

***DETERMINANTS OF INTERNAL AUDIT EFFECTIVENESS:  
A CASE STUDY IN HADIYA ZONE'S PUBLIC FINANCE  
AND ECONOMY DEVELOPMENT SECTOR OFFICES***

***A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES ON  
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SECTOR OFFICES**

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*A Thesis Submitted to the School Graduate Studies of Jimma University Partial  
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Finance (M.Sc.)*

**JIMMA UNIVERSITY  
M. Sc. PROGRAM IN ACCOUNTING AND FINANCE**

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JIMMA, ETHIOPIA**

## **DECLARATION**

I hereby declare that this thesis entitled “Determinants of Internal Audit Effectiveness: A Case Study in Hadiya Zone’s Public Finance and Economy Development Sector Offices”, has been Carried out by me under the guidance and supervision of Abiy G. (Asst. Prof.) and Haymanot Alemayehu (M. Sc.).

The thesis is original and has not been submitted for the award of the degree of diploma any university or instructions.

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Date

Signature

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## CERTIFICATE

*This is to certify that the thesis entities “Determinants of Internal Audit Effectiveness: A Case Study in Hadiya Zone’s Public Finance and Economy Development Sector Offices”, Submitted to Jimma University for the award of the Degree of Master of Science in Accounting and Finance (M.Sc.) and is a record of Valuable research work carried out by Mr. Endalkachew Nigusse, under our guidance and supervision*

*Therefore we hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree of a diploma.*

*Main Adviser’s Name*

*Date*

*signature*

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*Co-Advisor’s Name*

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## **Abstract**

*The main purpose of this study is to investigate on the determinants of internal audit effectiveness in the Hadiya zone's public finance and economy development sector offices (in SNNPR, Ethiopia). This investigation is focused on all 10 woredas (WoFED) and 2 Hossana Administrative-towns public finance and economy development sector offices. The management teams and the internal auditors from all of the public finance and economy development sector office are the sources for the required data to the researcher through the questionnaires administered. The research design used in this study is cross-sectional. In addition, the findings of this study are to show the direct relation effects of management perception, management support, organizational independence of internal auditors and adequate and competent internal auditor's staff with the internal audit effectiveness on the public finance and economy development sector management. According to the regression output, the management support and the existence of adequate and competent internal audit staff were contributed for the internal audit effectiveness in the public finance and economy development sector significantly and positively. The remaining two variables; the management's perception for the internal audit value and the organizational independent of internal auditors were positively related with the internal audit effectiveness but their contribution for the internal audit effectiveness was statistically not significance. All of these four independent variables are making 50.7% of the contributions to internal audit effectiveness in the public finance and economy development sector offices. The public finance and economy development 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 internal audit effectiveness in the public finance and economy development sector offices.*

*Key Words: determinants; Hadiya Zone; Internal Audit; internal audit effectiveness; Public sector, finance and economy development sector offices; Woredas;*

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## ACRONYMS AND ABBREVIATIONS

- ACIAS Adequate Competent Internal Audit Staff
- BoFED Bureau of Finance and Economic development
- CFIA Competency Framework for Internal Auditing
- 3Es Effective, Efficient and Economical
- HZoFED Hadiya zone Finance and Economic Development
- IA Internal Auditors
- IAE Internal Audit Effectiveness
- IIA Institute of Internal Auditors
- MS Management's Support
- MoFED Ministry of Finance and Economic Development
- MP Management's perception
- OAG Office of the Audit General
- OIN Organizational Independence
- OLS Ordinary Least Square
- SAP Statement on Auditing Practice
- SPSS Statistical Package for Social Science
- WoFED Woreda Finance and Economic Development

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1. Background to the Study

With the ever-changing business environment, the effectiveness and credibility of the internal audit function are crucial. 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 functions were the major mechanism for controlling and using of all scarce resources available in the corporate organization. Larger and complex systems require greater competitiveness, thus internal audit has had to become ever more professional (Cecilia Nordin Van Gansberghe, 2003).

Auditing has a significant role in the management of most organizations. It has become increasingly varied, both in scope and objective to assist all levels of management in assuring internal and external constituencies that financial resources are being properly managed and accounted for (Faudziah H. 2003).

Internal auditing has undergone dramatic changes that have expanded its scope in a way that allows it to make greater contributions to the organization it serves. Internal auditing is also performed in diverse legal and cultural environments; within organizations that vary in purpose, size, and structure; and also by persons within or outside the organization. Furthermore, the internal auditing profession also walks a tightrope between serving as a management consultant and an independent professional (Fadzil 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 independent profession, which is playing a significant role in the management of organizations.

Besides, independence of internal auditors always been a sensitive issue while he/she is the employees of the organization, above all, not clearly organized structure or reporting line makes the problem more complicated in such offices (Rolandas Rupsys, 2005).

Moreover, the new Institute of Internal Audit's (IIA, 2001), the board of directors defined internal audit as An independent, objective assurance and consulting activity designed to add and improve an organization's operations. It helps an organization to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

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

Public sector offices are part of the public body which is partly or wholly financed by government budget and concerned with providing basic government services to the whole society (Ministry of Finance and Economic Development (MoFED), 2004). The compositions of the public sectors are varied by their function and purposes, but in most cases, they are designed in order to enable the public sectors to achieve their goals. Public sector organizations are also required to have internal audit functions to support effective management. The Ministry of Finance and Economic Development has the authority to issue internal audit manuals for use by all organizations that are wholly or partially financed by the government budget (Government of Ethiopia, 1996).

The public sector provides services such as financing service, banking service, education, communication service, healthcare, police, transportation, electric services, security and so on, which benefit all of the society and encourage equal opportunity to benefit from those services

provided (Mihret and Yismaw, 2007). While at the zone level, most of the public sectors internal audit activities and financial control practices are held or pooled under the responsibility of each woreda's finance and economic development offices internal audit staff. This research focused on the determinants of Internal Audit Effectiveness in the selected Public finance and economy development sector office found in Hadiya zone, mainly on all woredas finance and economic development offices (WoFED). Mostly, the efficiency and effectiveness of the management operations in public finance 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 finance and economy development offices, are expected to work independently and objectively to enhance high quality of public services, achieve good internal control system, avoid corruption, ensure good corporate governance system, promote accountability and greater transparency (Coram et al, 2008; Van Peurse 2005; Belay, 2007).

Therefore, it is important to have effective internal audit unit as part of the modern governance system in public finance and economy development sector offices. In public sectors good 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).

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 a lack of management respect, lack of independence, assigned of internal auditors to many tasks and being ignored (conflict of interest) and lack of professional development.

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

## **1.2 Statement of the Problem**

Internal auditors have the right and ability to access all information in every part of the organization and their function lies in every activity of the corporate governance system. All the stakeholders will, therefore, benefit from having a strong Internal Audit Function (IAF) which will provide value to the other cornerstones of corporate governance (Smet and Mention, 2011). Because internal auditors can make line managers aware of their responsibility; can act as a consultant in monitoring risk, identifies weakness in internal control system, and facilitates the implementation of risk management, as well as internal audit, contributes to the appropriateness of procedures and operations of the audited body (Cohen and Sayag, 2010; Arena and Azzone, 2009; Dittenhofer, 2001). According to (Roussy, 2013) research, his



finding suggests that internal auditing is not the governance watchdog expected by the regulatory bodies since this is not the role performed by internal auditors.

The internal audit staffs are organized inefficiently with low technical staff proficiency, that does not Prepare strategic plans to conduct their activities to produce effective internal audit output to their organization (Cohen and Sayag, 2010; Arena and Azzone, 2009; Mihret and Yismaw, 2007). Besides this the audit evidence 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 Internal Audit findings and recommendations is generally not adequate in universities which are part of the public sector.

Moreover, the number of actual audits performed in a period is usually less than the number of audits stated in the annual audit plan is not supporting the effectiveness of the internal auditors in the organization (Mihret and Yismaw, 2007). This would have far-reaching implications on the level of Internal Auditor's effectiveness and competency. Because the percentage of recommendations suggested by the internal auditors are actually implemented by the auditee offices; and the ability to plan, execute and communicate audit findings are the most suitable dimensions to evaluate internal audit effectiveness (Cohen and Sayag, 2010; Arena and Azzone, 2009; Mihret and Yismaw, 2007).

The area that 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 internal audit to the governmental sector offices in case of Hadiya zone in which those sectors are pooled under each Woreda's Finance and Economy Development sector and which are also an important concept to show the influential outputs of the internal auditors.

According to the research conducted by Arena and Azzone (2010), Chaveerug (2011) and Mihret et al, (2010), they emphasize the need for future studies to examine the factors that influence internal audit effectiveness and the possible interactions among them. Equally, it is

interesting to focus on the model that will lead to the strength of internal audit effectiveness (Aguolu, 2009).

In this vein, many studies that have been conducted on internal audit effectiveness give more concerned in companies' hotels, banks and few public sectors at the state level which their internal audit is a little big effective than those of local government. Similarly, Johnsen and Vakkuri (2001) noted that local government public sectors' internal auditing has been less studied and reported in the literature. This study is therefore motivated because of the limited studies in the area of local governmental public sectors.

Therefore, to fill this areal gap that was happened in the past researchers' literature, this paper trying to examine the relationship between internal audit effectiveness and its determinant factors at zonal level government public finance and economy development offices in Hadiya zone, SNNPR Ethiopia. With regard to this, the researcher is attempting to identify the factors influencing internal auditor's effectiveness in this study area. Specifically, how management's perception of Internal Audit's value, management support, organizational independence and adequate competent internal audit staff influence the effectiveness of internal audit in those all Woredas under Hadiya zone, are examine and answered. The questions that have been proposed to answer were the followings;

- Does the support given by the management to internal auditors enhance the internal audit effectiveness?
- Does management's perception matter for internal audit effectiveness?
- Does organizational independence of internal auditors affects internal audit effectiveness?
- Does the adequate and competent internal audit staff affects internal audit effectiveness?

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

#### **1.3.1 General Objective**

The general purpose of this study is to investigate the determinants of internal audit effectiveness in the Hadiya zone's public finance and economy development sector offices.

### **1.3.2 Specific Objective**

Specifically, to achieve the following objectives:

- To examine the effects of management support for internal audit effectiveness IAE in the public finance and economy development sector offices.
- To examine the effects of management perception for internal audit effectiveness in the public finance and economy development sector offices.
- To examine the effects of organizational independence of internal auditors for internal audit effectiveness in the public finance and economy development sector offices.
- To examine the effects of adequate and competent internal auditors' staff for internal audit effectiveness in the public finance and economy development sector offices.

### **1.4 Research Hypothesis**

After reviewing the related literatures (Mihret and Yismaw, 2007; Cohen and Sayag, 2010; Arena and Azzone, 2009; shewamene H. 2014) specifically the relations of management perception, management support, organizational independence of internal auditors and adequate and competent internal audit staff with internal audit effectiveness of the study are designed the following directional hypothesis.

H1: The management supports are positively related to the internal audit effectiveness in the public finance and economy development sector offices.

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

H3: The organizational independence for internal auditors positively related to the internal audit effectiveness in the public finance and economy development sector offices.

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

## **1.5 Significance of the Study**

The internal auditors have a significant impact on controlling 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 are 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 is essential to show the effectiveness of the internal auditors by assessing the factors which determine the public finance and economy development sectors' internal audit effectiveness. In addition, this research is important for the empirical evidence for the public finance sector offices to examine their policies and procedures, and for the future researchers also important to develop a conceptual literature development.

## **1.6 Scope and Limitation of the Study**

The study focus on the determinants of internal audit effectiveness more successful if it is conducted by identifying each woreda as a rural and urban separately with the sectors as a private and public sector internal audit offices.

The scope of the study is limited to governmental finance and Economic Development sectors in Hadiya zone of all 12 woredas, within which the respondents of internal auditors and management team were purposively selected. In addition, the intent of this study is to investigate the carefully chosen determinants of the internal audit effectiveness; such as management perception, management support, organizational independence and adequate competent in internal audit staff in all selected public finance and economy development sector offices.

## **1.7 Structure of the Thesis**

In addition to the preliminary page, this research paper consists of five chapters. The first chapter with its subtopics was introductory parts incorporated the introduction, statement of the problem, research objectives, research questions, research hypotheses, significant of

conducting the study, scope and limitation of the study, and the methodologies used to conduct this study. The second chapter follow by describing the detailed review of the related literature 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 and methods used to conduct the research. The fourth chapter presents the analysis, discussions and presentation part of the research findings. And finally, the last chapter draw the conclusions and recommendations of the case study and wind up the thesis by highlighting future research areas and followed by the references and appendixes.

# CHAPTER TWO

## 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 the unique position to internal audit in corporate governances for internal assurance services (Soh and Bennie, 2011). These changes have given the internal audit a set of expanded opportunities to support and advice management; evaluate risk exposures relating to the organization's governance, operations and information systems, identify internal control system efficiency and effectiveness, provide services to other organizational functions; and generate direct reporting links to the audit committee and shareholders; safeguarding of assets; and compliance with laws, regulations, and contracts (IIA, 2001; MoFED, 2004).

The Ethiopian ministry of finance first issues the audit directive in 1942, by focusing mainly on the public sector utilization of funds, and it marked on the modernization of audit practice in the country. By following this, the Office of the Audit General (O.A.G) is formulated in 1961 with the necessary modifications with respect to the duties and responsibilities of the bureaus and the auditors; and in 1987 and onwards there are significant developments in public sector auditing systems in the country.

Moreover, the coming of Proclamation No. 13/1987 empowered the O.A.G to direct the internal auditors of government offices and public enterprises in three aspects that are whether accounting records are properly maintained and reliable, whether the assets of the ministries and enterprises are adequately safeguarded and properly maintained; and whether policies and procedures laid down by top management comply with that implies less attention was given to operational audit as a service to management (Kinfu, 1990; Lemma Argaw, 2000).

The public sector offices are the major vehicle for economic development due to their engagement in various economic activities; such as in manufacturing industry, transport and

communication services, 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 assessed to take corrective actions when bad performance is found.

Accordingly, the management of the public finance offices is responsible for following up the implementation of economic policy and procedure, and submit reports on the performance of the economy (MoFED, 2004). Therefore, the effectiveness of internal audit should receive the greater attention in research area to enhance the quality of its report. In line with this, the research had focused on the determinants of internal audit effectiveness in Hadiya zone public finance and economy development sector offices.

Nevertheless, Internal Audit is subject to many problems that affect internal auditors' effectiveness in different corporate governance (Cohen and Sayag, 2010; Arena and Azzone, 2009; Belay, 2007; Mihret and Yismaw, 2007). Particularly the determinants of internal audit effectiveness which are used to measure the improvement of public finance and economy development sectors through internal audit were the focus of this case study.

In this case study the literature review consists of the definition of internal audit and the term effectiveness, the type of auditing activities performed by the internal auditors and the internal audit effectiveness instrument of improving public finance sector management such as the perceptions of the management, management support, organizational independence of internal auditors and adequate and competent of internal audit staff and by referring different books, reviewing and analyzing prior audit researchers, articles and journals.

## **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 internal audit 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 is the mechanism through which information about the effectiveness of the quality system is gathered by auditors selected from within the company but, who are the 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 ensuring, 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 the functioning of various operations of an enterprise including the functioning of the system of internal check. Exceptions from the 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 the enterprises 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 the 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 whether the business is carried on efficiently and effectively. Again if an internal auditor finds the inefficiency of the management and if the management concern has suffered a loss, it is his duty to report the fact. The internal audit has to be reported to the management that 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 organization in the planned manner.

### **2.2.1.1 Internal Audit Services**

#### **Assurance Services**

Assurance service is an objective examination of evidence for the purpose of providing an independent assessment of risk management control or governance processes of the entity.

Internal audit unit fulfills its audit obligations by:

- i.) Conducting financial, performance, and other audits of all activities;
- ii.) Assessing the effectiveness of internal control systems;

- iii.) Recommending measures to strengthen internal controls, governance and risk management; and
- iv.) Monitoring the implementation of audit recommendations and reporting on the status thereof.

### **Consulting services**

Internal audit units shall provide consulting services, the nature, and scope of which are agreed upon with management and which according to internal audit judgment are intended to add value and improve an entity's operations. Examples include counsel, advice, facilitation, process design, training, etc.

Internal auditors generally provide consulting services at the specific request of an audited entity, but as auditors, they do not have the management authority or responsibility for implementing the outcomes of these services. Care should be taken to ensure that objectivity is maintained during consulting engagements. Internal auditors should be careful not assume management roles internal audit should attend meetings or presentations by audited entities solely in an observer capacity to avoid the appearance of a conflict of interest.

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

A variety of audits is performed in the review of campus programs and resources. 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. **Performance Audit:** According to (International Organisation of Supreme Audits Institutions (INTOSAI)) Performance Auditing can also be defined as: - "An independent examination of the efficiency and effectiveness of government undertakings, programs or organizations, with due regard to economy, and the aim of leading to improvements".

**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.

### **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 internal audit 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.

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

- Undertakes an independent evaluation of financial and operating systems and procedures;
- Contributes to the achievement of organizational goals;
- Needs management’s commitment to implement recommendations;
- Provides useful recommendations for improvements as necessary;
- Affected negatively by lack of attention from management which in turn adversely affects the auditee attributes; and

- Management support is a natural quid pro quo for effective internal audit.

While; Sarens and Beelde (2006) point out the contribution and roles of internal audit in organizations or corporate governance from the senior management's expectation point of view. 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.

## **2.3 Empirical Review**

As the main aim of this research is to assess the effectiveness of internal audit in the public finance sectors, 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 internal audit 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 and adequate competent of internal audit staff 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 internal audit (IA) effectiveness in organizations. For example, Mihret and Yismaw (2007) in their case study of internal audit effectiveness on public sector shows that the component of management support consists of the response to audit finding and the commitment to strength internal audit which has significance influence on internal audit 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 internal audit process. Because, Sarens and Beelde (2006) argue that the overall acceptance and appreciation of internal audit 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 internal audit effectiveness (IAE) derive from the support of top management, given that hiring proficient internal audit staff, developing career channels for internal audit staff, and providing organizational independence for internal audit work are the results of decisions made by top management (Cohen and 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 internal audit 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 internal audit services. As a result, management's commitment to use audit recommendations and its support in strengthening internal audit is vital to internal audit effectiveness (IAE). Therefore, audit finding and recommendations would not serve much purposely unless management is committed to implement them.

Furthermore, Belay, (2007) find that to curb corruption and inefficiency in the public 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 Internal Audit'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 internal audit (Arena and Azzone, 2009).

When employees at all levels perceive that the top management assigns importance to the function of internal audit, they will cooperate and support these processes (Cohen and Sayag,

2010). This implies that internal audit staffs are more motivated and encouraged to perform audit activities given good management's awareness of internal audit 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 to 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).

The internal audit typically the whole management process, to maintain objectivity, to increase the reliability of information, to be free from unacceptable risk of material bias, and to issue reasonable and credible audit opinion, it is required to be independent (IIA,2001).

However, due to an often strong direct or indirect relationship between internal audit 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 significance influence over internal audit (Sarens and Beelde, 2006; Van Peurseem, 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 and Sayag, 2010).

However, Hellman N. (2011) suggested that CFOs seek to influence audit planning, particularly with regard to internal controls and the selection and scope of entities subject to audit; and this in return impairs the independence of internal auditors. 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 internal audit function 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 and Sayag, 2010; Van Peurse, 2005; Boa- 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 internal audit staff and the competency of internal audit are the critical characteristics of internal audit quality that can't be separated. This means 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 internal audit function (IAF) size is an important indicator of its quality. In addition, the large size of internal audit staff has many benefits for internal operations of internal audit unit. For an instance, larger sized functional units, there will be more opportunity and flexibility to have a staff rotation schedule that can also influence internal audit 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 internal audit 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 the proficiencies of the auditor, require that the internal auditors should possess the knowledge, skill and other competencies need to perform their responsibilities (IIA, 2001).

Additionally, the critical dimension of internal audit function 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 enhancing the auditor's potential but will also improve the quality of audits produced.

Institutional Auditing and Assurance Standards Board (IAASB) suggests that "auditing is a discipline that relies on competent individuals using their experience and applying integrity, objectivity, and scepticism to enable them to make appropriate judgments that are supported by the facts and circumstances of the engagement", which implies that high audit quality and audit effectiveness should be satisfied independence and competence of auditors in order to ensure the reports are qualified.

In addition to the above dimension of internal audit 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 and Sayag, 2010; Leung and Cooper, 2009; Belay 2007).

Arena and Azzone, (2009) also stated that internal audit 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 internal audit to do its duties.

## **Summery**

Despite increasing attention to the internal audit's role within corporate governance, only limited researchers have been examined the determinants of the effectiveness of its function. A number of these studies were internal audit related and organizational characteristics to the effectiveness of its function. For example, a similar understanding of internal audit (IA) as value adding activity by management and its customer will increase the possibility of regular utilization of internal audit services and recommendations, that in turn related to internal audit effectiveness (Flesher and Zanzig, 2000; Arena and Azzone, 2009). In assessing the organizational delivery of internal audit effectiveness added that the size of internal auditors team and the involvement of audit committee in internal auditors activities are positively related to internal audit effectiveness (Arena and Azzone, 2009).

The advantage of having internal audit 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, auditee evaluations, and the added contributions. In addition, they stated that the greater the organizational independence increases positive internal auditee evaluation. Furthermore, the size of internal auditors staff, skills, and experience of internal auditors, continues professional development and academic level is the best indicators of internal audit quality (Arena and Azzone, 2009; Cohen and Sayag, 2010; Al- Twaijry *et al.*, 2004).

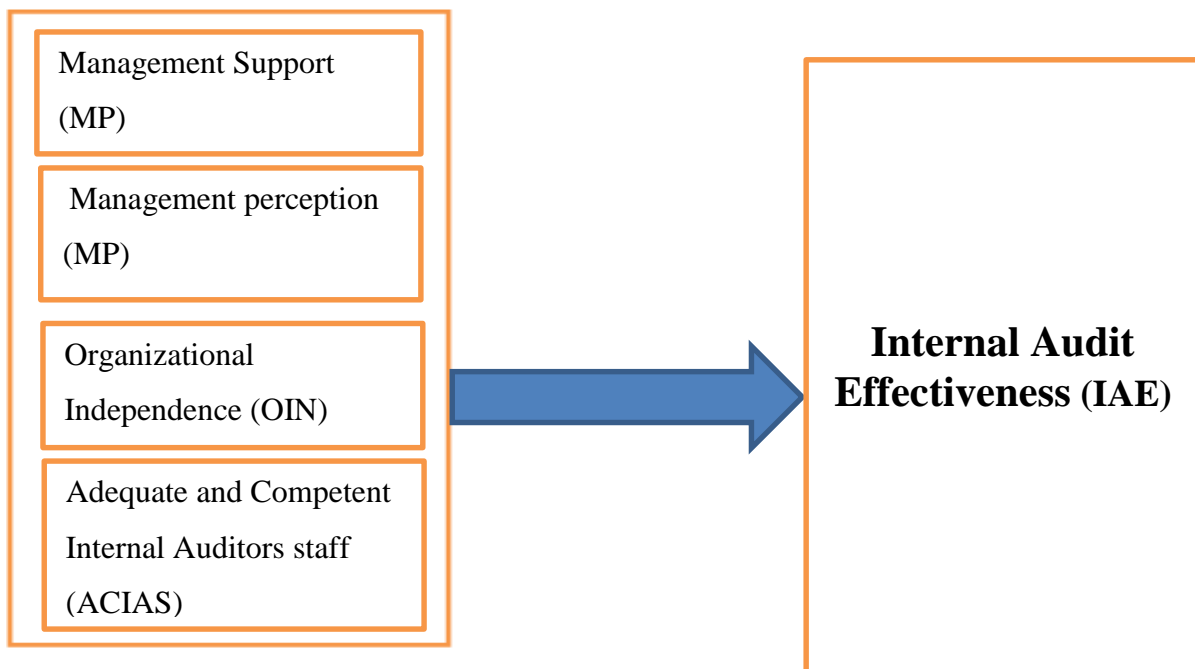
Finally, the current research investigates the determinants of internal audit effectiveness in the Hadiya zone public finance and economy development sector offices based on the management support, the management's perception of internal auditors' value, organizational independence and existence of adequate and competent internal auditor's staff.

## 2.4. Conceptual framework

The conceptual framework includes both the independent and the dependent Variables. The independent variables are the Management Support, Management's Perception, Organizational independence and Adequate and competent internal Audit Staff and the Dependent variable is the Internal Audit effectiveness.

### Independent Variables

### Dependent Variable



Source: From researcher 2017

Figure 1: Conceptual framework on Determinants of internal audit Effectiveness

# CHAPTER THREE

## 3. RESEARCH DESIGN AND METHODOLOGY

### 3.1. Introduction

An important part of the research activity is to plan and develop an effective research design which gives an idea and shows the logical link between the data collection, the analysis, and conclusions to be drawn in the research. 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, Data type and source, research instrument, the dependent and independent variables which applied throughout the research, and finally the model specifications used for data analysis which is applicable and uses in the study are included.

### 3.2. Research Design

Miller and Salkind (2002) define research design as basically, master plan of a research that focuses on how the study is to be conducted. It is a framework or blueprint for conducting a research. It details the procedures necessary for obtaining the information needed to structure the research problem.

The study was designed to employ cross-sectional studies which had been taking a study within a particular timeframe. According to Soureli et.al., (2006) the cross-sectional design, also known as one- shot and it is best suited to studies aimed at finding out the prevalence of a phenomenon, situation, problem, attitude or issue, by taking a cross- section of the respondents. Therefore, this design helps the researcher to obtain an overall picture of research objective as it stands at the time of the study.

Descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual, or of a group (Kothari, 2004). So that, this study from purpose point of view categorized as descriptive research study.

The investigation conducted by both descriptive and inferential research methods. Descriptive method was mainly used to describe for demographic part of the questions. Although, the inferential method was used to determine each independent variables effect on internal audit effectiveness by using its objective measurement. Furthermore, inferential statistics method was used to ensure efficiency of research finding with various diagnostic tests (Davis, 2000). This study investigates the determinants of internal audit effectiveness in all woredas public finance and economy development sector offices in Hadiya zone.

The data used to conduct the study are the primary data obtained through the questionnaires. The questionnaires were distributed to both the finance sectors' head office management team and for the internal auditors. In this study from a total number of questionnaires administered to all 120 respondents (both sixty each management bodies and internal auditor response rate), the tolerable non-response rate expected to be less than 10 percent.

### **3.3 Source and Type of Data**

In this research, primary data would be used predominantly. Primary data refers to data originated by the researcher for the specific purpose of addressing the research problem (Coper and Schindler, 2006). It is what the researcher originally collects from the target population (source of data). For this thesis, the target population was all woredas in the Hadiya zone finance and economy development sectors' internal auditors and management bodies. The primary data was being collected by questionnaire.

Primary data were the major source of data for this research. Some Secondary data might have their contribution as they were helpful to define the research problem, methods that were used in data collection and analyses.

### **3.4. Sampling Techniques**

The target populations for this research were at all Woredas Governmental finance and economy development sector offices which are found in Hadiya zone SNNPR Ethiopia, in Hosanna town and the surrounding Woredas (shown in fig.2 below).

In SNNPR Hadiya zone, there are 10 Woredas and 2 administrative-towns, each of those have one Finance and Economy Development sector office and around 23 other public government

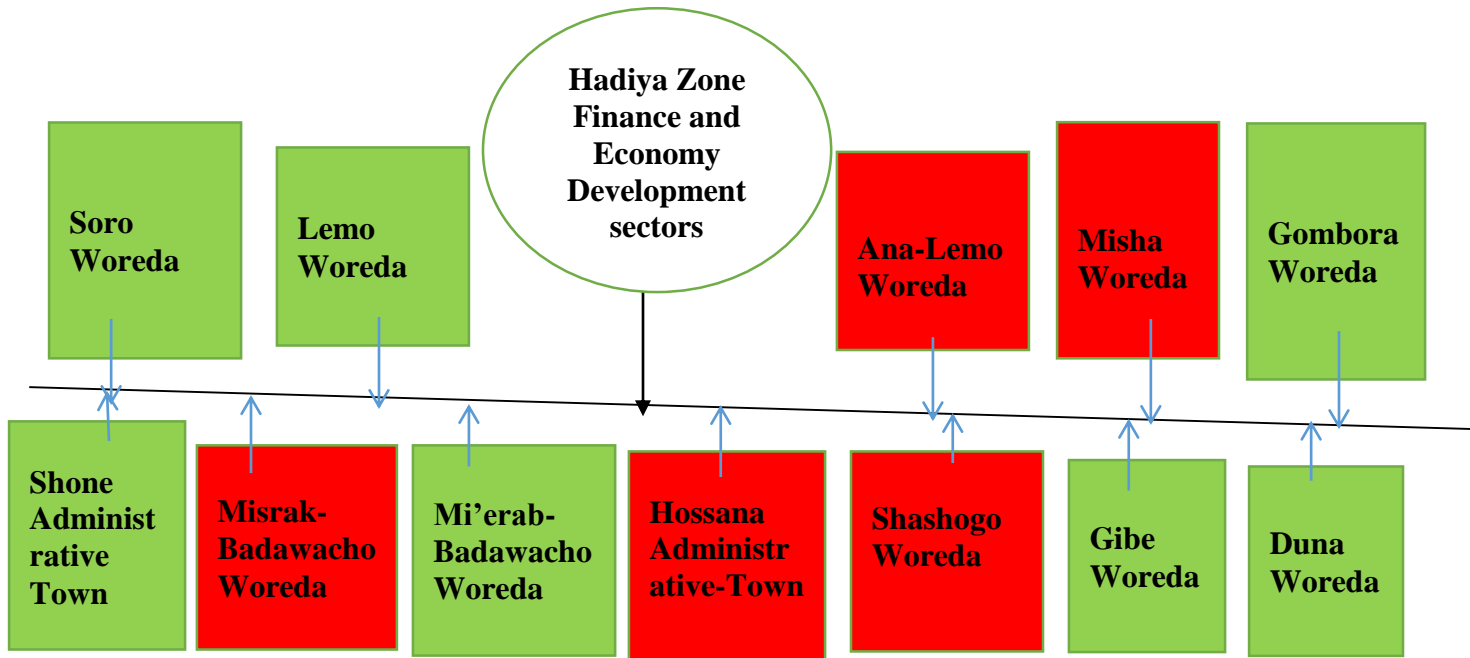
sectors. Since most of those government sectors have not internal audit staff/function, their financial activities and budget controlling system were pooled under each of those Woreda finance and economic development offices/sectors (WoFED) which have internal audit staffs. Due to the necessity in covering all internal audit staff to the total existing Woredas' public finance and economy development sector, the researcher obliged to shelter study area by focusing on all of 12 public finance and economy development sectors, which are expected to represent the effect of the rest other none financial sectors, in which their financial activities/services were pooled under those selected public finance and economy development sector.

All these woredas and finance sector offices were used/selected because, it enables the researcher to generate meaningful insights, and also greater impact in influencing the zone's overall social, political and economic issues.

The study focused areas/departments in all public finance and economy development sectors offices are as follows. From those of all each public finance and economic development sectors: - Department of purchase and payment office; Department of budget and plan; Department of Ethics and Anti-corruption with respective departments' management teams; and Head of Finance and Economy Development office with all of internal audit staffs/department are the focus of this case study.

The data collection was conducted based on a survey of all selected public finance and economy development sector offices that have internal audit department/team in their offices. But, the other public sector offices that have not internal audit function are excluded from this study. From each public finance and economy development sector office: the management members; Zone/ Woreda's audit committee, Head of the finance office with the respective department's management body and Ethics and anti- corruption officers who are participated for the responses distributed. The internal auditors of all those public finance and economy development sector offices having experience are also participated for the questionnaires administered.

**Chart of Case Study Area for Sampling Technique and Procedure**



*Figure 2: Hadiya Zone’s All Woredas Finance and Economy Development Sectors*

Source: From Researcher 2017

### 3.5. Sample size

From the study area of zonal background and empirical literature studies, the total number of public finance and economy development sectors in Hadiya zone are around 12 finance offices (as shown in fig.2 Above). Based on their similarity on service rendering to the public, all are selected from each Woredas in Hadiya Zone, and by using census that the researcher focused on those selected finance and economy development sector offices. The questionnaires distributed for these all selected Woredas public finance and economy development sector offices which help to get appropriate responses.

To obtain the adequate responses through questionnaire, the researcher believed that distributing the questionnaire for five purposively selected senior managers are decent; those are: - each of one finance’s head office managers and four of respective departmental office managers (who are the stepping stone to other positions in the sector), in total sixty management bodies/respondents who use the audit results, are appropriate.



And also, to get adequate responses from the internal audit staffs regarding the factors affecting the effectiveness of internal audit in the sector, purposively taking of five experienced internal auditors (because most of the public finance and economy development sector offices have five internal auditors) from all of 12 each finance sector and total sixty respondents are believed appropriate to make analysis regarding the effectiveness of internal audit in all selected public finance and economy development sector offices. For taking of all finance sectors, the use of census is essential to obtain all representatives of the whole universe (Kothari, 2004).

### **3.6. Data Collection Instrument**

The questionnaires adopted and modified from the prior authors and literature review (Mihret and Yismaw, 2007; Cohen and Sayag, 2010; Arena and Azzone, 2009; shewamene H. 2014). The Reliability and Validity test of those adopted questionnaires were also considered to this study.

An approach which is recommended in methodological literature for studies of this nature (Bryman and Bell, 2007) and those questionnaires are prepared in the form of Likert-Scale type (showing respondents agreement or disagreement) by constructing into five point scale where the lowest scale represent strongly disagree and the highest scale represent strongly agree (Likert, 1932).

Then the questionnaires were distributed to the managers and the internal auditors of the public finance and economy development sector office. But, the questions were different for the managers and the internal auditors according to their profession and responsibility. The questionnaire for the manager deals about the effectiveness of the finance offices internal auditing process, while the questionnaires for the internal auditors were about the independent variables which determine the effectiveness of internal auditors.

The questionnaires distributed to the respondent are organized into two parts; the first part comprises the demographic question regarding the respondents, and the second part contains items relating to the effectiveness of internal audit and its determinants.

### **3.7. Variables used in the Research**

According to past exploratory research of Anam and Rab (2015), Government audits were used as dependent variables and Training of auditors, resource constraints, behavior of audit, massive corruption, auditing techniques, powers of auditors, demotivation, follow up of audit recommendations, extent of auditing techniques, were explored as independent variables which affect government auditors. Since the previous time, exploratory researches were served as a base to present and future further studies. With this regard, this study stands to test four independent variables as determinants of internal audit effectiveness in case of government audit in public finance and economy development sector offices at Hadiya zone.

#### **3.7.1. Dependent Variable**

The dependent variable for this research is the internal audit effectiveness. In here the internal audit effectiveness is measured in terms of internal auditors' ability to identify non-compliance activities with the office's procedures and policies, and the contributions added by internal audit to the public finance and economy development offices.

A 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 whether it is for profit or nonprofit; and governmental or nongovernmental sector' operations (Fadzil, F.H et al, 2005; MoFED, 2004).

Therefore, internal audit 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 internal auditors to organizations can be measured in terms of value creation (its role in the avoidance of corporate failures) and cost saving (Soh and Bennie, 2011; Cohen and Sayag, 2010).

One issue that has emerged related to the internal auditing practices and effectiveness is; “what is a proper and sound measurement of the internal audit effectiveness?” Before proper and sound measurement of the internal auditing effectiveness/practices can be done, we have to have a clear understanding of the roles expected of internal auditing and its impact on the internal audit effectiveness (Barrett, 1986). Barrett notes that “effectiveness can be described and is determined by the perception of auditees.” In the company environment, the management is the most important auditee of the internal audit department since the effectiveness of the internal auditing can be described through the expectations of the management with regard to the internal auditing practices.

In this case study, the researcher measured the internal audit effectiveness by assessing and implementing the effectiveness of internal audit in the public finance and economy development sector offices with a zonal as well as country’s auditing environment in which the internal auditor’s ability in identifying non-compliance activities and the added contribution by the internal audit to the public finance and economy development offices.

A compliance audit is the most audit services implemented in Ethiopian public bodies (Mihret and Wolde yohanes, 2008; MoFED, 2004) while the added contributions by the internal audit to the organization was used by Cohen and Sayag (2010) to measure the internal audit effectiveness.

Therefore, both dimensions were measured internal audit effectiveness against the perception of public finance and economy development offices Managers (Finance Head Office and respective Department’s management team Officers).

To understand the level of the manager’s perception of internal audit effectiveness a 5-scale point Likert-type of 15 different item questionnaires were constructed and distributed to the respondents.

The researcher used the summative score technique for the questions in each factor for each participant. This is because the Likert scale is the common summative scores (Balnaves and Caputi, 2001).

### **3.7.2. Independent Variable**

This study focused on four independent variables that might have an impact on the internal audit effectiveness in the public finance and economy development sector offices. Those predictor variables investigated in this research were: the management's support for the internal audit activity, the management's perception of internal audit's value, organizational independence of the internal audit work and the adequate and competent internal audit staff. It should be noted that the data for the independent variables were collected from the internal auditors of the selected public finance and economy development sector offices. Therefore, the independent variables represent the perceptions of the internal auditors regarding these concepts. Similarly, with the dependent variable items, all of the independent variables items were measured on a five-point Likert-scale where the lowest scale represent strongly disagree and the highest scale represent strongly agree (Likert, 1932).

As shown in Appendix A of part I, twenty different item questionnaires were constructed to identify 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 the internal auditors were asked to express their opinion for those items.

### **3.8. Data Analysis Method**

After data collection, data analysis begins. The collected data were analyzed using both descriptive statistics and econometric model. Data analyses are conducted through a descriptive statistics to provide details regarding the demographic question and the various factors that affect the effectiveness of internal audit in the public finance and economy development sector. To evaluate the effects of various factors on the effectiveness of internal auditors in the public finance and economy development sector, the correlation analysis were used. The degree of association among variables was examined by Pearson correlation analysis. And also, the Statistical Package for Social Sciences (SPSS) version 16 and Stat 12 were used for the data analysis.

### **Reliability and Validity Test of Instrument**

In order to assess the reliability and consistency of the instrument the Cronbach's Alpha ( $\alpha$ ) analysis was conducted. Reliability refers to the consistency and accuracy of the data collecting instrument. A reliability test was used to check the consistency and accuracy of the measurement scales, through which researchers required to maintain the reliability and validity of the research results (Djalalie, 2011). Reliability and validity are often used by scientific researchers in their studies both qualitative and quantitative.

In the quantitative research, reliability can be illustrated as the stability of the measurement over time, the similarity of the measurements during the given period, and also the degree to the same results of the measurement given repeatedly.

Validity means the accuracy of the measurement, in which it is used to test the questionnaires and how truthful the results of the research are. Checking the validity and reliability of data collecting instrument before providing to the actual study, is the core to assure the quality of the data (Akalu, 2015).

The pre-test provide an advance opportunity for the investigator to check the questionnaires and to minimize errors and bias due to improper design of elements, such as question, wording or sequence (Mullins, 1999). In this research to pre-test the instrument and to ensure validity, first the questionnaires were developed by the researcher and next a pilot study was carried out on 3 conveniently selected Woredas finance and economy development sectors' sample respondents of internal auditors and management team.

The average test results of the Cronbach's alpha values for perceived performance and for expected performance were determined. According to Cronbach's Alpha (1951), the result is greater than 0.7 and therefore it is fitted and it indicates there is not reliability problem in the instrument (questionaries').

Whereas, to determine the relationship among the variables and to test the research hypothesis correlation and regression analysis method are used by meeting the ordinary least square (OLS) assumptions of the linear regression. In line with this, in this study the normality, multi-col linearity, Hetroscadastisity and autocorrelation problems were also considered and tested.

### 3.9. Model Specification

The following model is formulated for this research in order to test the research hypothesis set earlier. Most of the independent variables included in the model are used in prior audit researchers (Mihret and Yismaw, 2007; Cohen and Sayag, 2010; Arena and Azzone) except the management perception of internal audit's value and the adopted internal audit charter. While in this study the researcher use the most applicable four independent variables excluding the adopted internal audit charter, which is for the reason that, the amendment in adopting internal audit charter were not the mandate for this study case area in Hadiya Zone. So the reliability and validity of the model was recognized and used in this research is to analyze and interpret the result of the study.

$$IAE = \alpha + \beta_1 MS + \beta_2 MP + \beta_3 OIN + \beta_4 ACIAS + e$$

#### *Where*

IAE- the effectiveness of internal auditors' in identifying non-compliance activities and the added contributions of internal audit to the public finance and economy development sector offices,

MS - The Managements Support,

MP - The management's perception of internal audit's value,

OIN- The organizational independence,

ACIAS- The adequate and competent internal audit staff,

$\alpha$ :-is a constant, represents the effectiveness of internal audit when every independent variables are zero.

$\beta_1 - 4$ :- is the coefficient, in which every marginal change in variables on internal auditor's effectiveness affects correspondingly.

$e_i$ : - the error term

# CHAPTER FOUR

## 4. RESULT AND DISCUSSION

### 4.1. NTRODUCTION

As indicating in the previous chapter, the main attempt of this study is to investigate the determinants of internal audit effectiveness in the public finance and economy development sector.

Therefore, this chapter presents the analysis and discussions for research findings obtained from the questionnaires. It reports the investigation results obtained from senior management bodies and internal auditors of the public finance and economy development sector offices covered in the questionnaire. The discussion begins with the questionnaires' response rate followed by the descriptive statistics of the respondents related questions; like the gender, age, profession, and level of education. The results of the reliability analysis and the regression assumption test also reported and finally the results of hypothesis testing are presented.

### 4.2. Descriptive Statistics

#### 4.2.1 Response Rate

The questionnaires were distributed to both the office management team and the internal auditors of the selected zonal level public finance and economy development sector offices. As indicated in Table 1 below, 120 questionnaires are distributed to both the Finance sectors' management bodies and internal auditors and from which 112 questionnaires were collected (56 responses each from management bodies and internal auditors) giving the response rate of 93.33 percent.

This shows good response rate both for the managers and internal auditors, in relative to the expected non-response rate of less than 10 percent in research design.

Table 1: Response Rate

|                                  | <b>Questionnaires administered</b> | <b>Questionnaires filled &amp; returned</b> | <b>Percentage</b> |
|----------------------------------|------------------------------------|---|-------------------|
| Respondents of Internal auditors | 60                                 | 56  | 93.33             |
| Respondents of Management bodies | 60                                 | 56  | 93.33             |
| Total                            | 120                                | 112   | <b>93.33</b>      |

Source: Researcher, 2017

#### **4.2.2 Respondents Profile**

Table 2, describes the general findings regarding the respondent's age, field of study and level of education for both the senior managers and the internal auditors.

The majority of the ages of respondents of the managers are fall under the age of 40-49 (23, 41 percent), 30-39 (20, 36 percent ), and the rest falls in the age interval of 50–59 (8, 14 percent) and 20-29 (5, 9 percent ); and in the internal auditors category the majority are fall in the age of 30-39 (20, 36 percent ) and 40-49 (19,34 percent ) and the rest falls in the age of 50-59 (12, 21 percent ) and 20-29 (5, 9 percent ) respondents.

Here, the majority of the respondents are in the age of 30-50 (82, 73 percent) years. This shows that most of the internal auditors and management respondents are at the age of youth and at maturity to accept or participate in technological and innovative activities through the effectiveness of IA.



Table 2: Respondents General Profile

| Demographic Questions |                   | Responses |              |                   |              |
|-----------------------|-------------------|-----------|--------------|-------------------|--------------|
|                       |                   | Managers  |              | Internal Auditors |              |
|                       |                   | Frequency | Percentage % | Frequency         | Percentage % |
| Age                   | 20 – 29           | 5         | 9            | 5                 | 9            |
|                       | 30 – 39           | 20        | 36           | 20                | 36           |
|                       | 40 –49            | 23        | 41           | 19                | 34           |
|                       | 50 – 59           | 8         | 14           | 12                | 21           |
|                       | Total             | 56        | 100          | 56                | 100          |
| Field of Study        | Accounting        | 24        | 43           | 10                | 18           |
|                       | Management        | 27        | 48           | 41                | 73           |
|                       | Economics         | 3         | 5            | 5                 | 9            |
|                       | Other             | 2         | 4            | -                 | -            |
|                       | Total             | 56        | 100          | 56                | 100          |
| Educational level     | Diploma           | -         | -            | 7                 | 12.5         |
|                       | Bachelor’s Degree | 54        | 96.4         | 49                | 87.5         |
|                       | Master’s Degree   | 2         | 3.6          | -                 | -            |
|                       | Total             | 56        | 100          | 56                | 100          |

Source: Questionnaire Results, 2017

In the case of field of study the respondents were composed of from Accounting (24, 43 percent ), Management (27, 48 percent ), Economics (3, 5 percent), and others fields (2, 4 percent ) for managers, while the internal auditors were composed of from Accounting (10, 18 percent ), Management (41, 73 percent ) and economics (5, 9 percent ) fields. Here, the majority of managers and 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, most managers and internal auditors have bachelor’s degree (54, 96.4 percent) and (49, 87.5 percent) respectively followed by master’s degree (2, 3.6 percent) for managers and (none, zero percent) for internal auditors. Only 7

(12.5 percent) respondents from internal audit have a diploma and there were no managers who had a diploma.

But from both categories, there were no respondents who had other levels of education. The majorities of the respondents were (Degree holders) educated/or professional and can contribute more to the effectiveness of their intended work.

### 4.2.3 Internal Auditors Response

The internal auditors, who are the main participants in the internal audit effectiveness were requested separately to respond the question regarding their professional certification, experiences working as internal audit and the presence of audit committee in their sector office.

Table 3 shows the descriptive statistics of these internal auditors' responses for the delivered questionnaires.

Table 3: Internal Auditors Response

| Questions                              |                         | Responses |              |
|--|-------------------------|-----------|--------------|
|  |                         | Frequency | Percentage % |
| <b>Experiences working as IA</b>       | <b>Below five years</b> | <b>6</b>  | <b>11</b>    |
|  | <b>5 to 10 years</b>    | <b>23</b> | <b>41</b>    |
|  | <b>11 to 15 years</b>   | <b>16</b> | <b>29</b>    |
|  | <b>16 to 20 years</b>   | <b>5</b>  | <b>9</b>     |
|  | <b>Above 20 years</b>   | <b>6</b>  | <b>11</b>    |
|  | <b>Total</b>            | <b>56</b> | <b>100</b>   |
| <b>The presence of Audit Committee</b> | <b>Yes</b>              | <b>45</b> | <b>80</b>    |
|  | <b>No</b>               | <b>11</b> | <b>20</b>    |
|  | <b>Total</b>            | <b>56</b> | <b>100</b>   |

Source: Questionnaire Results, 2017

As indicated in Table 3 above the internal auditors work experience ranges from one year up to 25 years, but the majority of the respondents are in the range of 5-10 years (23, 41

percent) and 11-15 (16, 29 percent) years of work experience followed by participants having less than five years and above twenty years of work experience both are numbered six (11 percent) each and participants having work experience of 16-20 years are five (9 percent). Here the majority of the internal auditors are relatively experienced and can perform their auditing activities by using their past audit experiences.

In assessing of internal audit effectiveness added that the size of internal auditors team and the involvement of audit committee in internal auditors activities are positively related to internal audit effectiveness (Arena and Azzone, 2009; Shewamene H., 2014). In terms of the presence of Audit Committee, about nine (n = 45, 80 percent) public finance sector offices had audit committees and three (n= 11, 20 percent) public finance and economy development sector offices had no audit committees in their office. The availability of audit committee in the public finance 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 management's actions in terms of financial, risk management and internal control (MOFED, 2004).

### **4.3. Reliability Analysis**

To measure the consistency of the questionnaire particularly the Likert-type scale, the reliability analysis is essential in reflecting the overall reliability of constructs that it is measuring.

To carry out the reliability analysis, Cronbach's Alpha ( $\alpha$ ) 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 ( $\alpha$ ) greater than 0.600 is also acceptable.

Table 4: Reliability Statistics

| Reliability Statistics |            |
|------------------------|------------|
| Cronbach's Alpha       | N of Items |
| .684                   | 5          |

Sources: survey data, 2017 SPSS output

From Table 4 above, the value for Cronbach's Alpha ( $\alpha$ ) was 0.684 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.

Validity test is important for the questionnaires appropriateness and validity. There are three main ways of characterizing validity in research studies (Greener, 2008). By taking into account that, in construct type of validity, sometimes the results can be invalidated because of the respondents may have misunderstood a question and answered in a way which was not intended, in this study the internal type of validity were applied to test questionnaires which were relate to causality. According to (Greener, 2008), in business researches to test the internal validity, it is important to deal and ask the question about factors (i.e independent variables) causing an effect (Dependent variables). Although in this study to test validity, the researcher developed questionnaires about determinants of internal audit effectiveness for internal auditors while the questionnaires related to the effectiveness of internal auditors for management bodies were developed and the pilot study carried on sample of public finance sectors,. As a result of test-retest technique, there were no reliability and validity problem in both of questionnaires.

#### **4.4. Assessment of Ordinary Least Square Assumptions**

The characteristics of the model and proposed variable in this study have been evaluated for the fulfillment of the classical assumptions underlying the OLS model. In this part, a Diagnostic test of each OLS assumptions was verified.

#### 4.4.1. Assessment of Normality Test

In normality test, the residuals should be normally distributed about the predicted dependent variable scores. Whereas in linearity test the residuals should have a straight-line relationship with predicted dependent variable scores. Here in this study residuals means the score differences between the obtained and the predicted dependent variable scores.

In order to test the normality of data, Kolmogorov-Smirnova and Shapiro-Wilk tests of normality were used and conducted on SPSS 16. According to Field (2009), when the test is non-significant ( $p > 0.05$ ) it shows that the distribution of the sample is not significantly different from a normal distribution. Accordingly, the result of the test showed in Table 5 below and Appendix C that all variables were found to be normal and the presence of normality was accepted at  $p > 0.05$ .

Hence, here we should take the result of Konglomorov-Smirnov test of normality for Dependent variable (for which  $p$  is  $.298 > 0.05$ ), because no need of test of normality for explanatory variable.

Table 5: Test of Normality

| Variables                       | Kolmogorov-Smirnov <sup>a</sup> |    |       | Shapiro-Wilk |    |      |
|---------------------------------|---------------------------------|----|-------|--------------|----|------|
|                                 | Statistic                       | Df | Sig.  | Statistic    | df | Sig. |
| Internal Audit Effectiveness    | .108                            | 56 | .298* | .962         | 56 | .112 |
| Management Support              | .095                            | 56 | .185* | .971         | 56 | .247 |
| Management Perceptions          | .125                            | 56 | .050  | .965         | 56 | .140 |
| Organizational independence     | .127                            | 56 | .072  | .920         | 56 | .102 |
| Adequate and Competent IA Staff | .108                            | 56 | .200* | .962         | 56 | .224 |

a. Lilliefors Significance Correction significance.

\*. This is a lower bound of the true

Source: Survey data, 2017 SPSS output

#### 4.4.2. Assessment of Heteroskedasticity Test

This is the assumption of homoscedasticity, or *equal* (homo) *spread* (scedasticity), that is, equal variance (Gujarati 2004, 4<sup>th</sup>-ed pp.411). In homoscedasticity (non-heteroskedasticity

problem) test the variance of the residuals about predicted dependent variable scores should be the same for all predicted scores. This assumption is theoretically expressed by Brook (2008) as “ $\text{var}(\mathbf{ui}) = \sigma^2 < \infty$ ” which has been assumed that the variance of errors is constant.

Since Breusch-Pagan test (BP) is an asymptotic or large-sample (a population) test, this study strive to use this test.

To test whether  $\sigma^2$  is homoscedastic, one can test the hypothesis that  $\alpha_2 = \alpha_3 = \dots = 0$ . This is the basic idea behind the Breusch-Pagan test. Under the assumptions of the BPG test asymptotically follows the chi-square distribution (Gujarati, 4<sup>th</sup>-ed pp.411).

For the regression output of the model Breusch-Pagan/Cook-Weisberg test for Heteroskedasticity was conducted on stata 12 to test for homogeneity of variance and a P-value of greater than 0.05 was acceptable. As the result revealed in Table 6 below and Appendix C, p-value (= 0.7894) for the model is greater than 0.05 the critical value, shows homogeneity of variance across the model.

Table 6: Test of Heteroskedasticity

|   |
|---|
| . estat hottest   |
| Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity |
| Ho: Constant variance                                     |
| Variables: fitted values of IAE                           |
| chi <sup>2</sup> = 0.1800                                 |
| Prob > chi <sup>2</sup> = 0.7894                          |

Source: Survey data, 2017 Stata output

#### 4.4.3. Assessment of Multicollinearity Test

Assumption, that there be no exact linear relationship between independent variables, technically known as the assumption of no collinearity or no multicollinearity. Informally, no collinearity means none of the regressors can be written as exact linear combinations of the remaining regressors in the model.

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

Table 7: Collinearity Statistics

| Variables                       | Collinearity Statistics |       |
|---------------------------------|-------------------------|-------|
|                                 | Tolerance               | VIF   |
| Management Support              | .604                    | 1.655 |
| Management Perceptions          | .826                    | 1.211 |
| Organizational independence     | .805                    | 1.242 |
| Adequate and Competent IA Staff | .721                    | 1.387 |

Source: Survey data, 2017 SPSS output

As shown in the Collinearity table 7, the tolerance levels for all variables are greater than 0.10 and the VIF value are less than 10 (see Table 7 above), and also the correlation matrix of all the variables have the paired values among the predictors are less than 0.80 (see Table 8 below) indicates that there were no multicollinearity problems that alters the analysis of the findings, rather it leads to the acceptance of r value, tolerance and VIF values.

On the other hand, the objective of the Multicollinearity test is to see whether there are many multicollinearity problems among variables. The problem exists if independent variables are highly correlated among each other with correlation values exceeding 0.90 (Tabachnick and Fidell, 2001).

High correlation among independent variables reduces the explanatory power of the variables on the dependent variable (Sharma, 1996). According to Cohen (1988) a correlation of 0 indicates no relationship at all, a correlation of 1.0 indicates a perfect positive correlation, and a value of -1.0 indicates a perfect negative correlation.

In this study, the results of the test are presented in Table-8 below which shows that the correlation values among independent variables range between 0.179 and 0.575. Hence, multicollinearity problems do not exist in this study.

Table 8: Pearson Correlations Matrix

| Variables                       | IAE    | MS     | MP     | OIN   | ACIAS |
|---------------------------------|--------|--------|--------|-------|-------|
| Internal Audit Effectiveness    | 1.000  |        |        |       |       |
| Management Support              | .399** | 1.000  |        |       |       |
| Management Perceptions          | .216   | .354** | 1.000  |       |       |
| Organizational Independence     | .179   | .429** | .220   | 1.000 |       |
| Adequate and Competent IA Staff | .575** | .492** | .343** | .262* | 1.000 |

\*\* . Correlation is significant at the 0.01 level (1-tailed). \* . Correlation is significant at the 0.05 level (1-tailed).

Source: Survey data, 2017 SPSS output

Table 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 are no Multicollinearity problems among variables.

As of the relationships between the dependent variables IAE and independent variables MS, MP, OIN and ACIAS some findings are significant. Furthermore, there were strong correlations between the dependent variable internal audit effectiveness (IAE) and independent variables MS ( $r = 0.399$ ), and ACIAS ( $r = 0.575$ ) with ( $P < 0.01$ ) level of significant, shows a strong support for first and fourth hypothesis respectively. However, there were no significant correlations among the MP 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).

#### 4.4.4. Assessment of Autocorrelation Test

Data were assessed to ensure that the autocorrelation is not a threat for the use of OLS for analysis. Mostly, the autocorrelation is a series problem in the time series data. In this case, it is better to test this problem with pasarance test (Gujarati 2004, 4<sup>th</sup>-ed pp.410-411). However



in this study of the cross-sectional data, to test and check the probability of the autocorrelation problem-existence, the Durbin-Watson test were used. The most celebrated test for detecting serial correlation is Durbin– Watson  $d$  statistic (test) developed by statisticians Durbin and Watson. It is popularly known. A great advantage of the  $d$  statistic is that it is based on the estimated residuals, which are routinely computed in regression analysis (Gujarati, 2004).

Because of this advantage, it is now a common practice to report the Durbin–Watson  $d$  along with summary measures, such as  $R^2$ , adjusted  $R^2$ ,  $t$ , and  $F$ . This assumption can be tested with the Durbin-Watson test which test for serial correlation between errors and the value closer to 2 are acceptable (Field, 2009). As described in Appendix D and table-9 below, the Durbin-Watson statistics value are 1.952 very close to 2 suggests that there is no severe autocorrelation among error terms.

#### **4.5. The Regression Results and Hypothesis Testing**

The regression result that are obtained by regressing the internal auditors effectiveness in identifying noncompliance activities and the internal auditors ability in adding value for their organization on the management's support (MS), managements perception (MP), organizational independence (OIN),and adequate and competent internal audit staff (ACIAS) were analyze and reported.

Finally, the hypothesis tests were undertaken based on the proposed hypothesis and the regression output results.

##### **4.5.1. Regression Results for IAE**

The regression result explores the necessary indicators of the internal audit effectiveness by using the variables identified in the model.

As indicated in the model summary (Table 9) the appropriate indicators of the variable used to identify the internal audit effectiveness (IAE) were explored. That is, the value of Adj. R square used to identify how much of the variance in the dependent variable IAE identify by the model. The larger the value of Adj. R square, the better the model is.

The overall contribution of management's support, management's perception, organizational independence and adequate and competent internal audit staff to the internal audit effectiveness IAE accounted for 51% ( $\text{Adj. } R^2 = 0.507$ ) of the variation in the internal audit effectiveness, the rest 49% are other variables not included in this study.

Table 9: Regression result for IAE

| R = 0.743 $R^2 = 0.551$ $\text{Adj. } R^2 = 0.507$ Std. Error of the Estimate = 2.7287<br>Durbin-Watson (d) = 1.952      F = 12.292      P = .000 |                             |                             |            |                           |       |        |                         |       |
|---|-----------------------------|-----------------------------|------------|---------------------------|-------|--------|-------------------------|-------|
| Model   |                             | Unstandardized Coefficients |            | Standardized Coefficients | T     | Sig.   | Collinearity Statistics |       |
|   |                             | B                           | Std. Error | Beta                      |       |        | Tolerance               | VIF   |
| 1   | (Constant)                  | 29.676                      | 5.984      |                           | 4.959 | .000   |                         |       |
|   | Management Support          | 1.705                       | .202       | .424                      | 3.481 | .001** | .605                    | 1.651 |
|   | Management's Perception     | .047                        | .168       | .029                      | .282  | .0779  | .826                    | 1.211 |
|   | Organizational Independence | .135                        | .164       | .087                      | .825  | .413   | .805                    | 1.242 |
|   | Adequate & Competent IAs    | 1.196                       | .191       | .698                      | 6.257 | .000** | .721                    | 1.387 |

\*\*P < 0.01, 95% level of Confidence, N = 56

Source: Survey data, 2017 SPSS output

The analysis in Table 9 shows that the coefficient of determination (the percentage variation in the dependent variable is explained by the changes in the independent variables)  $\text{Adj. } R^2$  equals 0.507, that is, Use of MS, MP, OIN and ACIAS explains 50.7% of the observed change in the Dependent variable internal audit effectiveness (IAE). The P- the value of 0.000 (Less than 0.05) implies that the regression model is significant at the 95% significance level.

Moreover, the model summary also shows the significance of the model by the value of F-statistics ( $P = .000$ ) and  $F = 12.292$  which implies that there were strong relationship between the predictors and the outcomes of the regression variables and are at best fit the model to predict the effectiveness of internal audits in the public finance and economy development sector.

The beta ( $\beta$ ) sign also shows the +ve or -ve effect of the independent variables coefficient over the dependent variable. And as shown in Table 9 above, a beta sign of all the independent variables shows the positive effect of the predicting dependent variable. That means any increase in the independent variables leads to increase in the dependent variable internal audit effectiveness.

This finding is consistent with most of the previous studies that are identified in this paper (Mihret and Yismaw, 2007; Cohen and Sayag, 2010; Shewamene H., 2014 Arena and Azzone, 2009; Al-Twajjry et al. 2004).

Therefore, based on the coefficients of the independent variable ( $\beta$  sign) all the hypotheses proposed by the researcher are acceptable because of all the four hypotheses stated the positive relationship with the dependent variable are meet. But based on the statistical significances of the independent variable over the dependent variable at 5% level of significance, only two independent variables (MS and ACIAS) are significantly contributed to the internal audit effectiveness IAE at ( $P < 0.01$ ) level of confidence.

Thus, this implies the MS and ACIAS are the most important determinants of internal audit effectiveness (IAE) in which the public finance and economy development sector office should give more emphasis in their internal audit function.

Besides this, even if their relationships are positive the remaining two independent variables (MP and OIN) have not significant contribution for the predicted dependent variable IAE because they have a sig. the value of greater than 5%. The variable with the level of significance (sig) value less than 5% could make a significance unique contribution to the predicted value of the dependent variable, beyond this level of the sig. the variable is not

making a significance contribution to the prediction of the dependent variable (Pallant, 2007; Somekh and Lewinn, 2005).

#### **4.5.2. Hypothesis Test**

The regression analysis whose results are presented in Table 9 above and Appendix D provides a more comprehensive and accurate examination of the research hypothesis. Therefore, the regression results obtained from the model were utilized to test these hypotheses. The hypotheses sought to test for a significant influence of management support (MS), Management's perceptions (MP), organizational independence (OIN) and adequate and competent internal audit staff (ACIAS) on the direct effect of internal audit effectiveness in terms of internal auditors' ability to identify the noncompliance activities and by their added contributions to the public finance and economy development sector.

As can be seen in Table 9 above the p-value for the MS and ACIAS are statistically significant at ( $p < 0.01$ ) which suggests a strong support for Hypothesis 1 and 4; whereas, MP and OIN are not supported the developed hypothesis (hypothesis 2 and 3) because it was statistically insignificant at ( $p < 0.05$ ).

The following hypotheses test were conducted based on the regression results of the internal audit effectiveness obtained from the regression output.

H1: The management supports are positively related to the internal audit effectiveness in the public finance and economy development sector offices.

Management support and auditee characteristics and Audit quality were determinants of audit effectiveness in Ethiopia Yismaw.A and Miheret.J. (2007).

The first hypothesis of this research posted that the effectiveness of the internal audit is directly related with the extent of the management support it receives. Showing the strongly correlated relationship between the internal audit effectiveness IAE and the management support, the positive beta sign and a statistically significant result of management support related to the internal audit effectiveness ( $\beta = 1.705$ ,  $t = 3.841$ ,  $P < 0.01$ ) support the proposed hypothesis acceptable. The management support in terms of providing resources, giving training, introducing new technologies, providing enough facilities and encourages the

internal audit process with commitments to promote and communicate their added value for the effectiveness of internal audit work in their office contributes for the IAE.

The result were consistent with the previous auditing research works of (Mihret and Yismaw, 2007; Cohen and Sayag, 2010;shewamene H.,2014) 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 management's support in terms of training, 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.

Sarens and Beelde (2006) argue that the overall acceptance and appreciation of internal audit 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.

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

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

The second hypothesis of this research revealed that there was the direct relationship between the management's perception and the effectiveness of internal audit in the way of identifying noncompliance activities and the ability to add value to the internal audit effectiveness (IAE). This hypothesis was not supported by the regression result as of the regression results insignificant related with the IAE at ( $P < 0.05$ ). As shown in Table 9 above the coefficient of MP ( $\beta = 0.047$ ) were positively related but statistically ( $t = .282, \rho > 0.05$ ) not significantly related with the internal auditor's effectiveness by identifying noncompliance

activities and in adding more values to the internal audit works of the public finance and economy development sector offices. Similarly, this insignificance result was consistent with the previous auditing research works of (Shewamene H., 2014). However, like other statistically significant variables of MS and ACIAS, this variable has a coefficient of positive relationship with the dependent variable of IAE.

Therefore, the managements perception of internal auditors values results in statistically insignificant contribution for the internal auditor's ability in identifying the noncompliance activities and their added contribution to the end objective of effective internal audit activities in their office. Even if this variable has a coefficient of positively related to the effectiveness of internal auditors, as a result of its insignificant regression analysis output result leads not to support (H2) the proposed hypothesis.

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

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

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

The third hypothesis of this research which is assumed to be the determinants of internal audit effectiveness is the independence of the organization in which internal audit work was conducted. Like Ethiopia, Government auditors in Greece, Ireland, Netherlands, Slovakia and the Czech Republic, Poland, Ireland, and Hungary did not have full financial independence, whereas these European Union countries have operational independence (Sacer.I, et al, 2011).

As shown in Table 9 above the coefficient of OIN ( $\beta = .135$ ,  $t = .825$ ) were positively related to the effectiveness of internal audit. But, because of its statistical result ( $P > 0.05$ ) the regression output result haven't statistically significant relationship between the organizational independence and the internal audit effectiveness reveals not to support the third hypothesis.

Whereas, it is inconsistent with the previous studies conducted by (Cohen, and Sayag, 2010; Van Peurse, 2005) they find that, the more organizational independence to the internal auditors plays the vital role in assurance of internal audit effectiveness by freely access of necessary documents, information and data about the organization for audit work, and can provide audit finding /report/ freely and directly to the responsible body, and this all supports the internal audit effectiveness in their sector.

This may be occurred due to the organization's support to the internal audit effectiveness and accordingly, the level of independence, reporting level, direct contact to the senior management, interference, the unrestricted access to all departments and employees, and performing a 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 internal audit staff 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 finance and economy development sector. And inturn, this leads to make, the result of OIN for the internal audit effectiveness IAE insignificant contribution and not to support the proposed hypothesis (H3).

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

The existence of adequate and competent internal audit staff also supposed to be the determinants of internal audit effectiveness and is the fourth hypothesis of this research. Gauteng province of South Africa, an independence of government auditors, timely submission of audit reports to government, follow up of recommendations and cooperation of audit parties, effective audit opinion, innovative auditing method and competent audit staff were the key success factors of public audit quality Khumalo, M.(2007).

The regression result highly supports this hypothesis at ( $P < 0.01$ ) level of significant and with the positive signs of beta and t- statistics ( $\beta = 1.196$  and  $t = 6.257$ ). Similarly, the result might be consistent with the past research which was conducted by (Shewamene H., 2014). On the other hand, this result has inconsistency with some previous auditing researchers (Arena and Azzone, 2009; Cohen and Sayag, 2010) they argued that there was no correlation between professional proficiency and adequacy with the internal audit 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 internal audit by considering the overall abilities of the internal auditor staffs and the availability of adequate and competent 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 internal audit staff in the public finance and economy development sector office results with positively relationship with effectiveness of internal audit IAE and with high contribution to the internal audit effectiveness by performing their activities on time, covering the planed scope of auditing activities by using the computerized data tools and specific internal audit software. This results for with the overall contribution of internal audit effectiveness and its positive relationship with internal audit effectiveness lead to highly support the proposed hypothesis (H4).



# CHAPTER FIVE

## 5. CONCLUSION AND RECOMMENDATION

### 5.1. Summary of Major Finding

According to the regression output, all these predictors were positively contributed to the effectiveness of internal audit functions in Hadiya Zone public finance and economy development sector offices. Therefore, the public finance sector office advised to give emphasis to use these determinant variables to make their service delivery effective, efficient and economical throughout their offices.

Moreover, the management support and the existence of adequate and competence internal auditor's staff were the major determinants of internal audit effectiveness in the public finance and economy development sector. Krisnamoorthy (1957) concluded that it is futile to attempt a rank ordering of the three factors of objectivity, work performance and competence are interrelated and no single factor can be used in isolation to make an overall evaluation of the strength of internal audit function.

Management support is the most influencing factor among the factors that contribute to the variation of quality audit work and this obviously crucial factor to the effective internal audit function. However, the management's perceptions for internal audit value and the organizational independence of internal audit, were not significantly important for the internal audit effectiveness (IAE) of finance and economy development sectors as of the above two variables.

This study finds that the composite measure of management support, management's perception of internal audit values, organizational independence of internal auditors and the existence of adequate and competent internal audit staff accounts for 50.7% ( $\text{adj. } R^2 = 0.507$ ) variance for the internal audit effectiveness in identifying noncompliance activities and added contributions to the public finance and economy development sector offices. That means, the

impact of these four independent variables contributed to the dependent variable internal audit effectiveness IAE were 50.7%, and the remaining 49.3% 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 on 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 management's support given to the internal audit activities, the management's perception to the internal audit values, the organizational independence of the internal audit and the existence of adequate and competence internal audit staff in the public finance and economy development sector offices.

## **5.2. Conclusion**

Due to its important role it plays to the overall management system internal audit is the major mechanism to ensure sound public sectors' good-governance. The existences of effective internal audit in the office links with internal-control risk management systems, improves organizational efficiency and effectiveness, reduce information asymmetry during decision making, and ensures the internal reliability of financial reporting process.

By taking this aspect into consideration, this study was identified factors that determine the internal audit effectiveness in the public finance and economy development sector offices and then analyzed the organizational dimensions in which the public finance sector office should carry out to enhance the internal audit effectiveness. And also by testing of the proposed hypotheses showed relations of these independent variables with the internal audit effectiveness the following conclusions were drawn.

The Internal-audit effectiveness of the public finance and economy development sector office increases, when there were more supports from the management and adequate and competent internal auditors' staff in the office. The regression analysis (shown in Table 9) shows very strong contributions of these variables to the internal audit effectiveness (IAE). Therefore,

the overall effect of the management support and the existence of adequate and approved internal audit staff is very important for the internal audit effectiveness in the public finance and economy development sector offices without neglecting the other two statistically insignificant variables (MP and OIN), because they have a positive sign of beta and contribute for the 50.7% of the variances for the IAE. Thus, neglecting these two variables may cause to decrease the value of internal audit effectiveness variance that was obtained from collective contribution of the four independent variables.

In addition, the correlation analysis (shown in table 8) shows all the independent variables have the direct effect on the internal audit effectiveness (IAE) and the regression result also depicts all the independent variables have a positive sign of coefficients (shown in table 9) with IAE in the public finance and economy development sector offices. However, the management's perception to the internal audit value and the organizational independence of internal audit were statistically not significant enough at 5% sig. level to contribute to the internal audit effectiveness in the public finance and economy development sector offices, therefore this conclusion requires further future researchers consideration for obtaining the impact of those variables on the internal audit effectiveness.

Furthermore, the correlation analysis (see table 8) showed the contributions of the independent variables to the dependent variable of internal audit effectiveness. For instance, the management's perception of internal audit value and the organizational independence of internal auditors were not significantly correlated with internal audit effectiveness to the public finance and economy development 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 internal audit effectiveness in the public finance and economy development sector offices and also to prove the hypotheses, the researcher provides the following recommendations to the public finance and economy development sector offices and the internal auditors in Hadiya zone SNNPR, Ethiopia.

The finding of this research proved that the management support and the existence of adequate and competent internal audit staff were statistically significant and positively related to the internal audit effectiveness in the public finance and economy development sector offices.

Management's support is expressed in terms of supporting the auditing process by providing response on audit finding and the commitment to strength internal audit; and by fulfilling the necessary resources, finance, transport if required, providing training, introducing auditors with new technology and procedures, budgeting funds and other facilities that facilitate the internal auditing works. It consists: -

- ⇒ From the view point of their independence and objectivity, the Government auditors may face different problems due to lack of financial resources support from their office managements. As a result, they might heavily rely on auditee for stationaries, conveyance, photocopiers and other needs which creates a negative perception about government auditors. So, the appropriate budget should be assigned to internal audit to eliminate that reliance.
- ⇒ Similarly, (POB 2000, p.109) once argues that independence is fundamental to the reliability of auditor's reports cited in Geiger and Tan (2002). And truly independent auditors are able to provide the public with higher-quality audits due to the lack of "ties" with the audited client. This lack of association with the client enables auditors to exercise unfettered professional judgment when planning and conducting the audits, and reporting the results of their findings in their audit report.
- Thus, the public finance sector office advised to support more for the internal audit functions by facilitating the internal audit works, should recruite the more of adequate and competent internal audit staff and give sufficient training for the existing internal audit staffs.
- The internal auditors of the public finance and economy development sector office should recommend to maintain and improve their effective contribution to the internal audit effectiveness in their office, by using the supports from their office management

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

- Top management must support auditors to conduct audit honestly and fairly. Audit paragraphs must not be changed on directions of political pressures and personal interest of management.
- Technology should be upgraded in a timely manner to encourage all employees to use computerized auditing techniques.

As the research proved that the adequate and competent internal audit staffs were the major determinant of internal audit effectiveness in the public finance and economy development sector.

- ✓ So, Hadiya zone public finance and economy development (ZoFED) sectors and each Woredas Finance and Economy Development (WoFED) offices recommended as to support the internal audit works by increasing the number of skilled internal auditors by facilitating the way for training.
- ✓ Audit teams should comprise both new and experienced auditors to share experiences, explicit and implicit. In this way, training cost can be saved through on the job training methods. Employees can learn and share good manner.

It is advisable in providing a Training to staff at all levels and it shall cover:

- ✚ Basic training providing the knowledge which all Internal Auditors in Government should possess.
- ✚ Development training in general audit skills, technique and behavioral aspects, to improve the effectiveness of those currently employed as Internal Auditors.
- ✚ Management training for Internal Auditors with responsibility for managing and directing Audit Teams, together with those staff members who show potential for management positions.
- ✚ Specialist training for those Internal Auditors may be responsible for a particular activity such as IT and forensic auditing which require special skills.

Internal auditors are responsible for their continuous professional education in order to maintain their proficiency. With this regards they should keep themselves informed about current developments in Internal Auditing (advised to update their skill).

- Internal auditors advised to avoid any factors that may restrict their work or impair their ability to be professionally independent through the accomplishing the non-compliance activities. Such factors might include actual or perceived pressures from management and employees of the audited entity, politician and other externals factors etc.

Finally; the Hadiya zone's public finance and economy Development sectors should contribute to the internal audit effectiveness (IAE) by working in collaboration with the Bureau of at regional level and Ministry of Finance and Economy Development at federal level and other public finance sector offices to accomplish effective internal audit work by supplying the adequate and competent internal audit staffs and also to give a short term trainings to upgrade the existing internal audit staffs proficiency in line with the institute of internal audit standards.

## **5.4 Future Research Direction**

The study has achieved its aim that is to investigate the effect of determinant factors on internal audit effectiveness in case of Hadiya zone public finance and economy development sector. It has therefore opened up avenues for further research since it was confined to government finance sectors in Hadiya zone. In its significance, this research also used as empirical evidence for the public sector offices and as a conceptual literature development for the future researchers.

In addition in this study, the two independent variables the management's perception on the internal audit value and the organizational independence of internal audit were statistically not significant enough at 5% sig. level to contribute to the internal audit effectiveness in the public finance and economy development sector offices, therefore this conclusion requires further future researchers consideration for obtaining the impact of those variables on the internal audit effectiveness.

Therefore future researchers should investigate the determinants of internal audit effectiveness in case of those untouched study areas by considering the above two statistically insignificant and others independent variables.

## Bibliography

(The) institute of internal auditors, 2001. *Standards for the Professional Practice of Internal Auditing(SPPIA)*. htm: Audit Tools/New IIA Standards.

(The) Ministry of Finance and Economic Development, 2004. *Internal Audit Standards and Code of Ethics for Internal Auditors and Internal Audit Procedural Manual* :Ministry of Finance and Economic Development.

Adams, M., 1994. "Agency theory and the internal audit": *Managerial Auditing Journal*, Volume 9 (8), pp.8-12.

Adrian C.Darnell, 1994. *Dictionary of Econometrics*,. U.k: Edward Elgar,Cheltenham.

Al-Twajjry et al., 2004. "An Examination of the Relationship Between internal and external audit in the Saudi Arabian corporate sector". *Managerial Auditing Journal*, Volume 19 (7), pp. 929–45.

Anderson, U., 1983. "*Quality Assurance for Internal Auditing, Institute of Internal Auditors*" , Florida: Altamonte Springs.

Anon., *International Organisation of Supreme Audits Institutions (INTOSAI)*.

Arena, 2009. Identifying Organizational Drivers of Internal Audit Effectiveness. *International Journal of Auditing*, Volume 13, pp. 43–60 B.N.

Belay, 2007. *Effective Implementation of Internal Audit Function to Promote Good Governance in the Public Sector, Ethiopian Civil Service College Research, Publication Consultancy Coordination Office*. Addis Ababa, conference paper.

Bou-Raad, 2000. "Internal auditors and a value-added approach: the new business regime". *Managerial Auditing*, Volume 15(4), pp. 182-186.



- Cohen A. & Sayag, G., 2010. "The Effectiveness of Internal Auditing: An Empirical Examination of its Determinants in Israeli Organizations". *Australian Accounting Review*, Volume 20(3), pp. 296-307.
- Coram et al., 2008. "Internal Audit, Alternative Internal Audit Structures and the Level of Misappropriation of Assets Fraud". *Accounting and Finance*, Volume 48, pp. 543–59.
- Cronbach's, 1951. "Coefficient alpha and the internal structure of tests". *Psychometrika*, Volume 16, pp. 297–334.
- Dittenhofer, M., 2001. "Internal audit effectiveness: an expansion of present methods". *Managerial Auditing Journal*, Volume 16(8), pp. 443-50.
- Fadzil et al., 2005. "Internal auditing practices and internal control system". *Managerial Auditing Journal*, Volume 20(8), pp. 844-66.
- Field A, 2009. *Discovering statistics using SPSS*. 3rd ed. Sage: Publication ltd.
- Flesher D & Zanzig j, 2000. "Management accountants express a desire for change in the functioning of internal auditing". *Managerial Auditing Journal*, Volume 15(7), pp. 331-37.
- Gansberghe, 2003. *"Internal Audit finding, its place in public Finance Management"*. New York: The World Bank.
- Government, 1961. *"Auditor general proclamation"*, Ethiopia: Negarit Gazette.
- Greener, 2008. *Business research method*. Ventus : Ventus publishing ApS.
- Gujarati, N. D., 2004. *Basic Econometrics*. 4th ed. west point: Mc.Graw-Hill company.
- Hellman N, 2011. "Chief Financial Officer Influence on Audit Planning". *International journal of auditing*, Volume 15(433), pp. 247-274.
- Khotari, 2004. *Research methodology: methods and techniques*. 2nd ed. New Delhi: New Age International (P) Ltd.

Khumalo M., 2007. *Investigation of efficiency of office of Auditor General in ensuring public financial accountability in Gauteng province*, retrieved from. Gauteng province: [http://uth.retd.ac.za/bitstream/10353/283/1/whole%20MPA % 20 research-3.pdf](http://uth.retd.ac.za/bitstream/10353/283/1/whole%20MPA%20research-3.pdf).

Kinfu J, 1990. Accounting and auditing in Ethiopia:, *a historical perspective*, *Proceedings of the First National Conference of Ethiopian Studies*, Institute of Ethiopian Studies, Addis Ababa University, Addis Ababa, pp. 189-225.

koenker, 1981. "A Note on Studentizing aTest for Hetroscedasticity": *Journal of Econometrics*, Volume 17, pp. 1180-1200.

Lemma Argaw, 2000. *Proceedings inaugural ceremony of IIA-EC, The State of Internal Auditing in Ethiopia, The Way Forward to Professionalism*. Ethiopia: IIA-EC.

Leung P. and Cooper B.J, 2009. "Internal audit – an Asia-Pacific profile and the level of compliance with Internal Audit Standards". *Managerial Auditing Journal*, Volume 24(9), pp. 861-82.

Lindow P.E.and Race J.D, 2002. "Beyond traditional audit techniques". *Journal of Accountancy*, Volume 194(1), pp. 28-33.

Mihret D. G.and Yismaw A.W, 2007. "Internal audit effectiveness: an Ethiopian public sector case study". *Managerial Auditing Journal*, Volume 22(5), pp. 470-84.

Mihret and Woldeyohanes G., 2008. "Value-added role of internal audit: an Ethiopian case study". *Managerial Auditing Journal*, Volume 23(6), pp. 567-95.

Myers R, 1990. *Classical and modern regression with applications*. 2nd ed. Boston : MA: Duxbury.

Neumann WL, 2006. *Social Research Methods: Qualitative and Quantitative Approaches*. Sixth ed. Boston: Pearson.

O'Rega D, 2002. "The CPA's transition to the world of internal auditing". *The CPA Journal*, August. pp. 11-31.

Balnaves M and Caputi P, 2001. *“Introduction to Quantitative Research Methods, an investigative approach”*, London: Sage Publications, Thousand Oaks and New Delhi.

Pallant J, 2007. *“SPSS survival manual”*. 3rd ed. Sydney: Ligare Book Publisher.

Reynolds M.A, 2000. "Professionalism, Ethical Codes and the Internal Auditor: A Moral Argument". *Journal of Business Ethics*, Volume (24), pp. 115–24.

Rolandas Rupsys, 2005. The Analysis of Reporting Lines: *Managerial Auditing Journal* , Volume 10(4), pp. 128-40.

Roussy M, 2013. Internal auditors’ roles: From watchdogs to helpers and: *Critical Perspectives on Accounting*, pp. 550-571.

Sacer et al., 2011. *An accountability of supreme audit institutions in the European union countries*,. Juraj Do, Proceedings of the International Scientific Conference, pp. 81.

Sarens G. and Beelde I.D, 2006. “The Relationship between Internal Audit and Senior Management, A Qualitative Analysis of Expectations and Perceptions”. *International Journal of Auditing*, Volume 10(3), pp. 219 -41.

Seol et al., 2011. “Factor Structure of the Competency Framework for Internal Auditing (CFIA) Skills for Entering Level Internal Auditors”. *International Journal of Auditing*, Volume 15(3), pp. 217–30.

Seol I and Sarkis J, 2006. “A Model for Internal Auditor Selection: The Case of a Trading Company in Hong Kong”. *International Journal of Auditing*, Volume 10(3), pp. 243–53.

Smet D and Mention A, 2011. “Improving auditor effectiveness in assessing KYC/AML Practices in a Luxembourgish context”. *Managerial Auditing Journal*, Volume 26(2), pp. 182-203.

Smith G, 2005. “Communication skills are critical for internal auditors”. *Managerial Auditing Journal*, Volume 20(5), pp. 513-519.

Soh. D and Bennie M, 2011. “The internal audit function Perceptions of internal audit roles, effectiveness and evaluation”. *Managerial Auditing Journal*, Volume 26(7), pp. 605-22.

Somekh B. and Lewinn C, 2005. *Research methods in the social sciences*. London: SAGE Publications Ltd.

Stewart J & Subramaniam N, 2010. "Internal audit independence and objectivity: emerging research opportunities". *Managerial Auditing Journal*, Volume 25(4), pp. 328-60.

Tandon, 2010. *Practical Auditing*: 14th ed pp.112-15.

Van Gansberghe , 2005. Internal auditing in the public sector: a consultative forum in Nairobi, Kenya, shores up best practices for government audit professionals in developing nations". *Internal Auditor*, Volume 62 (4), pp. 69-73.

Van Peurse. K, 2004. "Internal auditors' role and authority New Zealand evidence". *Managerial Auditing Journal*, Volume 19(3), pp. 378-93.

Van Peurse. K, 2005. "Conversations with Internal Auditors: The Power of Ambiguity". *Managerial Auditing Journal*, Volume 5, pp. 489–512.

Wines G, 2012. "Auditor independence, Shared meaning between the demand and supply sides of the audit services market". *Managerial Auditing Journal*, Volume 27(1), pp. 5-40.

Woodard, 2002. *Administers' Perceptions of Internal Auditing Roles and Effectiveness in Texas and Big Twelve Public Enterprises*, Texas: Southern University.

Yismaw A Miheret.J. Y, 2007. Internal audit effectiveness: an Ethiopian public sector case study, *Managerial Auditing Journal*, Volume 22 (5), pp. 470-484.

Zain et al., 2006. Internal Auditors' Assessment of their Contribution to Financial Statement Audits: The Relation with Audit Committee and Internal Audit Function Characteristics. *International Journal of Auditing*, Volume 10, pp. 1–18.

## **Appendix A: Questionnaires**



**Jimma University**  
**College of Business and Economics**  
**School of Graduate Studies**  
**Department of Accounting and Finance**

### **Dear Participant:**

The intent of this questionnaire is to explore information regarding the determinants of Internal Audit (IA) effectiveness and to conduct Master Thesis (Research) for the partial fulfillment of Master's Degree in accounting and finance at Jimma University. The questionnaires are distributed to the Zonal level public Finance and economy development sector offices that found in Hadiya zone. The results of the study are expected to contribute to identify the determinants of internal audit effectiveness.

The conclusions of the study will be drawn in aggregate terms, without any reference to specific office or individual respondents. Please, do not write your name on the questionnaire. I would also like to assure you that the information you provided will be treated as strictly confidential and used only for the purpose of this research only.

Your honest and thoughtful response is valuable

Thank you in advance for your support and participation.

With best regards,

Endalkachew Nigusse    Mobile: 0916443828    Email: endalkachewnigusse2017@gmail.com

## Questionnaire Administrated to Internal Auditors

**Objective of the Questionnaire** Effective internal audit function is an important management tool to monitor and direct the internal operations of an organization effectively and appropriately. Therefore, the purpose of this research is to assess and identify factors that affect the effectiveness of internal audit (IA) function in different public finance offices. In line with this, you are kindly requested to give your response to your personal profile and each statement related with the management's perception of internal audit function, the management support, the organizational independence and the adequate competent internal audit staff as provided below.

- A. **The personal profiles:** General Instruction: Please indicate your choice by putting “√” mark in the bracket or encircle.
1. Age (in year): (1). from 20 to 29, (2). from 30 to 39, (3). from 40 to 49 and, (4). from 50 to 59,
  2. Your field of study: Accounting (1\_), Management (2\_), Economics (3\_), and if other specify (4\_), \_\_\_\_\_
  3. Level of education: TVET certificate (\_1\_), Diploma (\_2\_), Bachelor's Degree (\_3\_), Master's Degree (\_4\_) or others specify (-5-)\_\_\_\_\_
  4. Number of years of experience you work as an internal auditor:  
\_\_\_\_\_
  5. Does your organization/sector have audit committee? YES (\_\_1\_\_), NO (\_\_2\_\_)
  6. Indicate your woreda's sector: - name of public finance office /sector (-----  
-----)
  7. What are the activities carried out by IA in your office/sector? You can select more than one. A. Compliance audit B. Financial audit C. Operational/performance audit E. Internal control system evaluation D. Risk assessment (analysis) audit

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

| S. No | The Management Support   | The Scales |   |   |   |   |
|-------|--|------------|---|---|---|---|
| 1     | I receive full cooperation, access to records and information from my office/sector  | 5          | 4 | 3 | 2 | 1 |
| 2     | I can get the necessary resources (facilities) that help me to perform auditing activities as needed.  | 5          | 4 | 3 | 2 | 1 |
| 3     | The office/sector supports me by providing training in order to improve my skill and update with the field.  | 5          | 4 | 3 | 2 | 1 |
| 4     | The office/sector supports me to introduce myself with new technology, policy or procedures when it is necessary.  | 5          | 4 | 3 | 2 | 1 |
| 5     | The office/sector supports Internal Auditing staffs by budgeting funds for training to have relevant education in auditing that allows them to audit all of the organization's/sector's systems. | 5          | 4 | 3 | 2 | 1 |
|       | <b>Management's perception of internal audit function</b>  |            |   |   |   |   |
| 6     | The office/sector has enough awareness and good perception about internal auditing roles.  | 5          | 4 | 3 | 2 | 1 |
| 7     | The office/sector considers internal auditing practices as a value adding activity and I work smoothly & regularly with the management.  | 5          | 4 | 3 | 2 | 1 |
| 8     | The office/sector encourages me to implement my recommendations, to promote value-added activities and to strength internal audit function.  | 5          | 4 | 3 | 2 | 1 |

|    |   |   |   |   |   |   |
|----|---|---|---|---|---|---|
| 9  | The position/status of internal audit is clearly recognized by the management in my office/sector.  | 5 | 4 | 3 | 2 | 1 |
| 10 | The office/sector see internal auditing as providing internal assurance through investigations, check & assessment, and consultants & adviser particularity into controls associated to management performance and internal operations. | 5 | 4 | 3 | 2 | 1 |

|    |   |   |   |   |   |   |
|----|---|---|---|---|---|---|
|    | <b>Organizational independence</b>  |   |   |   |   |   |
| 11 | I perform the auditing activities without any interference from anybody and without any influence from the office/sector.   | 5 | 4 | 3 | 2 | 1 |
| 12 | I freely decide the scope, time and extent of auditing procedures based on auditing standards and the office's/sector's policy.   | 5 | 4 | 3 | 2 | 1 |
| 13 | I objectively examine auditing issues only meeting on reliable audit evidence and no management interest is involved for adjustment beyond auditing standards & values. | 5 | 4 | 3 | 2 | 1 |
| 14 | I feel free to include any audit finding in my audit work and report directly to responsible body.  | 5 | 4 | 3 | 2 | 1 |
| 15 | I can freely access necessary documents, information and data about the organization/sector for my audit work.  | 5 | 4 | 3 | 2 | 1 |
|    | <b>The adequate competent internal audit staff</b>  |   |   |   |   |   |
| 16 | My office/sector has sufficient skilled internal auditors. Most of them are trained in auditing.  | 5 | 4 | 3 | 2 | 1 |
| 17 | It is possible to audit and review each activity on time, and cover the planned scope of auditing activities.   | 5 | 4 | 3 | 2 | 1 |



|    |  |   |   |   |   |   |
|----|--|---|---|---|---|---|
| 18 | The audit procedures and evidence collections are completed on time, since enough and skilled internal auditors are available or employed. | 5 | 4 | 3 | 2 | 1 |
| 19 | The internal audit staff number & their skill matches the scope of office's/sector's internal operations.                                  | 5 | 4 | 3 | 2 | 1 |
| 20 | The work of internal audit is performed with modern technology that uses computerized data tools as IBEX and specific IA software          | 5 | 4 | 3 | 2 | 1 |

## I. Questionnaire Administered to Managers

### Objective of the Questionnaire

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

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

### A. The personal profiles

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

1. Age (in year): 1/. From 20 to 29 2/. From 30 to 39, 3/. From 40 to 49, 4/. From 50 to 59,
2. Your field of study: (\_1\_) Accounting, (\_2\_) Management, (\_3\_) Economics and (\_4\_) if other specify\_\_\_\_\_
3. Level of education: (1) TVET certificate, (2) Diploma, (3) Bachelor's Degree, (4) Master's Degree or (5) others specify\_\_\_\_\_
4. Indicate your woreda's sector: name of public finance office (-----  
-----)
5. Current position in your office/sector\_\_\_\_\_
6. Number of workers in your office/sector\_\_\_\_\_
7. Number of internal auditors in your office/sector\_\_\_\_\_

**B. The questionnaire items (questions)**

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

| S. No | The effectiveness of internal auditors' in identifying noncompliance activities and added contributions to the Organizations.                           | The scale |   |   |   |   |
|-------|---|-----------|---|---|---|---|
|       |   | 5         | 4 | 3 | 2 | 1 |
| 1     | Internal auditors can effectively identify and report any noncompliance activities with my office's/sector's policies and procedures.                   | 5         | 4 | 3 | 2 | 1 |
| 2     | Internal Auditors provide useful recommendations and constructive criticisms on non-compliances activities or control systems of the office/sector.     | 5         | 4 | 3 | 2 | 1 |
| 3     | I use the recommendations, criticisms and information provided by internal auditor for decision making.   | 5         | 4 | 3 | 2 | 1 |
| 4     | My office/sector has put its confidence on internal audit staffs, because they may face any problems (non-compliance activities).                       | 5         | 4 | 3 | 2 | 1 |
| 5     | The non-compliance reports provided by internal auditors are reliable and significant to my organization/sector.  | 5         | 4 | 3 | 2 | 1 |
| 6     | The internal auditors have confidence to issue audit report because they are capable to determine the nature and frequency of noncompliance activities. | 5         | 4 | 3 | 2 | 1 |
| 7     | The number of complaints (doubts) about the internal auditors' finding (report) is very low because their report is correct and reasonable.             | 5         | 4 | 3 | 2 | 1 |
| 8     | Internal audit ensures the economical, effective and efficient use of resources in my office/sector.  | 5         | 4 | 3 | 2 | 1 |
| 9     | In my office/sector internal audit ensures activity performed is compliance with established policies, procedures, laws and regulations.                | 5         | 4 | 3 | 2 | 1 |

|    |   |   |   |   |   |   |
|----|---|---|---|---|---|---|
| 10 | The recommendations of internal audit department provide practical, cost-benefit solutions for correcting the problems that were found. | 5 | 4 | 3 | 2 | 1 |
| 11 | Internal auditors have the experience and expertise to address sectorial risk management problems within the organization               | 5 | 4 | 3 | 2 | 1 |
| 12 | The existing role that the internal audit is playing sufficient enough to address the very purpose for which it is established          | 5 | 4 | 3 | 2 | 1 |
| 13 | Internal auditors in your sector are capable of carrying out internal control function under current sector's governance rules          | 5 | 4 | 3 | 2 | 1 |
| 14 | The existence and findings (reports) of Internal Auditors meet my expectations.   | 5 | 4 | 3 | 2 | 1 |
| 15 | The internal auditor reports are highly considered for decision making and internal controls by the management.                         | 5 | 4 | 3 | 2 | 1 |

## Appendix B: Reliability Statistics and Regression results for Variables

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .684             | .713   | 5          |

|                              | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item- Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|------------------------------|----------------------------|--------------------------------|-----------------------------------|------------------------------|----------------------------------|
| Internal Audit Effectiveness | 103.1250                   | 53.166                         | .415                              | .551                         | .676                             |
| Management Support           | 145.5714                   | 68.395                         | .464                              | .513                         | .628                             |
| Management Perceptions       | 146.2321                   | 70.363                         | .386                              | .175                         | .652                             |
| Organizational Independence  | 146.0893                   | 70.046                         | .368                              | .206                         | .657                             |
| Adequate and Competent IA    | 146.7500                   | 63.827                         | .630                              | .596                         | .612                             |

Item-Total Statistics

## Appendix C: Assessment of OLS Assumptions for the Model

### i. Assessment of Normality

Test of Normality

| Variables                       | Kolmogorov-Smirnov <sup>a</sup> |    |       | Shapiro-Wilk |    |      |
|---------------------------------|---------------------------------|----|-------|--------------|----|------|
|                                 | Statistic                       | df | Sig.  | Statistic    | df | Sig. |
| Internal Audit Effectiveness    | .108                            | 56 | .298* | .962         | 56 | .112 |
| Management Support              | .095                            | 56 | .185* | .971         | 56 | .247 |
| Management Perceptions          | .125                            | 56 | .050  | .965         | 56 | .140 |
| Organizational independence     | .127                            | 56 | .072  | .920         | 56 | .102 |
| Adequate and Competent IA Staff | .108                            | 56 | .200* | .962         | 56 | .224 |

a. Lilliefors Significance Correction significance.

\*. This is a lower bound of the true

ii. **Assessment of Heteroskedasticity**

Test of Heteroskedasticity

|   |
|---|
| . estat hottest   |
| Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity |
| Ho: Constant variance                                     |
| Variables: fitted values of IAE                           |
| chi <sup>2</sup> = 0.1800                                 |
| Prob > chi <sup>2</sup> = 0.7894                          |

iii. **Assessment of Multicollinearity**

Pearson Correlation

|       |                     | IAE    | MS     | MP     | OIN    | ACIAS  |
|-------|---------------------|--------|--------|--------|--------|--------|
| IAE   | Pearson Correlation | 1      | .399** | .216   | .179   | .575** |
|       | Sig. (1-tailed)     |        | .001   | .055   | .093   | .000   |
|       | N                   | 56     | 56     | 56     | 56     | 56     |
| MS    | Pearson Correlation | .399** | 1      | .354** | .429** | .492** |
|       | Sig. (1-tailed)     | .001   |        | .004   | .000   | .000   |
|       | N                   | 56     | 56     | 56     | 56     | 56     |
| MP    | Pearson Correlation | .216   | .354** | 1      | .220   | .343** |
|       | Sig. (1-tailed)     | .055   | .004   |        | .051   | .005   |
|       | N                   | 56     | 56     | 56     | 56     | 56     |
| OIN   | Pearson Correlation | .179   | .429** | .220   | 1      | .262*  |
|       | Sig. (1-tailed)     | .093   | .000   | .051   |        | .026   |
|       | N                   | 56     | 56     | 56     | 56     | 56     |
| ACIAS | Pearson Correlation | .575** | .492** | .343** | .262*  | 1      |
|       | Sig. (1-tailed)     | .000   | .000   | .005   | .026   |        |
|       | N                   | 56     | 56     | 56     | 56     | 56     |

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

iv. **Assessment of Autocorrelation (Shown in Appendix D Below)**

Model Summary<sup>b</sup>

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics |         |     |     |               | Durbin Watson |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|---------|-----|-----|---------------|---------------|
|       |                   |          |                   |                            | R Square Chang    | F Chang | df1 | df2 | Sig. F Change |               |
| 1     | .743 <sub>a</sub> | .551     | .507              | 2.72871                    | .551              | 12.292  | 5   | 50  | .000          | 1.952         |

a. Dependent Variable: Internal Audit Effectiveness

## Appendix D: The Regression Results for IAE

ANOVA<sup>a</sup>

| Model |            | Sum of Squares | Df | Mean Square | F      | Sig.              |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1     | Regression | 457.635        | 5  | 91.527      | 12.292 | .000 <sup>b</sup> |
|       | Residual   | 372.294        | 50 | 7.446       |        |                   |
|       | Total      | 829.929        | 55 |             |        |                   |

a. Predictors: (Constant), Adequate and Competent IA Staff, Organizational Independence, Management Perceptions, Management Support

b. Dependent Variable: Internal Audit Effectiveness

Coefficients<sup>a</sup>

| Variables               | Unstandardized Coefficients |            | Std. Coeffi | T     | Sig. | Correlations |         |      | Collinearity Statistics |       |
|-------------------------|-----------------------------|------------|-------------|-------|------|--------------|---------|------|-------------------------|-------|
|                         | B                           | Std. Error | Beta        |       |      | Zero-order   | Partial | Part | Tolerance               | VIF   |
| (Constant)              | 29.676                      | 5.984      |             | 4.959 | .000 |              |         |      |                         |       |
| Management Support      | 1.705                       | .202       | .424        | 3.481 | .001 | .399         | .442    | .330 | .604                    | 1.651 |
| Management Perceptions. | .047                        | .168       | .029        | .282  | .779 | .216         | .040    | .027 | .826                    | 1.211 |
| Organizational Ind.     | .135                        | .164       | .087        | .825  | .413 | .179         | .116    | .078 | .805                    | 1.242 |
| Adequate and CIAS       | 1.196                       | .191       | .698        | 6.257 | .000 | .575         | .663    | .593 | .721                    | 1.387 |

a. Dependent Variable: Internal Audit Effectiveness

b. Predictors: (Constant), Adequate and Competent IA Staff, Organizational Independence, Management Perceptions, Management Support