceptions from normal functioning of internal check system are exposed in internal audit. Accuracy, completeness, reliability and timeliness of accounting information are tested and reported for remedial action. Non-accounting areas with the operational side of enterprise are critically studied, analyzed and

weakness of the system or practice with inefficiency, wastage and frauds are brought to the notice of the management. Suggestions for increasing the effectiveness of the system, for improving the productivity and profitability of business practices are offered. Internal audit is the independent appraisal of activity within an organization for the review of accounting, financial and other business practices as a protective and constructive arm of management. It is a type of control which functions by measuring and evaluating the effectiveness of other types of control (B.N.Tandon *14th edition, p.112-115*).

Professor Walter B. Meigs of America says internal auditing consists of a continuous, critical review of financial and operating activities by a staff of auditors functioning as full time salaried employees. Internal audit implies an audit of the accounts by the employees of the business. The work is done by a separate set of staff that may or may not have professional audit qualifications. The function of an internal auditor is practically the same as that of an auditor. In addition to that an internal audit has to see that there is no wastage and the business is carried on efficiently and effectively. Again if an internal auditor finds that as a result of the inefficiency of the management, the management the concern has suffered a loss, it is his duty to report the fact. The IA has to be reported to the management whether the policy and plans of activities prescribed by them have been implemented, whether the internal controls and checks established were adequate, whether the actual results obtained were varying from the estimates, etc. to enable the management to achieve the objective of the company in the planned manner.

### **2.2.2. Types of Audits Performed by Internal Auditors**

A variety of audits are performed by the internal Auditors. These audits include: Operations Audits: These audits examine the use of resources to determine if resources are being used in the most effective and efficient manner to fulfill the organization's mission and objectives. Financial Audits: These audits review accounting and financial transactions to determine if commitments, authorizations, and receipt and disbursement of funds are properly and accurately recorded and reported. This type of audit also determines if there are sufficient controls over cash and other assets and that adequate process controls exist over the acquisition and use of existing resources. Compliance Audits: These audits determine if entities are complying with applicable laws, regulations, policies and procedures. Examples include federal and state laws, and Trustee

policies and regulations. Information Systems Audits: These audits review the internal control environment of automated information processing systems and how people use these systems. The audits usually evaluate system input, output; processing controls; backup and recovery plans; system security; and computer facilities. Internal Control Reviews: These audits focus on the components of the major business activities, such as payroll and benefits, cash handling, inventory and equipment, physical security, grants and contracts, and financial reporting.(source :IIA, 2001; MoFED, 2004)

### **2.2.3. 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”. All the three authors defined effectiveness in terms of achieving the IA goals and objectives, though interpreted in different ways. Mihret and Yismaw (2007) described the characteristics of effective internal audit unit from the internal audit point of view. But, The area that will look in this research focus on 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 Ethiopian Health sector which are an important concept to show the influential out puts of the internal auditors

#### **Effective Internal Audit (IA):**

- Ñ Undertakes an independent evaluation of financial and operating systems and procedures;
- Ñ Contributes to the achievement of organizational goals;
- Ñ Needs management’s commitment to implement recommendations;
- Ñ provides useful recommendations for improvements as necessary;

Ñ Affected negatively by lack of attention from management which in turn adversely affects the audite attributes Source: (Mihret and Yismaw, (2007) internal audit effectiveness Journal.)

#### **Senior management expects internal audit:**

- To compensate for management's loss of control resulting from increased organizational complexity,
- To be the safeguard of corporate culture through personal contacts with people in the field,
- To be a supportive functions in the monitoring and improvement of the risk management and internal control system,
- To be laid a training ground for future managers, and
- To collaborate actively with the external auditors to increase total audit coverage.

This indicates that internal audit and management is the interdependent unit that should be collaborated to achieve organizational goals. While doing their activities, there is some value that internal audit unit seeks from management (such as management support, commitment, expectation, etc.) and that the management wants from the internal audit like adding value in decision making by providing sufficient information and reducing information asymmetry, monitoring and improvement of the risk management and internal control system.

#### **2.2.4. Effective internal Control System**

**Effective internal control system:** Glance (2006) provided that internal control system refers to “the local government process and procedure that is been established with the aim of objective achievement.” 18 Section 125 of (IAG, 2008) stipulated that “local government should provide a sound system of internal control system which should assist toward the achievement of objective.” Similarly, the internal control system also serves as a process that guides an organization towards achieving its established objectives (Amudo & Inanga, 2009; Baltaci & Yilmaz, 2006; Jokipii 2010). From the above definition of internal control system, it can understand clearly that it all about the provision that will assist to the achievement of objectives. In this context, local government should ensure that their internal control system is well

established in order to assist internal audit towards objective achievement of organization. Similarly, quality of an organization internal control system has significant impact on the accuracy of management guidance, likewise firms that disclose ineffective internal controls system have larger tendency of experiencing management errors in their operation than those firms that report effective internal controls system (Feng, Li & McVay, 2009). Therefore, it is the responsibility of management of an organization to ensure that effective internal control system is put in place that will ensure the achievement of organizational established objectives. This is because establishment and supervision of effective internal control systems are the responsibility of management, not auditors (Changchit et al, 2001). At the same time effective internal controls system are fundamental drivers toward earnings quality (Church & Schneider, 2008). In the same vein, effective internal control system has an essential role to play in a firm's success (Jokipii, 2010); in line with the above issue, effective internal control system could also play an important role in the effectiveness of internal auditors particularly at local government.

Therefore, implementing and maintaining such effective internal control system will ensure compliance with laws and regulations even in health care section (Amudo & Inanga, 2009; Gundling, 2000). Meanwhile, it is good for local government to improve the effectiveness of their internal control system in order to enhance the effectiveness of internal audit. Furthermore, the main responsibilities of internal control system in local government covers; ensuring full protection of council's assets; ensuring proper utilization of councils resources; proper authorization of revenue and expenditure; proper expenditure monitoring; removal of any misconduct in finances (Kwanbo, 2010).

Al-Twajry et al (2004) also found that effectiveness of internal control system helps external auditors to rely on the work of internal auditors and thereby improve their effectiveness. Therefore, internal control systems are integral component of the management processes of a public sector which should be establish in order to provide reasonable assurance that the operations are carried out efficiently and effectively. Effective internal controls systems are essential to the effectiveness of local governments operation because it deals with the activities or procedures that are designed to provide reasonable assurance that operations are performing according to plan and these can also influence the effectiveness.

COSO also provides the basic principles representing the fundamental concepts of effective internal control in five components of the framework (Candreva, 2006; Sudsomboon & Ussahawanitchakit, 2009). Though Amudo and Inanga (2009) argued that the weakness of the COSO mechanism is failure to recognize Information Technology as one of the major control components of internal control system and Information Technology is very crucial to internal control framework. That is why most organizations today used Information Technology for authorization, initiation, recording and processing of transactions, because its ensures effectiveness of internal controls system and thereby making it six. At the same time advancements in technological have increased the importance placed on internal controls system (Rezaee et al, 2001). These components must be present and functioning effectively for any internal control system to achieve organizational objectives (COSO):

- ❖ **Control environment:** Is the major aspect of managing an organization this is because is a reflection of the attitude and the policies of management in regard with the importance of internal audit in the economic unit (Theofanis, et al 2011). It has influence over organization goals achievement (Aldridge & Colbert, 1994).
- ❖ **Risk assessment:** This is the identification and analysis of relevant risks associated with the achievement of the management objectives (Theofanis, et al 2011), similary (Sudsomboon & Ussahawanitchakit, 2009) view risk assessment as the process of identifying and analyzing management relevant risks to the preparation of financial statements that would be presented fairly in conformity with general accepted accounting principle.
- ❖ **Control activities:** These are policies, procedures and mechanisms that ensure management's directives are properly carry out (Aikins, 2011; Rezaee, Elam & Sharbatoghlie, 2001). Proper documentation of policies and procedural guidelines in these aspects help to determine not only how the control activities are to be executed but also provide adequate information for auditors examination of the overall adequacy of control design over financial management practices (Aikins, 2011).
- ❖ **Information and communication:** refers to the process of identifying, capturing, and communicating of relevant information in an appropriate manner and within timeframe in order to accomplish the financial reporting objectives (Aldridre & Colbert, 1994).



However, effective communications should occur in a wider sense with information within the various sections of the organization (Theofanis et al, 2011).

- ❖ **Monitoring:** it is usually accepted that internal control systems need to be adequately monitored in order to assess the quality and the effectiveness of the system's performance over time. Monitoring provides assurance that the findings of audits and other reviews are promptly determined (Theofanis et al, 2011).

### **2.3. Empirical Reviews**

As the main aim of this research is to assess the effectiveness of internal audit in the Health sector/one of the public sector/, different authors and researcher's idea and recommendations regarding the related topic of internal audit are analyzed and presented. Although the prologue of internal audit in Ethiopia are dated in the 1940s the time also the United States and most European countries are adapted; the effectiveness of internal audit in the public sector are challenged because of the factors that hinder the development of IA in Ethiopia. For the ease of presenting the literature those studies regarding the main determinants/factors/ that influence the effectiveness of internal audit in the public business enterprise sector; such as the perceptions of the management, management support, organizational independence of internal auditors, adequate competent of IA staff and the presence of IA charter reviewed from different researchers are included in these literature.

#### **2.3.1. Management Support**

Internal auditors have a close relationship with organization's management in their day to day activities. They need good support and perception from their management to be more effective and to achieve the audit objectives. Management support is expressed in terms of supporting the auditing process by fulfilling the necessary resources, finance, transport if required, providing training, introducing auditors with new technology and procedures, budgeting funds for certification and other facilities that facilitate the internal auditing works. Management support has a far-reaching consequence on IA effectiveness in organizations. For example, Mihret and Yismaw (2007) in their case study of IA effectiveness on public sector shows that the component

of management support consists of the response to audit finding and the commitment to strength internal audit which has significant influence on IA effectiveness. Given the fact that internal audit activities are performed in dynamic management process and more Supportive environment, internal auditor expects senior management to take the first steps to support the IA process. Because, Sarens and Beelde (2006) argue that the overall acceptance and appreciation of IA within the company is strongly dependent upon the support they receive from senior management. Internal audit actively seeks management support with resources, commitment to promote and communicate their added value. The management support is almost crucial to the operation and internal audit; because all other determinants of IA effectiveness derive from the support of top management, given that hiring proficient IA staff, developing career channels for IA staff, and providing organizational independence for IA work are the results of decisions made by top management (Cohen & Sayag, 2010). This means it is the interest of management to maintain a strong internal audit department (Adams, 1994; Mihret and Yismaw, 2007). In addition implementation of audit recommendations is highly relevant to IA effectiveness (Sarens and Beelde, 2006; van Gansberghe, 2005) which is the component of management support (Mihret and Yismaw, 2007). The management of an organization is viewed as the customer receiving IA services. As a result, management's commitment to use audit recommendations and its support in strengthening internal audit is vital to IA effectiveness. Therefore, audit finding and recommendations would not serve much purposely unless management is committed to implement them. Furthermore, Belay, (2007) found that to curb corruption and inefficiency in the public sector (Health sector) of Ethiopia, it is mandatory to have effective internal audit function (IAF) that in turn needs appropriate governance structure, mobilizing sufficient and appropriate resource and competent personnel.

### **2.3.2. 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 III, 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 (Flesher and Zanzig, 2000) 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 & 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 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.

### **2.3.3. Organizational Independence**

Independence has no single meaning and interpretation across the people; hence the concept is subject to ambiguity and uncertainty (Wines, 2012). However, for the purpose of the case study independent refers to the concept of being free from any management influence while internal auditors perform audit activities and issue audit report (Ahmad & Taylor, 2009; Belay, 2007; MoFED, 2004). Independence is fundamental to the reliability of auditor's reports. Those reports would not be credible, and investors and creditors would have little confidence in them, if auditors were not independent both in fact and appearance. The assurance services provided by auditors derive their value and credibility from the fundamental assumptions of independence of mind and independence in appearance (Wines, 2012; Stewart and Subramanian, 2010). However, due to an often strong direct or indirect relationship between IA and the Chief Executive Officer (CEO) and/or chief Finance Officer (CFO), it is reasonable to expect that senior management is in a position to exert a significant influence over IA (Sarens and Beelde, 2006; Van Peursem, 2005). Independence in fact exists when auditors are actually able to act with objectivity, integrity, impartiality and free from any conflict of interest. While the concept of independence in appearance is the auditor should be perceived by others (the public or other third party) to be independent. In this case, conflict of interest will also exist when a reasonable person, with full

knowledge of all relevant facts and circumstances, would conclude that the auditor, or a professional member of the audit team, is not capable of exercising objective and impartial judgment in relation to the conduct of the audit of the audited body. Auditors should be sufficiently independent from those they are required to audit in order to conduct their work without interference. Coupled with objectivity, organizational independence contributes to the accuracy of the auditor's work and gives employers confidence that they can rely on the results and the reports (Cohen & Sayag, 2010). However, Hellman N. (2011) suggested that chief Finance Officers (CFOs) seeks to influence audit planning, particularly with regard to internal controls and the selection and scope of entities subject to audit; and this in return impairs the independence of internal auditors. In order to maintain their independence internal auditor's organizational status and position is also critical which is related to management perception. This is because it enables them to exercise their tasks independently and act objectively. As 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 and also to the management. Furthermore, many auditors have been argued that in order to achieve audit objectives and become effective organizational independence is very important. For instance, the independence of internal audit department and the level of authority to which the internal audit staff report are the important criteria influencing the objectivity of its work, and added that organizational independence is more crucial to the effectiveness of the internal auditors, as it protects the auditor from pressure or intimidation, and increases the objectivity of the auditing work (Cohen & Sayag, 2010; Van Peurse, 2005; Boar-Read, 2000).

#### **2.3.4. Adequate and Competent Internal Audit Staff**

Adequate staffing is essential for a system to its full capability. Weakness in staffing can lead to mismanagement, error and abuse, which can negate the effect of other controls (MoFED, 2004). The size of IA staff and the competency of internal audit are the critical characteristics of IA quality that can't be separated. This means at the absence of one dimension the other cannot contribute to the quality of internal auditors. The empirical findings by Al-Twaijry et al. (2004),

based on questionnaire and interview responses from internal and external auditors, working in Saudi Arabia, suggests that the external auditors believe that IAF size is an important indicator of its quality. In addition, large size of IA staff has many benefits for internal operations of IA unit. For instance, larger sized functional units, there will be more opportunity and flexibility to have a staff rotation schedule that can also influence IA effectiveness by promoting a more healthy relationship and resulting in more objective audit investigations. Furthermore, Zain et al. (2006) argue that a larger size internal audit is likely to be better resourced, including having a broader work scope, higher organizational status and wider staff talent than a smaller unit. Likewise, the quality of IA work is likely to be higher in internal audit units with a larger proportion of staff with audit experience than those with a lower proportion of audit experience. Appropriate staffing of an internal audit department and good management of that staff are keys to the effective operation of an internal audit. An audit requires a professional staff that collectively has the necessary education, training, experience and professional qualifications to conduct the full range of audits required by its mandate (Al-Twaijry et al., 2004). Auditors must comply with minimum continuing education requirements and professional standards published by their relevant professional organizations (IIA, 2001). The IIA's standard 1210, on proficiency of the auditor requires that the internal auditors should possess the knowledge, skill and other competencies needed to perform their responsibilities (IIA, 2001). Additionally, the critical dimensions of IAF is the quality of its internal auditing staff measured in terms of internal auditors skill (Seol et al., 2011; Leung and Cooper, 2009; Seol and Sarkis, 2006). As part of this, Competency Framework for Internal Auditing (CFIA) focuses on the skills needed by an individual person to be an efficient internal auditor.

The literature review specifically conducted on the communication skills (Smith, 2005) stated that the development of effective communication skills (such as listening, interpersonal, written and oral communication skills) is an important part of internal auditor's advancement potential. Internal auditors must possess highly developed communication level skills to become a successful professional. The development of these skills is not only enhances the auditor's potential, but will also improve the quality of audits produced. In addition to the above dimension of IA quality, the competence of internal auditors can be measured in terms of academic level, experience and the efforts of staff for continuous professional development and compliance with audit standards. Both the quantity of audit effort and the quality of professional

care exercised will determine the overall quality of the internal audit work (Cohen & Sayag, 2010; Leung and Cooper, 2009; Belay, 2007). Arena and Azzone, (2009) also stated that IA effectiveness increase in particular when the ratio between the number of skilled internal auditors and employees grows. This shows that sufficiently large number of skilled professionals enables the IA to do its duties.

### **2.3.5. The Approved Internal Audit Charter**

Internal audit charter is defined by the IIA as “a formal written document that defines the activity, purpose, authority and responsibility. The charter should (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) define 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 defines 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 (O. Regan, 2002). Different authors have been explained the presence of defined audit charter in organizations will help auditors to be effective. For instance, O. Regan (2002) concludes that a well drafted charter is an important ingredient for the IA effectiveness. It helps to direct the efforts of audit staff and defines what the board can expect on the assurance it required on internal control from an IA. Van Peurseem (2005) added that the presence of a strong charter adds an official and respected layer of authority to the position of IA in the company. It is also an important feature of insuring success in achieving the independent status of an IA. Furthermore, the existence of audit charter in the organization influences senior management to follow the recommendations of the internal auditor (Van Peurseem, 2005) which in turn affects IA effectiveness.

### **2.4. Summary of Literature Review and Research Gap**

Despite increasing attention to the IA's role within corporate governance, only limited researchers have been examined on the determinants of effectiveness of its function. A number of these studies were IA related and organizational characteristics to the effectiveness of its function. For example, similar understanding of IA as value adding activity by management and its customer increased the possibility of regular utilization of IA services and recommendations, that in turn related with IA effectiveness (Flesher and Zanzig, 2000; Arena and Azzone, 2009).

In assessing the organizational delivers of IA effectiveness added that the size of internal auditors team and the involvement of audit committee in internal auditors activities are positively related with internal audit effectiveness (Arena and Azzone, 2009). The advantage of having IA function within the organization was increasing the likelihood of detecting and self-reporting fraud than outsourcing functions. Nevertheless, the possibility of realizing these advantages is determined by different organizational characteristics (Coram *et al*, 2008). As Cohen and Sayag (2010) find top management support was strongly and consistently related to the three internal audit dimensions such as auditing quality, audit evaluations and the added contributions. In addition, they stated that the greater the organizational independence increases positive internal audit evaluation. Furthermore, the size of internal auditors staff, skills and experience of internal auditors, continues professional development and academic level are the best indicators of internal audit quality (Arena and Azzone, 2009; Cohen and Sayag, 2010; Al- Twaijryet *al.*, 2004).

Finally, a well-defined internal audit charter will help internal auditors to be effective and contributes to achieve the attempt of ensuring independent status of internal auditors (Van Peurseem, 2005; O'Regan, 2002). In General Prior literature relating to internal audit effectiveness has either focused on the internal audit's ability to plan, execute and objectively communicate useful findings (Xiangdong, 1997; Spraakman, 1997; Dittenhofer, 2001), (Aaron Cohen & Gabriel Sayag, 2010 CPA Australia) In its examination of the factors that determine the effectiveness of internal auditors in Israeli organization used the following measures: Sector Private or Public, Professional proficiency of internal auditor's, Organizational independence, Top management support and Quality of Audit Work. ,(Aderajew Wondim Yismaw, (2007) "Internal audit effectiveness: an Ethiopian public sector case study", *Managerial Auditing Journal*, Vol. 22 Iss: 5, pp.470 - 484) In its identification of factors impacting the effectiveness

of internal audit services in Ethiopian public sector case study used the following Measure: internal Audit Quality, Managements Support, organizational Setting and Audit Attribute. Besides these almost all of the Researchers focused in different Public Sectors.

But, The current research was investigated the determinants of internal audit effectiveness only in the Health sector offices that are mentioned above based on the management support, the management's perception of internal auditors' value, organizational independence, existence of adequate and competent internal audit staffs, and the presence of approved internal audit charter. Similar to the Previous Studies, These Research was conducted in one of the public sector office (Health sector) and some of the factors that are used to Measure the effectiveness of internal Auditors such as independence of internal Auditors, Management Support are similar.

## **CHAPTER THREE**

### **3. RESEARCH DESIGN 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. Research Design**

The study investigated the determinants of internal audit effectiveness in the selected Health sector offices found in Addis Ababa at Federal Level under The Ministry of health .These: are Pharmaceutical Fund and Supply Agency, Ministry of Health, St. Paul Hospital, Ethiopian Health Institute, Alert Specialized Hospital, HIV Prevention and Control Organization (HAPCO), Emmanuel Specialized Hospital, Ethiopian Health Insurance, Blood Bank, and TB Specialized Hospital. The research approaches used to conduct this research were both



qualitative and quantitative and the data used to conduct this study were the primary data obtained through the questionnaires. Questionnaires was be designed and distributed both to the organizations senior management teams and for their internal auditors. The sample health offices was selected using purposive sampling method from the federal level Health sector offices listed above which had greater impact to influence the country's overall Health sector. To Employee this Descriptive statics was used. It help us to explain the data more Accurately and in greater detail than graphical display.(Jones and Bartlett Learning,LLC.not for sale or distribution.

### **3.3. Sample size**

The target populations for this research were the federal Health sector offices found in Addis Ababa at Federal Level under The Ministry of health. Which are eleven in number as mentioned in the above paragraph). Among these sector offices five of them had selected purposively (Pharmaceutical Fund and supply Agency (30Auditors), ministry of Health (10Auditors), St. Paul Hospital (2Auditors), Alert Specialized Hospital (8Auditors), HIV Prevention and control Organization/HAPCO/10Auditors). 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, this specific research was focused on selected Health sector offices which had internal audit staffs and had greater impact to influence the country's overall Health issues. The data collection was conducted based on a survey from the selected Health sector offices that had internal audit team in their offices. The Health sector offices that don't have internal audit function were excluded from the study. From each Health sector office the management members; chief executive officers (CEO), chief finance officers (CFO) and their respective deputy senior managers who have been using the audit result was participated in the study. The internal auditors of those purposively selected health sector offices were also involved in the study.

### **3.4. Sampling Techniques**

From the researcher's preliminary study the total number of health sectors office found in Addis Ababa at Federal Level under the Ministry of health are around 11 offices .Which were classified into four strata based on their services rendered to the public, and by dividing it into

different homogeneous substratum the researcher focused on five public sector offices. 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 five senior managers; (who are the stepping stone to other positions) in total twenty five respondents who use the audit result are appropriate.

And also, to get adequate response from the internal audit staffs regarding the factors affecting the effectiveness of internal audit in the selected Health sector taking all experienced internal auditors: Pharmaceutical Fund and supply Agency ministry of Health St. Paul Hospital, Alert Specialized Hospital, HIV Prevention and control Organization/HAPCO) from each selected sector and total seventy respondents are believed appropriate to make analysis regarding the effectiveness of IA in the selected Health sector offices. Even if the use of proportional sampling is appropriate in order to obtain a representative sample from each strata; because of the samples selected from the population have not equally selected (not equally important) the use of purposive sampling was more essential to obtain a typical and representative of the whole universe (Kothari, 2004).

### **3.5. Data Collection Instruments**

The primary data was used to accomplish the study, and to collect the data from the respondents included in the sample, questionnaire was prepared and distributed to the respondents. Two types of questionnaires was prepared and distributed to the managers and the internal auditors of the Health sector offices that are mentioned above. 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 authors and literature review (Mihretand 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). The questionnaires were 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 were organized in to two parts; the first part

comprises of the demographic questions regarding the respondents and the second part contains items relating to the effectiveness of IA audit determinants.

### **3.6. Description of Variables and Model Specification**

#### **3.6.1. Dependent Variable**

The dependent variable for this research was the internal audit effectiveness. In here the internal audit effectiveness was 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 Health sector offices that are mentioned above. 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 measured in terms of value creation (e.g. its role in the avoidance of corporate failures) and cost saving (Soh and Bennie, 2011; Cohen & Sayag, 2010). In this case study the researcher measured the IA effectiveness by implementing the internal audit effectiveness of the Health sector offices that are mentioned above 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 Health sector offices. Compliance audit is the most audit services implemented in Ethiopian public bodies (Mihret and Woldeyohanes, 2008; MoFED, 2004) while the added contributions by the IA to organization was used by Cohen and Sayag (2010) to measure the IA effectiveness. Therefore, both dimensions were measured IA effectiveness against the perception of Health sector offices managers. To understand the level of the manager's perception of IA effectiveness a 5-scale

point Likert-type of 15 different item questionnaires was constructed and distributed to the respondents.

### **3.6.2. Independent Variables**

This study was focused on five independent variables that might have an impact on the internal audit effectiveness in the Health sector offices that are mentioned above. Those predicted variables investigated in this research were : (i) the managements support for the IA activity, (ii) the management's perception of IA's value, (iii) organizational independence of the IA work, (iv) the adequate and competent internal audit staff and (v) the presence of approved internal audit charter. It should be noted that the data for the independent variables was collected from the internal auditors of the selected Health 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 the Questionnaire below, twenty four different items 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.

### **3.7. Data Analysis Techniques**

After the required data had been collected from the respondents it was edited, coded and entered into a computer and processed and analyzed using the Statistical Package for Social Sciences (SPSS) Version-20.0 and MS Excel Software for Windows. Data analyses are conducted through a descriptive statistics to provide details regarding the demographic question and the various factors that affect the effectiveness of IA in the Health sector offices that are mentioned above. Moreover, to evaluate the effects of various factors on the effectiveness of internal auditors in the Health sector and to test the research hypotheses correlation and regression analysis were undertaken. Finally, the results of the study have been presented using different descriptive statistics such as tables, frequencies, percentages, mean, minimum and maximum values, etc.

### 3.8. Model Specification

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

$$IAE = + 1MS + 2MP + 3 OIN + 4 ACIAS + 5AIAC + e_i$$

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.

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

**1-5** = is the coefficient, in which every marginal change in variables on internal auditor's effectiveness affects correspondingly.

### 3.9. Reliability Analysis

To measure the consistency of the questionnaire particularly the Likert-type scale the reliability Analysis was essential in reflecting the overall reliability of constructs that it was measuring. To carry out the reliability analysis, Cronbach's Alpha ( ) 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 ( ) greater than 0.600 is also acceptable.

**Table 3.1. Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.6868	0.713	39

**Sources: survey data, 2016SPSS output**

From table 3.1. Above, the value for Cronbach's Alpha ( ) was 0.6868 for all variables. When these calculated reliability values are close to 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.

## **CHAPTER FOUR**

### **4. Research Findings: Analysis and Discussion**

#### **4.1. INTRODUCTION**

As indicated in the previous chapter, the main attempt of this study was to investigate the determinants of internal audit effectiveness in the Health 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 Selected Health 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, level of education and certification. 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 health sector offices. For these, 85 questionnaires are distributed both to the senior managers and internal auditors and from which 85 questionnaires were collected. Giving the responses rates of 100%. This shows good response rate both for the managers and internal auditors.

##### **4.2.2. Respondents Profile**

The table (4.1) given below describes the general findings regarding the respondents age, sex, field of study and level of education for both the senior managers and the internal auditors. The respondents from the senior managers 15 (60%) were males and 10 (40%) were females, while

from the internal auditors category 45 (75%) were males and 15 (25%) were females. Here in both categories the shares of males are higher than females but in proportion the gaps are higher in the internal auditor's category.

The majority of the ages of respondents of the managers are fall under the age of 40-49(15,60%), 30-39 (5, 20%), and 20-29 (5, 20%); and in the internal auditors category the majority are fall in the age of 30-39 (24, 38.7%) and 40-49 (21,33.9%) and the rest falls in the age of 20-29 (9, 14.5%) and 50-59 (6, 9.7%) respondents. Unfortunately there were no respondents who are aged above 60 years.

In the case of field of study the respondents were composed of from Accounting (5, 20%), Management (5, 20%), Economics (5, 20%), Druggist (5, 20%),Pharmacist (5,20%)and others(5,20%) for managers, while the IA's were composed of from Accounting (51, 82.2%), Management (3, 4.8%) and economics (3, 4.8%)and other(3,4.8%) fields. Here, the majority of internal auditors were studied management and accounting fields respectively which shows the good assignment of professionals for their appropriate job.

In terms of the level of educational background, bachelor's degree (10, 40%) and master's degree (10, 40%) and (5, 20%) for managers while (9, 14.5 %) diploma, (48, 77.4%) bachelor's degree and (3, 4.8%) masters degree for internal auditors. From both categories there were no respondents who had other level of educations under the level mentioned above. These shows the majorities of the respondents were educated/or professional and can contribute more for the effectiveness of their intended work.

**Table 4.1. Respondents general Profile**

Demographic Questions	Responses					
	Manager			Internal Auditor		
	Frequency	Percentage	Valid	Frequency	Percentage	Valid percent



				percent			
Gender	Male	15	60%	60%	45	75%	75%
	Female	10	40%	40%	15	25%	25%
	Total	25	100%	100%	60	100%	100%
Age	20-29	5	20%	20%	9	14.50%	14.50%
	30-39	5	20%	20%	24	38.70%	38.70%
	40-49	15	60%	60%	21	33.90%	33.90%
	50-59	-		-	6	9.70%	9.70%
	Above-60	-		-			-
	Total	25	100%	100%			60
Field of study	Accounting	5	20%	20%	51	82.20%	82.20%
	Management	5	20%	30%	3	4.80%	4.80%
	Druggist	5	20%	10%	3	4.80%	4.80%
	Pharmacies	5	20%	10%	3	4.80%	4.80%
	Other	5	20%	10%	60	100%	100%
	Total	25	100%	100%			
Educational level	Diploma	-		-	9	14.50%	14.50%
	Bachelors Degree	10		40%	48	77.40%	77.40%
	Masters Degree	10		40%	3	4.80%	77.40%
	Other	5		20%	-	-	-
	Total	25		100%	60	100%	100%

**Source: Questionnaire Result 2016**

#### 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 their professional certification, experiences working as IA and the presence of audit committee in their sector office.

**Table 4.2. Below shows the descriptive statistics of these internal auditors' responses for the delivered questionnaires.**

Questionnaire		Response		
Professional Certification		Frequency	Percentage	Valid Percentage
	Certified Internal Auditor (CIA)	15	24.20%	25%
	Certified Public Accountant (CPA)	9	14.50%	15%
	Certified Management Accountant (CMA)	6	9.70%	15%

	Other certification	27	43.50%	45%
	Note Certified	3	4.80%	5%
	Total	60	60	100%
Experiences Working as IA	Below five years	38	61.30%	61.30%
	6 to 10 years	19	30.60%	30.60%
	11 to 15 years	3	4.80%	4.80%
	16 to 20 years	-	-	-
	Above 20 years	-	-	-
	Total	60	100%	100%
The Presence of audit committee	Yes	2	3.30%	3.30%
	NO	58	96.80%	96.80%
	Total	60	100%	100%

**Source: Questionnaire Results, 2016**

As indicating in table 4.2 above the professional certification of the internal auditor; 15 (25%) Certified Internal Auditors (CIA), 9 (15%) Certified Public Accountants (CPA), 6 (10%) have Certified Management Accountants (CMA) and also the other 27 (45%) are with other certifications and the remaining 3 (5%) respondents had no professional certification of auditing.

The internal auditors work experience ranges from one year up to 15 years, but the majority of the respondents are in the range of below 5 years (38, 61.3%), 6-10 (19, 30.6%) and 11-15(3, 4.8%) . Here the majority of the IA was experienced below five years in internal auditing and Experienced in external auditing. Even if they have below five years experience in internal auditing, the external auditing experience was helped them to perform their auditing activities by using both experiences.

In terms of the present of Audit Committee, almost all of the health sector offices had no audit committees in their office. The availability of audit committee in the public sector(health 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).

#### **4.3. Table Descriptive Statistics of selected variable For Internal Auditor**

	N	Minimum	Maximum	Mean	Std.Deviation
Age	60	20-29	60-59	2.4	0.867
Experience	60	6-10	11-15	1.42	0.591
Field of Study	60	Accounting	Other	1.3	0.78
Level of Education	60	Diploma	Master	1.9	0.44

**Source: SPSS summery statistics results based on the data obtained from sample respondent**

As indicated in the above table 4.3 the minimum age of the internal Auditors were between 20-29 maximum age were between 50-59 and its average age were 2.4, which was near to 2, and represents the average age of the internal auditors were between 30-39. The minimum internal Auditors Work Experience in internal Audit is 6-10 Years, maximum internal Auditors work experiences were between 11-15 Years and its average work experience was 1.42. Which was near to 2, and represents the average work experience of internal auditors as internal auditors were between 6-10 years. The average Field of study of the internal Auditors were 1.3. Which was near to 1 and Represents the average field of study of internal auditors was accounting and the maximum number of internal auditors studied other discipline. The minimum and maximum level of education of internal auditor was Diploma and Masters Respectively and its mean education level was 1.9 which was near to 2. Showing that the average education level of internal auditor was Bachelor degree.

### 4.3. Assessment of Ordinary Least Square Assumptions

#### 4.3.1. Assessment of Normality

Table 4.4 .Test of Normality

	N	Mean	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
Management's perception	60	. 0.09501	-0.164	. 0.309	-0.949	. 0.608
Organizational independence	60	. 0.08193	. 0.155	. 0.309	-0.875	. 0.608
The adequate competent internal audit staff	60	. 0.05828	-0.885	. 0.309	1 1.154	. 0.608

The approved internal audit charter	60	. 1.2699	1.266	. 0.309	. 0.891	. 0.608
The Management Support	60	. 0.07885	-0.342	. 0.309	1.234	. 0.608
Valid N (listwise)	60					

**Source: Survey data, 2016 SPSS output**

The kurtosis of the adequate competent internal audit staff for the sample (1.154), The Management Support for the sample (-1.234) and Skewness of The approved internal audit charter for the sample (1.266) is outside the range for normality (-1.0 to +1.0). This condition violates the assumption of normality. *The skewness* of Management's perception of internal audit function for the sample (-0.164)and Kurtosis for the sample(-0.949), Organizational independence for the sample(0.155)and(-0.875),the skewness of The adequate competent internal audit staff for the sample(-0.885),the kurtosis of the approved internal audit charter for the sample(0.891)and the skewness of management support for the sample(-0.342)are within the range for normality (-1.0 to +1.0).

However, the sample size of the variable is above 30, which were (60) the central limit theorem states that the sampling distribution of statistics was followed a normal distribution, and the use of the statistical test with this variable was appropriate.

#### 4.3.2. Independence of Residuals

**Table 4.5. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.628 <sup>a</sup>	.395	.227	.27182	1.565

**Source: Survey data, 2016 SPSS output**

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 summary (table 4.5) the appropriate indicators of the variable used to identify the IAE were explored. 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 was. 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 39.5% ( $R^2 = 0.395$ ) of the variation in the IAE, the rest 60.5% are other variables not included in this study.

The Durbin-Watson statistic is used to test for independent of residuals. The value of the Durbin-Watson statistic ranges from 0-4. As a general rule, the residuals are independent (not correlated) if the Durbin-Watson statistics is approximately 2, and an acceptable range is 1.5-2.5. In this case, Durbin Watson is 1.565 close to two and within the acceptable range. We can assume independent of residuals.

#### 4.3.3. over all model fit

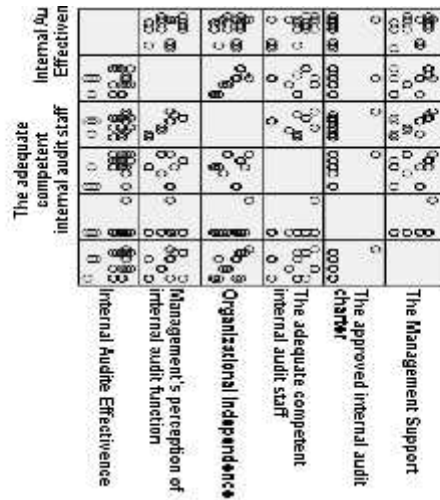
**Table 4.6 .over all model fit (ANOVA)**

Model	Sum of Squares	df	Mean of Square	F	Sig
Regration	0.868	5	0.174	2.350	0.83
Residual	1.330	18	0.74		
Total	2.198				

**Source: Survey data, 2016 SPSS output**

When doing regression analysis we determine whether or not there was a relationship between the IV and the DV by examining the ANOVA table. This can be thought of as the overall fit of the regression model. If the F statistic was significant, we can assume the IV, taken together, have a relationship with the DV. In this case, the probability of the F statistic for the regression analysis was 0.083, greater than the level of significance of 0.05. We accept the null hypothesis that there was relationship between the DVs and the IV.

#### 4.3.4. The scatter plot for evaluating homeoscedasticity(Table 4.7)



Multiple regressions assume a linear relationship between the IV and the DV “Internal Audit Effectiveness”. The four plots in the top row of the matrix show the scatter plot for the dependent variable with each of the independent variables. A visual inspection suggests that the relationship with internal Audit Effectiveness was linear. Multiple regressions also assume the range of variance for the DV was uniform for all values of the IV. With such small plots it’s hard to assess the homogeneity assumption. However, inspection of the plots shows good variability in the plots and we were proceeding with the analysis assuming homoscedasticity was not a major problem.

#### 4.3.5. Pearson Correlations Matrix

**Table 4.8. Pearson Correlations Matrix**

		IAE	MP	OIN	ACIAS	AIAC	MS
Internal Audit Effectiveness	Pearson Correlation	1					
	Sig. (2-tailed)						
Management's perception of internal audit function	Pearson Correlation	.032	1				
	Sig. (2-tailed)	.883					
Organizational independence	Pearson Correlation	-.011	.921**	1			
	Sig. (2-tailed)	.959	.000				
The adequate competent internal audit staff	Pearson Correlation	.621**	.049	.004	1		
	Sig. (2-tailed)	.001	.821	.985			
The approved internal audit charter	Pearson Correlation	.178	.069	.350	.258	1	
	Sig. (2-tailed)	.405	.750	.094	.223		
The Management Support	Pearson Correlation	.052	.703**	.773**	.068	.302	1
	Sig. (2-tailed)	.809	.000	.000	.752	.152	

**\*\*.** Correlation is significant at the 0.01 level (1-tailed). **\***. Correlation is significant at the 0.05 level (1-tailed). **source: Survey data, 2016 SPSS output**

Table 4.8. Above depicts the correlation between the independent variables and also with the dependent variables. The result shows the acceptable reliability of the research variables in which, the correlation among predictors were not high indicates there was no Multicollinearity problem among variables. As of the relationships between the dependent variables (IAE) and independent variables (MS, MP, OIN, ACIAS and AIAC), some findings was significant. Furthermore, there were strong correlations between the dependent variable internal audit effectiveness (IAE) and independent variables MP( $r = 0.32$ ), ACIAS ( $r = 0.621$ ) and AIAC ( $r = 0.178$ ) with ( $P < 0.01$ ) level of significant, shows a strong support for first, fourth and fifth hypothesis respectively. However, there were no significant correlations among the MS and OIN with internal audit effectiveness thereby leading to reject the second and third hypotheses. The correlation analysis was utilized to

reject or accept research hypothesis in previous audit research in addition to the regression analysis (Cohen and Sayag, 2010).

#### 4.3.6. MultiCollinearity Statistics

Multicollinearity exists when Tolerance is below .10 and VIF is less than 2.5. In this case, almost all of the tolerance values are greater than .10 and the VIF is less than 2.5. We were assumed that multicollinearity was not a problem.

**Table 1.9. Regression result for IAE**

Model	Unstandardized Coefficients	Standardized Coefficient	T	Sig.	Collinearity Statistics
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				ts				
		B	Std. Error	Beta			Tolerance	VIF
1	((Constant)	1.746	0.8		2.183	0.043		
	Management's perception of internal audit function	0.174	0.366	0.349	0.474	0.641	0.062	16.14
	Organizational independence	-0.253	0.49	-0.428	-0.517	0.611	0.049	20.39
	The adequate competent internal audit staff	0.509	0.193	0.565	2.64	0.017	0.733	1.365
	The approved internal audit charter	0.446	0.119	0.141	0.446	0.661	0.338	2.957
	The Management Support	0.025	0.131	0.057	0.195	0.848	0.397	2.516

source: SPSS 2016 out put

#### 4.3.7. The Regression Results and Hypothesis Testing

**H1: The better the management support of internal audit values, the higher internal auditors' ability in identifying noncompliance activities and the more added contributions.**

The Sig. level for the variable “Management's support of internal audit function” is .848, which was greater than our alpha level of .05. We accept the hypothesis and conclude that it was significantly related to the DV. 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. Looking at the B coefficient, we see that it is positive; indicating that as management's perception of internal audit function increases internal audit effectiveness also increases. We would expect that for every one unit increase in management's perception of internal audit function, there would be a .025 unit increase in internal audit effectiveness. This supports our research hypothesis and we conclude that level of Management's support of internal audit function is significant predictor of internal audit effectiveness.

**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 Sig. level for the variable "Management's perception of internal audit function" was .641, which was greater than our alpha level of .05. We accept the hypothesis and conclude that it was significantly related to the DV. The result was consistent with the previous auditing research works of (Flesher & Zanzig, 2000, Arena & Azzone, 2009, Cohen & Sayag, 2010 & Cohen & Sayag, 2011). 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 III, 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 (Flesher & Zanzig, 2000) which adversely influence the effectiveness of IA (Arena & 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 & 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. Cohen & Sayag, 2010 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 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.

Looking at the B coefficient, we see that it was positive; indicating that as management's perception of internal audit function increases internal audit effectiveness also increases. We would expect that for every one unit increase in management's perception of internal audit function, there would be a .174 unit increase in internal audit effectiveness. This supports our research hypothesis and we conclude that level of Management's perception of internal audit function was significant predictor of internal audit effectiveness.

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

The Sig. level for the variable "organizational independence for internal auditors" is .611, which was greater than the alpha level of 0.05. Even if the value of alpha was less the significant value, its beta coefficient indicate that negative. Therefore, the hypothesis has been rejected and concluded that it was insignificantly related to the DV.

The third hypothesis of this research which was assumed to be the determinants of IA effectiveness was the independence of the organization in which internal audit work were conducted. As shown in table 4.8 above the coefficient of OIN ( $\beta = -.253$ ,  $t = -.517$ ) were negatively 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 was inconsistent with the previous studies conducted by (Cohen, & Sayag, 2010; Van Peursem, 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. This may be occurred due to the organizations support to the IA effectiveness and accordingly, the level of independence, reporting level, direct contact to the board and senior management, conflict of interest, interference, the unrestricted access to all departments and employees, appointment and removal of the head of internal audit, and performing non-audit activity may not be equally perceived. But, without the relevant senior management support simply the independence of the organization to the internal auditors may not be enough to add value and to identify the noncompliance activities performed in their office. Therefore, the existence of adequate and competent IA staff and the availability of AIAC in their office in line with the appropriate management support for internal auditor's activity are strong enough to make effective the internal audit function in the public sector. And 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 Sig. level for the variable "presence of adequate and competent IA staff" is .0.017, which is less than our alpha level of 0.05 we reject the hypothesis and conclude that it is insignificantly related to the DV.

This result was consistence 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. But 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 health 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)

Looking at the B coefficient, we see that it was positive; indicating that as presence of adequate and competent IA staff increases internal audit effectiveness also increases. We would expect that for every one unit increase in presence of adequate and competent IA staff, there would be a .509.unit increase in internal audit effectiveness. This supports our research hypothesis and we conclude that level of presence of adequate and competent IA staff of internal audit function was significant predictor internal audit effectiveness.

**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 Sig. level for the variable “availability of approved IA charter” was .661, which was greater than our alpha level of 0.05 we accept the hypothesis and conclude that it was insignificantly related to the DV. 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 health to have approved IA charters that are used as a working manual. Therefore, the existence of approved internal audit charter in the health 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).

Looking at the B coefficient, we see that it was positive; indicating that availability of approved IA charter increases internal audit effectiveness also increases. We would expect that for every one unit increase in presence of adequate and competent IA staff, there would be a .446 unit increase in internal audit effectiveness. This supports our research hypothesis and we conclude that availability of approved IA charter is significant predictor internal audit effectiveness.

## **CHAPTER FIVE**

### **5. Conclusion and Recommendation**

#### **5.1. Summary of Major Finding**

According to the regression output except organizational independence of internal auditors, other predictors were positively contributed for the effectiveness of internal audit functions in Ethiopian health sector offices. Therefore, the health sector office should give emphasis to use these determinant variables to make their service delivery effective,

efficient and economical throughout their offices. Moreover the management support, the availability of approved internal audit charter and Management Perception were the major determinants of IAE in the health sector. However, Organization independence of internal auditor and Availability of competent internal audit staff were not significantly important for the IAE of health sectors as of the above three variables.

This study finds that the composite measure of management support, managements perception of IA values, organizational independence of internal auditors, the existence of adequate and competent IA staff, and the availability of approved internal audit charter accounts for 39.5% ( $R^2 = 0.395$ ) variance for the IA effectiveness in identifying noncompliance activities and added contributions to the health sector offices. That means, the impact of these five independent variables contributed for the dependent variable IAE were 39.5%, and the remaining 60.5% were other variables that are not included in this study. The final portion of this research aims to conclude the finding of the study focusing on the core determinants that have significant impacts to the internal audit effectiveness and to provide recommendations based on the research findings of the study. These conclusions and Recommendations are drawn from the findings of the study specifically related to the managements support given to the IA activities, the management's perception for the IA values, the organizational independence of the IA, the existence of adequate and competence IA staff, and the availability approved IA charters in the health sector offices.

## **5.2. Conclusion**

Due to its important role it plays for the overall management system internal audit was the major mechanism to ensure sound corporate governance. The existences of effective internal audit in the office links with internal control risk management system, improves organizational efficiency and effectiveness, reduce information asymmetry during decision making, and ensures internal reliability of financial reporting process. By taking this aspect into consideration, this study was identified factors that determine the IA effectiveness in the health sector offices and then analyzed the organizational dimensions in which the health sector office should carry out to enhance the IA effectiveness. And also by testing of

the proposed hypotheses showed relations of these independent variables with the IAE the following conclusions were drawn.

- The IAE of the health sector office increases, when there were more supports from the management, management perception combined with the availability of approved IA charters. The regression analysis (shown on table 4.9) shows very strong contributions of these variables for the IAE. Therefore, the overall effect of the management support, the existence of adequate and competent IA staff, and the availability of approved IA charter in the health sector was very important for the IAE in the health sector offices without neglecting the other statistically insignificant variables. Thus, neglecting this variable may cause to decrease the value of IAE variance that was obtained from collective contribution of the five independent variables.
- In addition, the correlation analysis (shown on table 4.8) shows almost all the independent variables have the direct effect of the internal audit effectiveness (IAE) and the regression result also depicts almost all the independent variables have a positive sign of coefficients (shown on table 4.8) with IAE in the health sector offices. However, the organizational independence of IA were statistically not significant enough at 5% sig. level to contribute for the IAE in the health sector offices, therefore this conclusion requires future research should consider for obtaining the impact of these variables on the IA effectiveness.
- Furthermore, the correlation analysis (see table 4.8) showed the contributions of the independent variables to the internal audit effectiveness. For instance, the organizational independence of internal auditors was not significantly correlated with internal audit effectiveness to the health sector offices. This conclusion requires future research should consider the impact of these determinants on internal audit effectiveness.

### **5.3. 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 health sector offices and also to prove the hypotheses, the researcher provides the following



recommendations to the health sector offices, the internal auditors.

- The finding of this research proved that the management support, the management perception, and the availability of approved IA charter were statistically significant and positively related with the IAE in the health sector offices. Thus, the health 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 health sector office should recommended 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.
- As the research proved that the existence of approved IA charter, and management support were the major determinants of IAE in the health sector, the health sector were recommended to design or adopt and continually evaluate the internal audit charters for the sector office; and also the recommended to support the internal audit works by increasing the number of certified internal auditors by funding the certification fees and also by facilitating the way for certification.
- The internal audit staffs of the health 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.
- Finally; Minister of Health should contribute for the IAE by working in collaboration with the MoFED and other public sector offices to accomplish effective internal audit work by supplying the adequate and competent internal audit staffs and also to give short term trainings to upgrade the existing IA staffs proficiency in line with the institute of IA standards.

#### **5.4.Directions for Further Research**

The study, focus on the determinants of internal audit effectiveness would more successful if it was conducted in all Health Sector offices that are found in Addis Ababa under the federal Government (they are eleven in numbers). The health sector offices which were involved in this research work are limited to 5 purposively selected health sectors (Pharmaceutical Fund and supply Agency, ministry of Health, St. Paul Hospital, Alert Specialized Hospital, HIV Prevention and control Organization/HAPCO).

I In addition, the intent of this study was 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 those health sector offices. Other determinates like size of internal Audit staff; the relationship of internal and external Auditors was not involved in this study.

Based on the scope and limitations of the current study I recommend that the next (other) research to conduct research in internal Audit Effectiveness in all health sector office and investigating its determinant by Other determinates like size of internal Audit staff; the relationship of internal and external Auditors.

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