

***Effect of Internal Control System on Fraud Prevention and Detection: A
Study on Selected Public Sectors in Oromia Regional State West
Hararghe Zone***

***A Thesis Submitted To the School Of Graduate Studies of Jimma University In
Partial Fulfillment Of The Requirement For The Award of the Degree Of
Master of Science In Accounting And Finance (MSc)***

BY:

SOLOMON ABATE WOYA



JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

MSC PROGRAM

JUNE 05, 2017

JIMMA, ETHIOPIA

*Effect of Internal Control System on Fraud Prevention and Detection: A
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SOLOMON ABATE WOYA

Under the guidance of

Kenenisa Lemi (PhD)

And

Haymanot Alemayehu (MSc)



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DECLARATION

I hereby declare that this thesis entitled “Effect of Internal Control System on Fraud Prevention and Detection: A Study on Selected Public Sectors in Oromia Regional State West Hararghe Zone”, has been Carried out by me under the guidance and supervision of KenenisaLemi (PhD) and HaymanotAlemayehu(MSc).

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

Researcher's Name

Date

Signature

CERTIFICATE

This is to certify that the thesis entities “Effect of Internal Control System on Fraud Prevention and Detection: A Study on Selected Public Sectors in Oromia Regional State West Hararghe Zone”, Submitted to Jimma University for the award of the Degree of Master of Science in Accounting and Finance and is a record of Valuable research work carried out by Mr. Solomon Abate Woya , 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 diploma.

Main Adviser’s Name	Date	signature
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KenenisaLemi (PhD)	31/05/2017	
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Co-Advisor’s Name	Date	Signature
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HaymanotAlemayehu(MSc)	31/05/2017	
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ABSTRACT

The main purpose of this study is to ascertain the effect of internal control system on fraud prevention and detection in public sectors in Oromia regional state west Hararghe zone. Purposive sampling and simple random sampling method was used to select key respondents officials to respond to the data collection instruments. The study used closed ended questionnaires. The respondents were office head, purchase and finance manager, internal audit head, purchase and finance head, and internal auditors. The collected Data was analyzed by descriptive and logistic regression model using Statistical Package for the Social Science (SPSS). Findings of the study reveal that there is statistically significant and positive relationship between the adequacy of internal control systems and fraud prevention and detection in public sectors in Oromia regional state West Hararghe zone. Furthermore, the finding also indicates that Information and communication level and the control activities were significant factors of the fraud prevention and detection status of the respondents office while control environment, risk assessment and monitoring process was negatively significant. Study was recommended that effective and efficient internal control policies and procedures should be put in place to prevent and detect fraud public sectors and other institutions.

KEY WORDS

Control activity, Control environment, Fraud, Information and communication, Internal control, Monitoring, and Risk assessment

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ACRONYMS/ABBREVIATIONS

BoFED-Biro of finance and Economic Development

COSO-Committee of sponsoring organizations of the trade way commission

FDRE-Federal Democratic Republic of Ethiopia

ICE-Internal Control Effectiveness

GAO-General Accounting Office

GTP-Grosse and Transformational Plan

IAI- International Audit Institution

ICS-Internal Control System

INTOSAI-International Organization for Supreme Audit Institution

OLS-Ordinary List Square

OFAG-Office of Federal Audit General

ORAG-Oromia Regional Auditor Genera

MoFED-Ministry of Finance and Economic Development

SAP-Standard Audit Practice

SPSS-Statistical Package for Social Sciences

WoFED- Woreda Finance and Economic Development

ZoFED-Zone Finance and Economic Development

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CHAPTER ONE

1. INTRODUCTION

1.1 Background of the study

Internal control system is a topical issue following global fraudulent financial reporting and accounting scandals in both developed and developing countries (Mattie & Cassidy, 2002). According to COSO (2004), Internal Control is a system consisting of specific policies and procedures designed to provide management with reliable assurance that the goals and objectives it believes important to the entity will be met. In their view , the reasons to have internal controls is to promote operational effectiveness and efficiency, provide reliable financial and administrative information, safeguard assets and records, encourage adherence to prescribed policies and compliance with regulatory agencies.

Investors and other stakeholders in public and private sector institutions are concerned with the safety of their assets. Shareholders delegate rights to managers to act in the principal's best interest. This separation of ownership from control implies a loss of effective control by shareholders and taxpayers over managerial decisions hence concerns over the safety of their investment. It is therefore important that good governance and accountable policy practices are adopted to achieve organizational goal of safeguarding shareholders assets and wealth maximization. Key among the best practices is the control measures put in place to detect and prevent frauds within the entity whether private or public (COSO, 2011).

To bring efficiency and effectiveness in economic activity the performance of the public sector management have a duty to frequently measure and appraise to take remedial actions if problems, for example fraud, encountered. There are many irregularities leading to public objection and there is increasing fraud in government activities resulting from an insufficient control of public finance and implementation mostly in African content like Ethiopia. Public

sectors fail in attaining their objectives thereby leading to fail of confidence in internal and external activities in the economy. According to Ghazali, Rahim, Ali, and Abidin (2014) one of the main factors that caused this is fraud which has serious adverse effect on public sectors and has damaging consequences for the individuals involved, and the entire community.

Fraud against Government is a crime that directly or indirectly victimizes every Person. Frauds result in the failure of organizations in achieving goals, massive public investment losses, significant legal costs, losses of key individuals, and erosion of public confidence on government. Fraud, negatively, affects an economy as a whole, by causing huge financial losses, weakening social stability, threatening democratic structures, leading to a loss of trust in the economic system, or corrupting and compromising economic and social institutions (Necolescu, 2007) Similarly, the Statement of Audit Standards (SAS) defines fraud as ‘an intentional act that results in a material misstatement in financial statements that are the subject of an audit’ (AICPA, 2003). Finally, the Association of Certified Fraud Examiners (ACFE) conceptualized fraud as the use of one’s occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization’s resources or assets (ACFE, 2007)

On the other hand, according to information released by Transparency International Index AFROSAI-E expressed the rank of member countries against corruption in its web address. Hence, Ethiopia scored 2.7 and ranked 14th among 23 of AFROSAI-E member and 120th among 180 assessed countries (Sundgren, 2011)

All the above observations underline the role of internal control to detect and prevent Fraud in the public sectors. Even though many efforts to strengthen financial controls and institute good governance at the Federal level and state government levels, the number of fraud cases is still on the rise, in fact becoming more severe – a clear signal that some form of action need to be taken to control this increasing crisis.

To date, besides the (OFAG , 2015) and Federal ethics and anti-corruption commission report (2014), studies investigated the occurrence of fraud and its mitigating factors. Considering the huge damaging effect of fraud, a better understanding on the effectiveness of detection and discovery of fraud is urgently needed. Thus, the objective of this study is to provide the effect of internal control system on fraud prevention and detection in public sectors. The study also aimed to seek the effect of control environment, risk assessment, control activity, information communication and monitoring on fraud prevention and detection.

1.2 Statement of the Problem

The public sector offices formulate and implements government's policies, gathers and supplies data for policymakers ensures continuity of services for economic development. Regarding to finance, Ministry of Finance and Economic Development play an irreplaceable role in developing attractive internal control over financial and asset management to avert fraud, corruption and irregularities.

Internal control serves as the first line of defense in safeguarding assets and preventing and detecting errors and fraud. (Bologna & Lindquist 1995) stressed that sufficient internal control is critical for the prevention and detection of economic losses resulting from embezzlement and fraud.

According to (Peterscua, 2014) argued the role of the internal audit include a varied set of responsibilities: supporting the management in establishing auditable anti-fraud mechanisms; facilitating the assessment of fraud and reputational risks at the level of an organization and its business process; assessing the connections between fraud risks and internal controls; auditing frauds; supporting the specialists in fraud investigation; supporting the efforts to rectify deficiencies; and reporting to the audit committee the problems regarding anti-fraud mechanisms, fraud and reputational risks assessment, or fraud cases and suspicions.

The recent corruption cases held by federal and Regional corruption commission and courts may also indicate failure of internal control practiced in those organizations. Within existing Ethiopian government development goals and transformation plan/GTP/, executives frequently warn that corruption and rent seeking is one of the threats for this plan and its implementation. For example, the OFAG report to parliament of FDRE government for the budget year 2005/2006 and previous budget years uncovered several weaknesses of internal control maintained and executed by government agencies and Sectors, particularly on internal control related to use of budget, cash handling, bank reconciliation, Advance cash payment and authorization of asset fixed and stock acquisitions. During 2004/2005 Ethiopian budget year the report revealed only 45% of audited public Universities and other government institutions were provided unqualified audit report, (OFAG , 2006)

While 29% were provided similar audit opinion during 2005/2006 (OFAG , 2006) The report finally asserts that it is a threat for the government to meet its set development goals and objectives.

However, in Ethiopia the strong struggle against corruption is mitigating the assumed prevailing corruption level (FEACC 2011). Disentangling and eradicating this problem requires stretched time, vast resources and organized national integrity system such as using performance audit and regular audit finding of office of the auditor general(OFAG, ORAG).

Also, the Efficiency Monitoring Unit, Internal Auditor in the public sectors, , the Office of the Auditor General, and the Ethiopian Anti-Corruption Commission all were established and mandated to recommend for effective internal controls systems and deal with acts of fraud in one way or the other in country.

All these reviews have implied that, there is a search which investigates the internal control role in fraud prevention and detection concerning to public sectors. In case of Ethiopia, reviewing the internal control literature shows no direct research on the effect of internal control regarding to fighting fraud in budgetary public sectors. As the research methods and results are influenced by and usually reflect economic, social or legal factors unique to those countries in which the studies took place. Thus, this has motivated the researcher to investigate into the effect of the internal control in detecting fraud on the subject of control environment, risk assessment, control activity, information communication and monitoring in preventing fraud in Ethiopian public sectors.

1.3 Objective of the Study

1.3.1 General Objective

The general purpose of this study was to see the effect of internal control systems on fraud prevention and detection in selected Public sectors.

1.3.2 Specific Objective

Specifically, the researcher was tried to achieve the following objectives:-

- To see the effect of Control environment on fraud prevention and detection in selected Public sectors.
- To see the effect of Risk assessment on fraud prevention and detection in selected Public sectors.
- To see the effect of Control activity on fraud prevention and detection in selected Public sectors.
- To see the effect of Information communication on fraud prevention and detection in selected Public sectors.
- To see the effect of Monitoring on fraud prevention and detection in selected Public sectors.

1.4 Significance of the study

The internal auditors have a significant impact to control any non-compliance activity in line with the established policies, plans, procedures, laws and regulations, set by the government which could have a significant impact on the organization's operations. The internal auditors are also essential to add contribution 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 very essential to governing body, specifically the woreda, zonal and regional administrators, the higher responsible body, external and internal auditors to have a better understanding whether the internal control has an impact on the internal auditor effectiveness when internal audit work accomplishes. In addition, this information can be used

by the local government to implement policies and procedures within the administration in regards to the internal controls and internal auditor effectiveness. The internal auditor can use this study to their role in apply to their administration. Finally the study may serve as a spring board for those who are interested to conduct further study on related topics.

1.6 Scope of the study

The study was focused on effect of internal control system in Oromia Regional State West Hararghe zone selected woreda administration context. It does not include other Oromia Regional State zones. In addition the intent of this study is to examine the effect of internal control system on the IC.

1.7 Limitations of the study

For some topics there is no relevant and up to date literature, and on the area especially in Ethiopia and study conducted West Hararghe zone selected woreda administration. The study was built on the current body of knowledge and studies conducted in other countries context.

1.8 Organization of the Study

In addition to the preliminary page, this research paper consists of five chapters. The first chapter with its sub topics was introductory parts combined the introduction, statement of the problem, research objectives, research hypotheses, significant of conducting the study, scope and limitation of the study, and the methodologies used to conduct this study. The second chapter describes the detail review of related literatures with regard to the internal control system, internal audit effectiveness and the variables or internal control component which impact on the internal audit effectiveness. The third chapter expresses the information regarding the sampling techniques used to conduct the research. The fourth chapter is the analysis, discussions and presentation part of the research findings and finally, the last chapter describe about the conclusions and recommendations of the case study followed by the references and appendixes.

CHAPTER TWO

2. LITERATURE REVIEW

Introduction

A system of effective internal controls is fundamental to the safe and sound management of institutions. Effective internal controls help an institution protect and enhance shareholders' value and reduce the possibility of unexpected losses or damage to its reputation. Internal controls are the policies, procedures and processes established by the Board of Directors (Board) and senior management to provide reasonable assurance on the safety, effectiveness and efficiency of the institution's operations, the reliability of financial and managerial reporting and compliance with regulatory requirements. This chapter reviews both the theories and empirical studies on effectiveness of internal control. The theoretical section discusses overview of internal control, the concept and importance of IC, Purpose of IC, Components of IC, Internal control evaluation and effectiveness of internal control. The empirical section reviews various studies in the areas of internal controls.

2.1 Theoretical framework

Internal Control: Internal control is defined as a process affected by organization's structure, work and authority flows, people and management information systems, designed to help the organization accomplish specific goals or objectives (AICPA, 2003). Internal control systems are not new to the Government and private sector organizations. There are checks and balances already in place which have been part of normal day to day working of the Government Ministries and Departments. In both sectors, accountability is of prime importance (COSO, 2011).

Statement of accounting standard(SAS, No 55) define internal control as a combined plan, method and procedures used to safeguard asset, promote efficiency of operation and adherence to prescribed policies and directives. The wider definition of internal control by United Kingdom Auditing practice Committee (UKAPAC, 1979) defined internal control as the whole system of control, financial and operational in order to carry on business of any enterprise to safe guard asset, ensure the completeness, accuracy of records , detect errors and fraud and ensure timely report of financial information.

(Robertson J.C and F.G Davis, 1988), defined internal control from accounting perspective, accordingly internal control is a set of client procedure both computerized and manual imposed on accounting system for purpose of detecting errors and irregularities that may enter the system and affect the financial statements.

Internal control however used an internal control definition made by Committee of Sponsoring Organizations (COSO, 2011) and Auditing Practices Board (APB, 1999). The two sources define internal control as a process, effected by an entity's board of directors (Council), management and other personnel, designed to provide reasonable assurance regarding the achievement of organizations objectives in the effectiveness and efficiency of operations, reliability of financial and management reporting, compliance with applicable laws and regulations and protect the organization's reputation .

Regardless of the sources, all have the point of coincidence related to the definition of internal control. These points are referred to as the purpose or functions of internal control. Accordingly internal control is designed and operated to; safe guard asset, adherence to policies and directive, and promoting organizational efficiency to attain the desired objectives.

Fraud can occur at various levels in public sectors and it needs appropriate detection. Fraud detection focuses on activities and techniques that promptly recognize timely whether fraud has occurred or is occurring. The Internal Auditor identifies indicators of fraud sufficient to warrant recommending an investigation. These indicators may arise as a result of controls established by management, tests conducted by auditors and other sources both within and outside the public body (MOFED, 2005).Fraud detective controls enhance the effectiveness of a fraud risk management program by demonstrating that preventive controls are working as intended and by identifying fraud if it does occur.

2.1.1 CONCEPT AND IMPORTANCE OF INTERNAL CONTROL

“Internal control is a management tool used to provide reasonable assurance that management objectives are being achieved.” (Guidelines for Internal Control Standards INTOSAL,I.O, 2004). It is also explained on the integrated internal control guideline, developed by the Committee of Sponsoring Organizations of the Tread way Commission (COSO) in the united states of America and highly adapted and adopted by other countries both in the private and public sector, “Internal control is broadly defined as a process, effected by the entity's board of

directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

Effectiveness and efficiency of operations, reliability of financial reporting and compliance with applicable laws and regulations.

The above stated concepts of internal control indicate that managers are primarily responsible to establish an effective internal control for their organizations so as to discharge their stewardship responsibility over the use of government resource. The role of managers promoting effective internal control system has paramount importance in ensuring effective internal control system. This is because the way managers understand the need for designing, implementing, and management of internal control system, built it in the organizational facility, communicating it well to the employees, strictly adhering to it and ensuring that it is accepted as organizational culture and value can result in either strong or lax internal control (COSO, 2011).

2.1.2 Purpose of Internal Control

According to (Hevesi, 2005), while the overall purpose of internal control is to help an organization achieve its mission, internal control also helps an organization to:

Promote orderly, economical, efficient and effective operations, and produce quality products and services consistent with the organization' mission, safeguard resources against loss due to waste, abuse, mismanagement, errors and fraud, promote adherence to laws, regulations, contracts and management directives and develop and maintain reliable financial and management data, and accurately present that data in timely reports (Hevesi, 2005).

2.1.3 INTERNAL CONTROL COMPONENTS

As defined in COSO Report, Internal Control consists of five interrelated components, namely monitoring, information & communication, control activities, risk assessment, and control environment, as illustrated and defined below. These are derived from the way management runs a business, and are integrated with the management process. Although the components apply to all entities, small and mid-size companies may implement them differently than large

ones. Its controls may be less formal and less structured, yet a small company can still have effective internal control.

2.1.3.1 Control Environment

The control environment sets the tone of an organization, influencing the control consciousness of its people. It is the foundation for all other components of internal control, providing discipline and structure. Control environment factors include the integrity, ethical values and competence of the entity's people; management's philosophy and operating style; the way management assigns authority and responsibility, organizes and develops its people; and the attention and direction provided by the board of directors (COSO, 2011). In an empirical study by (Valentine, Godkin and Lucero, 2002), a positive association was found between ethical environment and employee organizational commitment. Based on a sample of 304 young working adults, (Valentine, Godkin and Lucero, 2002) found that ethical environment was positively and significantly associated with the level of employees' organizational commitment. Furthermore, in a recent study, (Kizirian, T. & Leese, W.R., 2004) studied audit papers of 60 information systems audit engagements and found that the ethical tone of the audit clients' management has a significant impact on the strength of their security controls.

2.1.3.2 Risk Assessment and Management:

Risk assessment is the identification and analysis of relevant risks which can impair the achievement of objectives, forming a basis for determining how the risks should be managed. Because economic, industry, regulatory and operating conditions will continue to change, mechanisms are needed to identify and deal with the special risks associated with change. According to the (IIA-PFF, 1999), risks are assessed in order to determine the likelihood of an event occurring, the impact, and risk tolerance level. Once identified the risks are then classified as high, medium and low. Based on the accuracy of the assessment, risk tolerance level can then be determine. In order to determine whether risk management are effective, relevant risk information should be captured and communicated in a timely manner across the organization, enabling staffs, management and the board to carry out their responsibilities. (IIA-PFF, 1999).

2.1.3.3 Control Activities:

These are policies, procedures and mechanisms that ensure management's directives are properly carry out . Proper documentation of policies and procedural guidelines in these aspects help to determine not only how the control activities are to be executed but also provide adequate information for auditors examination of the overall adequacy of control design over financial management practices . This control activities ensure that all necessary actions should be taken with the aim to address risks so that organizational objectives are achieves. Example of control activities include; segregation of duties, daily deposit of cash receipts, bank reconciliations and limiting access to check stock

2.1.3.4 Information and Communication:

Refer to the process of identifying, capturing, and communicating of relevant information in an appropriate manner and within timeframe in order to accomplish the financial reporting objectives . However, effective communications should occur in a wider sense with information within the various sections of the organization (Theofanis et al., 2011). Most of the recent literature on internal control system frameworks gave concerned on information and communication as one of the internal control system components, because of their importance in influencing the working relationship within the organization at all levels . Therefore, such information must be communicated throughout the entire administration in order to permit personnel to carry out their responsibilities with regard to objective achievement.

2.1.3.5 Monitoring and Assurance:

It is usually accepted that internal control systems need to be adequate monitored in order to assess the quality and the effectiveness of the system's performance over time. Monitoring provides assurance that the findings of audits and other reviews are promptly determined .also monitoring of operations ensures effective functioning of internal controls system . Hence, monitoring determines whether or not policies and procedures designed and implemented by management are being carried out effectively by employees.

There is synergy and linkage among these components, forming an integrated system that reacts dynamically to changing conditions. The internal control system is intertwined with the entity's operating activities and exists for fundamental business reasons. Internal control is most effective when controls are built into the entity's infrastructure and are a part of the essence of the enterprise. "Built in" controls support quality and empowerment initiatives, avoid unnecessary costs and enable quick response to changing conditions.

2.1.4 Fraud

Statement of Audit Standards (SAS) also defines fraud as ‘an intentional act that results in a material misstatement in financial statements that are the subject of an audit’ (AICPA, 2003). Fraud includes intentional financial misrepresentations (e.g., falsification of accounts) and misappropriations of assets (e.g., theft of inventory) (AICPA, 2003). (Robertson, J.C., and F.G. Davis., 2000) defines fraud “all means that human ingenuity can devise and which are resorted to by an individual to get an advantage over another by false suggestions or suppressions of truth. Fraud involves recording of transactions without substances, suppression or omission of the effect of transaction from records or document, Intentional misapplication of accounting policies and willful misrepresentation of transaction of the entity’s state of affairs (Olatunji.O, 2009). As said by (Pollick, M, 2006), fraud can be regarded as a “deliberate misrepresentation, which causes one to suffer damages, usually monetary losses.

2.1.4.1 The relevant theories on fraud are reviewed below:

Social learning theory on fraud postulates that if deviant behaviors are reinforced and alternative behaviors are not reinforced as strongly, then an individual is likely to engage in fraudulent / deviant behaviors. The theory of work place deviance reiterates that employees steal primarily as a result of workplace conditions, and that a lowered rate of employee theft is a by-product of a management team that is responsive to employee’s plights.

The Potato Chips theory explains that fraud can be additive. If the perpetrator is not caught in the act, he gets bolder to commit more fraud and eventually makes a mistake that will expose him. Fraud has therefore been likened to a person that eats a potato chip, but may never be satisfied. The Rotten Apple theory opines that good and bad conducts within corporate organizations are infectious. Fraudulent actions by supervisors and top management can easily be emulated by their subordinates. Similarly, good conducts exemplified by top management

will be emulated. This poses a challenge to management that whenever a 'rotten and fraudulent apple' is identified in the organization; it must be quickly plucked off to ensure it does not contaminate the other good fruits on the tree. (Cressey, 1986).

The fundamental observation of (Cressy, 1919-1987), in the theory of fraud triangle was that fraud is likely to occur given a combination of three factors i.e. Pressure, (Motivation), Opportunity and rationalization. While opportunities can open the doorways to fraud, incentive and rationalization will attract people to it, but such an individual must have the capability to recognize the open doorway as an opportunity and should be able to take an undue advantage of the identified loopholes. According to (Holtfreter,K., 2004), in the theory of fraud diamond, an individual's capability, personality traits and abilities can play a major role in determining whether fraud may occur.

As stated by (CIMA, 2009), Certified Institute of Management Accountant, Fraud can mean many things and result from many varied relationships between offenders and victims. Examples of fraud include: Crimes by individuals against consumers, clients or other business people, e.g. misrepresentation of the quality of goods; pyramid trading schemes, employee fraud against employers, e.g. payroll fraud; falsifying expense claims; thefts of cash, assets or intellectual property (IP); false accounting and crimes by individuals or businesses against government, e.g. grant fraud; social security benefit claim frauds; tax evasion. (CIMA, 2009)

According to ASA 240, there are two types of intentional misstatements relevant to the auditor. First, there are misstatements that result from fraudulent financial reporting and second, there are misstatements that result from misappropriation of assets (ASA 240, para. 10). Fraudulent financial reporting is an intentional misstatement or omission of amounts or disclosures with the intent to deceive users. Most cases involve the intentional misstatement of amounts, rather than disclosures. Omissions of amounts are less common, but a company can overstate income by omitting accounts payable and other liabilities. While most cases of fraudulent financial reporting involve an attempt to overstate income either by overstatement of assets and income or by omission of liabilities and expenses, companies also deliberately understate income (Arens, Elder, and Beasley, 2012).

Misappropriation of assets is fraud that involves theft of an entity's assets. The theft of company assets is often a management concern, regardless of the materiality of the amounts

involved, because small thefts can easily increase in size over time amounts (Elder et al., 2012). The term misappropriation of assets is normally used to refer to theft involving employees and others internal to the organization. Misappropriation of assets is normally perpetrated at lower levels of the organization hierarchy. In some notable cases, however, top management is involved in the theft of company assets. Because of management's greater authority and control over organization assets, embezzlements involving top management can involve significant (Elder et al., 2012).

An organization's assets can be misappropriated by employees, customers, or vendors. The organization must ensure that controls are in place to protect such assets. Considerations to be made in the fraud risk assessment process include gaining an understanding of what assets are subject to misappropriation, the locations where the assets are maintained, and which personnel have control over or access to assets (Elder et al., 2012). Common schemes include misappropriation by: Employees, Employees in collusion with vendors, customers, or third parties, and Vendors. Protecting against these risks requires not only physical safeguarding controls, but also periodic detective controls such as physical counts of inventory. Those conducting the risk assessment keep this in mind when deliberating misappropriation of asset schemes and their impact to the organization.

Three conditions for fraud arising from fraudulent financial reporting and misappropriations of assets are described in SAS 99 (AU 316). These three conditions are referred to as the fraud triangle.

Incentives/Pressures: Management or other employees have incentives or pressures to commit fraud. A common incentive for companies to manipulate financial statements is a decline in the company's financial prospects. In some cases, management may manipulate earnings just to preserve their reputation.SAS 99 (AU 316).

Opportunities: Circumstances provide opportunities for management or employees to commit fraud. Although the financial statements of all companies are potentially subject to manipulation, the risk is greater for companies in industries where significant judgments and estimates are involved. A turnover in accounting personnel or other weaknesses in accounting and information processes can create an opportunity for misstatement. SAS 99 (AU 316).

Attitudes/Rationalization: An attitude, character, or set of ethical values exists that allows management or employees to commit a dishonest act, or they are in an environment that imposes sufficient pressure that causes them to rationalize committing a dishonest act. The attitude of top management toward financial reporting is a critical risk factor in assessing the likelihood of fraudulent financial statements. If the top managers display a significant disregard for the financial reporting process, such as consistently issuing overly optimistic forecasts, or they are overly concerned about meeting analysts' earnings forecasts, fraudulent financial reporting is more likely. Management's character or set of ethical values also may make it easier for them to rationalize a fraudulent act. SAS 99 (AU 316).

Corporate failures in recent years have turned significant public and regulatory interest on corporate fraud. Fraud can take a variety of forms, such as embezzlement, insider trading, self-dealing, lying, failure to disclose facts, corruption, accounts manipulation, kickbacks, phantom vendors, and many more (Ziegenfuss, 1996). Fraud involves complicated financial transactions conducted by white collar criminals, business professionals with specialized knowledge and criminal intent (Pollick, M., 2006).

Clearly, fraud is a pervasive corporate problem, affecting organizations across industries and sectors without regard to size (Adegoke¹, Samson, and Abayomi Sunday, 2013). The penalties for such fraud have significantly increased in response to society's view on this type of behavior. For example, Bernard Ebbers the former chairman of WorldCom was jailed for 25 years for orchestrating a \$US11 billion financial statement fraud (Belson, 2005). Fraud can be said to be the use of one's occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization's resources or assets. Public sectors are specifically likely to be target of fraud, even the owner of resources are public and controlled by public.

2.2 Empirical review

Inconsistent results have been found in relation to internal controls existence and the likelihood of fraud (Beasley, M.S., 1996). However, internal control system effectiveness has been found to reduce the likelihood that companies are sanctioned for fraudulent financial reporting (Abbott et al., 2000). A positive relation was found between concentration of power in the hands of insiders and the likelihood of issuing fraudulent financial statements (Dunn, P., 2004).

The impact of organizational environment on fraud has been consistently determined in previous studies. Employee theft has been found to be influenced by organization's work climate (Weber et al., 2003; Appelbaum et al., 2006; Kulas et al., 2007) and employees attitudes toward honesty (Greenberg, 2002). It has also been determined that organizational variables might be more likely to influence deviance directed at harming organizations (Robinson and Bennet, 1995). (Rae and Subramaniam,2008) found the quality of internal control procedures has a moderating effect on the relationship between perceptions of organizational justice and fraud. The authors suggest that strategies relating to fraud need to focus on organizational factors such as work environment, internal control activities, and training. The importance of internal control mechanisms in curbing fraud-bent behavior, specifically employee fraud, has been investigated. Studies relating to internal controls provide relevant, albeit limited, research concerning employee fraud (O'Leary's et al; 2006).

Employees' perceptions on both certainty and severity of organizational sanctions were found to be related to employee theft (Hollinger and Clark, 1983). (Holmes et al, 2002) Found that whenever top management firmly supports internal control, internal perpetrators and fraud were less likely to occur. Another study found that access to various control mechanism alone does not curb losses due to fraud to (Holtfreter,K., 2004). Breaking the Fraud Triangle is the key to fraud detection. Breaking the Fraud Triangle implies that an organization must remove one of the elements in the fraud triangle in order to reduce the likelihood of fraudulent activities. Out of the three elements, removal of opportunity is most directly affected by the system of internal controls and generally provides the most actionable route to detection of fraud. (CresseyCendrowski, et al, 2002).

(Mahdi, Mahmoud, Shiri and Fatemeh, 2011) investigated the effectiveness of internal control in the Iranian banking sector with special reference to Bank Mellat. The study used questions that needed to be answered in the study are: (1) Does an internal control system in Bank Mellat has proper power in preventing fraud and error? (2) Is there a significant relationship between the weakness of internal control system components (control environment, risk assessment, information and communication, control activities and monitoring) and the occurrence of error and fraud? To test the validity of the questions, hypotheses are postulated relating frequency of fraud reported as failure of internal control with the questionnaire answered on the relationship between the fraud and components of internal control. The paper evaluated the effect of control environment, control activities, risk assessment, information and communication and continuous monitoring on failure of internal control quantified as reported errors and fraud.

The empirical evaluation found out that all the elements of the internal control have significant effect on occurrence of errors and fraud, though the magnitudes are different. Accordingly, Weakness of control environment, control activities, risk assessment, information and communication and monitoring as a component of internal control system in an incident of error and fraud is effective.

Therefore, the more the increase in the weakness of a control environment, control activities, risk assessment, information and communication and monitoring in Bank Mellat, the more is the incident of error and fraud. However, statistically control environment is found to have the highest effect for the failure of internal control.

Using the analytical approach and focusing on control activities and monitoring, (Barra, 2010) investigated the effect of penalties and other internal controls on employees' propensity to be fraudulent. Data was collected from both managerial and non-managerial employees. The results showed that the presence of the control activities, separation of duties, increases the cost of committing fraud. Thus, the benefit from committing fraud has to outweigh the cost in an environment of segregated duties for an employee to commit fraud. Further, it was established that segregation of duties is a „least-cost“ fraud deterrent for non-managerial employees, but for managerial employees, maximum penalties are the „least-cost“ fraud disincentives. The results suggest the effectiveness of preventive controls (control activities) such as segregation of duties is dependent on detective controls (monitoring).

(Sarens and G.A., 2006) found that certain control environment characteristics like tone-at-the-top, level of risk and control awareness, extent to which responsibilities related to risk management and internal controls are clearly defined and communicated are significantly related to the role of the internal audit function and fraud detection within an organization.

(Weili and Sarah , 2005) Conducted a qualitative research on the topic of disclosure of material weakness in internal control after the Sarbanes-Oxley Act. Their paper focuses on sample of 261 companies that disclosed at least one material weakness in internal control in their SEC filings after the effective date of the Sarbanes-Oxley(Oxley Act of 2002). They find that poor internal control is usually related to an insufficient commitment of resources for accounting controls. Material weakens in internal control tend to be related to deficient revenue-recognition policies, lack of segregation of duties, deficiencies in the period-end reporting process and accounting policies and inappropriate account reconciliation.

In their statistical analysis, they also find that disclosing a material weakness is positively associated with business complexity (e.g. multiple segment and foreign currency), negatively associated with firm size (e.g. market capitalization), and negatively associated with firm profitability (e.g. return on asset)

A study by (Roth and Esperson , 2003) on the situation of internal control in companies introduced the components of an internal control (control environment, evaluating risks, control activities, information and communication and supervising) as an advocator for a company to achieve its goals as well as its own progressive procedures. The results suggest (a) Recognizing an internal control system and the role of corporate relationship; (b) Propagating self-control systems, (c) Identifying risk factors; and (d) Preventing incidents of fraud and financial mistakes.

In South Africa, a negative relation has been found between the proportion of independent directors and institutional investors and the likelihood of fraud, while a positive relation was found between duality (chair of board and also the chief executive officer) and the likelihood of fraud, (Sharma, 2004). One difference from this study to others was that in his measure of fraud (Sharma, 2004) used both financial statement fraud and misappropriation of assets. Analysts suggest that with sufficient pressure, incentive and rationalization, the perpetrators often turn their attention towards the opportunities that exist within the public financial management system's internal control structure that could allow for fraud to be committed (Mars Group, 2008).

(Ewa and Udoayang , 2012) Carried out a study to establish the impact of internal control design on banks' ability to investigate staff fraud and staff life style and fraud detection in Nigeria. Data were collected from 13 Nigerian banks using a Four Point Likert Scale questionnaire and analyzed using percentages and ratios.

The study found that Internal control design influences staff attitude towards fraud such that a strong internal control mechanism is deterrence to staff fraud while a weak one exposes the system to fraud and creates opportunity for staff to commit fraud. In addition, most Nigerian banks do not pay serious attention to the life style of their staff members and that most staff members are of the view that effective and efficient internal control design could detect employee fraud schemes in the banking sector. The study concluded that effective and efficient internal control system is necessary to stem the malaise in the banking sector. The study therefore recommended that banks in Nigeria should upgrade their internal control designs and

pay serious attention to the life style of their staff members as this could be a red flag to identifying frauds.

Internal control systems is a topical issue following global fraudulent financial reporting and accounting scandals worldwide. As such, a more proactive preventive approach to the problem requires a critical evaluation of existing internal control structures in organizations to determine their capacity to ensure that the organization's activities are carried out in accordance with established goals, policies and procedures. (Amudo and Inanga, 2009), carried out an evaluation of Internal Control Systems on the Regional Member Countries (RMCs) of the African Development Bank Group (ADB) focusing on Uganda in East Africa. The study established that some control components of effective internal control systems are lacking in these projects which renders the current control structures ineffective. The study recommended an improvement of the existing internal control systems in the projects.

(Bowe and Jobome, 2001) discussed the designation of a managerial framework to control the operational risk, and focus on unauthorized trading fraud. A sample of 37 cases was taken for examination from financial institutions in eight countries over the period 1984-1999. The sample results indicated that internal controls were the primary defense against severe fraud losses and showed that the regulatory penalties imposed on senior supervisory management, in addition to the fraudster, were crucial in ensuring efficient mitigation of fraud loss. Losses from unauthorized trading fraud can be identified with breakdown of controls and constraints designed to mitigate losses from operational risk.

The limitation of the paper is that only one type of fraud was analyzed, as there may be other types of fraudulent activities in the financial services industry. The survey also failed to identify the motives of fraud and other preventive measures to combat fraud.

To Commercial (Angles'Newsletter,2001c), the best way of preventing fraud was to understand why it happened. Fraudsters generally identify an opportunity for exploiting a weakness in the control procedures and then assess whether their potential rewards would outweigh the penalties should they be caught. In addition, the paper introduced the two-stage processes of fraud prevention and detection. First, an organization must ensure that opportunities for fraud were minimized: fraud prevention and detection. Second, organization should ensure that potential fraudsters believe they will be caught: fraud deterrence. Introduction and enforcement of new controls would reduce the opportunities for perpetrators. A regular control was most effective and normally required little management time or effort. It

also emphasized the importance of having strong management and a healthy corporate culture to detect and consequently deter fraud. The limitation of this paper is that it did not specify the detailed control procedures for two-step processes of fraud prevention and detection. It failed to explain the financial effects and risk of computer fraud if prevention and detection and deterrence procedures were not in place.

(Tekalign, 2011), investigated if the existing internal control in public enterprises in Ethiopia contributing to accounting fraud. The survey instruments on 11 major public enterprises in Addis Ababa were conducted using self-administered questionnaires to auditors and accountants. Frauds were represented as any violation of principles, manipulation of sales, expenses or inventories.

The result indicated that the respondents believe the existed internal controls were sufficient to keep possibility of accounting fraud to reasonably low level. Even though the internal control would detect accounting fraud, respondents require codes of conduct and employees training as additional tool to detect fraud events.

(Samuel , 2008), conducted research project for his partial fulfillment of his master's degree in accounting and finance on an internal audit reporting relationship in Ethiopian public enterprises.

The main intent of the research was to analyze the reporting line of internal audit and investigate its relationship with internal audit scope, independency, good governance and audit committee. He used a sample size of 12 organizations from those public enterprises which are operated in Addis Ababa. He found that the majority of Chief Audit Executives (CAE's) in the Ethiopian public enterprises sampled in his research directly to the board, audit committee or its equivalent, and administratively to the general manger and the organizations internal audit scope is more limited on the verification of financial transactions (financial audit), compliance audit, assessment of internal control, and fraud investigation. Finally he conclude that internal audit is one of the key corner stone of effective good corporate by providing assurance on the risk management, control and governance process within organization.

(Mahdi, Mahmoud, Shiri and Fatemeh, 2011) , Investigated the effectiveness of internal control in the Iranian banking sector with special reference to Bank Mellat. The study used questions that needed to be answered in the study are: (1) Does an internal control system in Bank Mellat has proper power in preventing fraud and error? (2) Is there a significant relationship between the weakness of internal control system components (control

environment, risk assessment, information and communication, control activities and monitoring) and the occurrence of error and fraud? To test the validity of the questions, hypotheses are postulated relating frequency of fraud reported as failure of internal control with the questionnaire answered on the relationship between the fraud and components of internal control. The paper evaluated the effect of control environment, control activities, risk assessment, information and communication and continuous monitoring on failure of internal control quantified as reported errors and fraud. The empirical evaluation found out that all the elements of the internal control have significant effect on occurrence of errors and fraud, though the magnitudes are different. Accordingly, Weakness of control environment, control activities, risk assessment, information and communication and monitoring as a component of internal control system in an incident of error and fraud is effective.

Therefore, the more the increase in the weakness of a control environment, control activities, risk assessment, information and communication and monitoring, the more is the incident of error and fraud. However, statistically control environment is found to have the highest effect for the failure of internal control.

(Kayongo, 2004), noted that a lot of benefits can be derived through the implementation of an effective corporate ICS. Among others, it prevents errors and irregularities by detecting them in a timely manner there by promoting reliable and accurate accounting records (Lame & Tan, 2000). It can also quickly resolve issues arising as a result of reporting errors. It protects the interests of employees by clearly specifying to them their duties and responsibilities and safeguarding them against being accused of irregularities or misappropriations (Dess& Shaw, 2001).

(Tekalign, 2011) investigated if the existing internal control in public enterprises in Ethiopia contributing to accounting fraud. The survey instruments on 11major public enterprises in Addis Ababa were conducted using self-administered questionnaires to auditors and accountants. Frauds were represented as any violation of principles, manipulation of sales, expenses or inventories.

In a study on internal control function of the Kenya Polytechnic University College, (Wainaina,2011) shows that as a substitute of its presence on the scene of operations, management must rely on internal control techniques to implement its decisions and to regulate the activities for which she would ultimately be responsible for. It was found that Internal Control Systems (ICS's) play an important role in preventing and detecting fraud and

protecting the organization's resources, both physical and intangible. This is achieved through proper authorization controls and documentation.

The result indicated that the respondents believe the existed internal controls were sufficient to keep possibility of accounting fraud to reasonably low level. Even though the internal control would detect accounting fraud, respondents require codes of conduct and employees training as additional tool to detect fraud events.

Therefore, Management as a body also has the utmost responsibility to test and assess the effectiveness and efficiency of the internal controls as well as safeguarding the assets of the entity. Besides, to ensure efficiency in the utilization of resources, internal control system must be designed in such a manner to prevent, detect fraud and error in the recording of transactions in the accounting records.

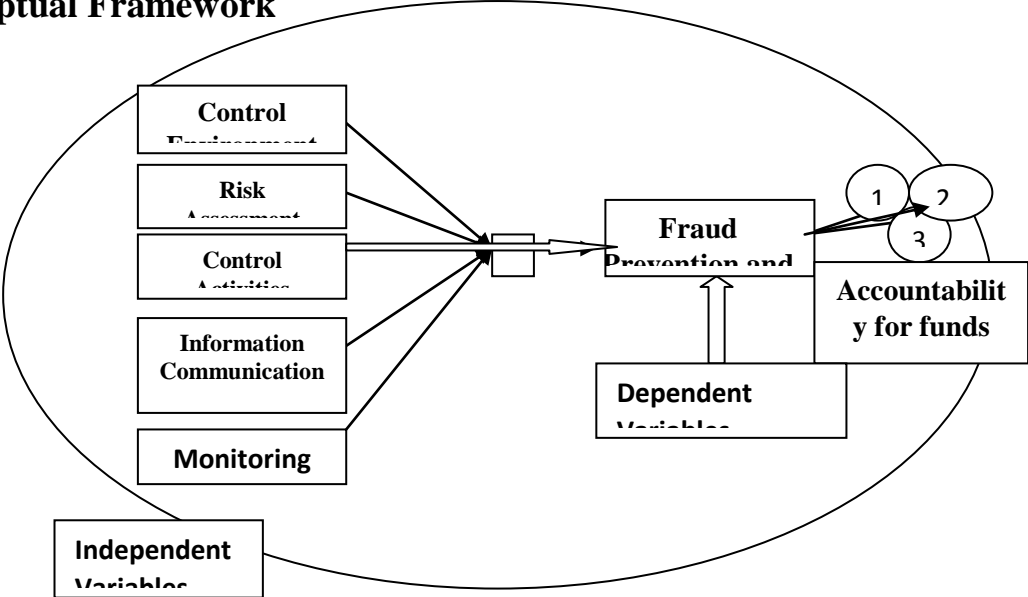
Finally, the corrective controls help in ensuring that the impact of a threat is minimized, identify the cause of a problem as well as the correct errors arising from the problem. Corrective controls correct problems discovered by detective controls and modify the processing system to minimize future occurrence of the problem.

2.3 Gaps in the literature

By definition, good internal control is supposed to result in more *reliable* financial information. Internal controls aim to prevent and/or detect errors or fraud that could result in a misstatement of the financial statements and misappropriation of Assets. However, there is limited empirical evidence in the existing literature regarding the effect of internal control on fraud prevention and detection. A major reason is lack of data on internal control; in general, it is difficult to directly observe or verify internal control (Kinney, 2000).

Even though so many prior scholarly researches are conducted on the various aspects of internal control to the knowledge of the researcher there is no any research which studies the effect of IC on fraud prevention and detection by making the researches case study Public sectors. So as per the researcher level of understanding it is a crucial time to undertake a research on the topic to see the effect of internal control on fraud prevention and detection., to what extent do Ethiopian public sectors are design and implement internal control so that they are in a best positions to over come the problems of fraud.

2.4 Conceptual Framework



CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

In this section the research design, target population, sample design, collection procedure, data analysis procedure and presentation would be also presented in this chapter. The dependent and independent variables applied throughout the research will be outlined and finally the model specifications used for data analysis which are applicable and use in the study was included.

3.2 RESEARCH DESIGN

This study was a cross-sectional descriptive survey employing quantitative methods of data collection. The study was expected to see the effect of internal control system on fraud prevention and detection in public sectors. The data used to conduct this study are the primary data obtained through the questionnaires. The questionnaires were distributed to the Office Head, Purchase and finance head and internal audit department. According to (Mugenda, O.M. and Mugenda, A.G, 2003), is considered to be relevant in a survey because it involves collecting data which can then be used to answer the research question in the current state of the object of the study.

3.3 Target population

The population considered in this study would be West Hararghe Zone administrations. As per the Zone of Finance and Economic Development (ZoFED, 2016), there are 16 woreda administrations in West Hararghe Zone.

3.4 The Study Area

The target populations for this research would be West Hararghe Zone administrations. It consists of 16 woreda administrations namely Anchar, Boke, Ciro, Darolebu, Doba, Gemechis, GubaKoricha, Habro, HawiGudina, Mesela, Mieso, Odabultuma, Tulo, Burka Dhintuworedas and Bedesa and Ciro towns.

3.5 Sampling technique

The target respondents in the participating in these studies were comprised of key informants who were Office Head, purchase and finance department and internal audit department (Who are the stepping stone to other positions).

From these sectors, the researcher employed both purposive sampling and simple random sampling techniques was used to select key respondents i.e. office head, purchase and finance manager, internal audit head, purchase and finance head, and internal auditors because had access to vital information, experience and professional skills that were necessary and relevant for the study. Due to their position of responsibility they had a better understanding of internal controls in relation to the use of public funds. Conversely, the researchers was selected other officials of the public sectors who did not necessarily belong to the key units.

3.6 Sample size

Population in terms of respondents is **160** (**10** respondents from each **16**woreda administration offices). The questionnaires were distributed for these selected public sector offices to get appropriate responses. To obtain the adequate responses through questionnaire the researcher believe that to distribute the questionnaire to office head, plan and budget head, finance department and internal audit department (Who are the stepping stone to other positions).

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

Where,

n = required sample size.

e = level of significance taken to be 0.05

N= the population size.

1= constant, (Alugbwo, 2005).

$$n = \frac{160}{1 + 160(0.05)^2}$$

$$\text{Thus } n = \frac{160}{1 + 160(0.05)^2} = 114$$

Table 3.1: Sample size and selection

No	Study group	Population	Sample method	Sample
1	Office head	1*16	purposive	16
2	Purchase, finance and asset Management head	1*16	purposive	16
3	Internal audit head	1*16	purposive	16
4	Other employee	7*16=112	Simple random sampling	66
	Total	160		114

3.7 Data Collection instruments

In the study primary data was collected on the current state of affairs of the woreda administration. The main instrument for data collection would be questionnaires with structured questions. Structured questions allows for uniformity of responses to questions. The questionnaire is a fast way of obtaining data as compared to other instruments (Mugenda,O.M.andMugenda,A.G, 2003). Questionnaires give the researcher comprehensive data on a wide range of factors. Questionnaires allow greater uniformity in the way questions are asked, ensuring greater compatibility in the responses. Secondary data are data which were used for research that was not gathered directly and purposefully for the project under consideration (Hair, Babin, Money, &Samouel, 2003).

For this research, secondary data was collected from internal audit report and internal audit working paper, different regional proclamation and regulation, OFAG and ORAG report that

concerns internal audit activity, in order to provide awareness to the background of the study and understanding before the primary data were carried out.

The questionnaires was and modified fro literature review an approach which is recommended in methodological literature for studies of this nature (Bryman and Bell, 2007) and those questionnaires will be prepared in the form of Likeret-Scale type (showing respondents agreement or disagreement) by constructing into five point scale where the lowest scale represent strongly disagree and the highest scale represent strongly agree (Likert, 1932). The questionnaires was distributed to the respondent are organized in to two parts; the first part comprises the demographic question regarding the respondents, and the second part contains items relating to the effect of internal control on fraud prevention and detection.

3.8 Variables used in the research

3.8.1 Dependent variables

Internal control systems is a topical issue following global fraudulent financial reporting and accounting scandals worldwide. As such, a more proactive preventive approach to the problem requires a critical evaluation of existing internal control structures in organizations to determine their capacity to ensure that the organization's activities are carried out in accordance with established goals, policies and procedures.

The Concept of Fraud: Fraud, as is defined in accounting standards reports, "is an intentional act that results in a material misstatement in financial statements that are the subject of an audit" (AICPA, 2003) . There are two ways in which a material misstatement could occur with respect to fraud: misappropriation of assets and fraudulent financial reporting. Misappropriation of assets, as the name suggests, refers to the theft of company assets that may result in the company's financial statements being materiality misstated (AICPA, 2003).

According to (ACFE, 2007), fraud is any intentional or deliberate act to deprive another of property or money by deception or other unfair means. The association also classifies fraud into eight categories namely; misrepresentation of material facts, concealment of material facts, corruption, illegal gratuity, extortion, conflict of interest, embezzlement and theft .Fraud refers to any illegal act characterized by deceit, concealment, or violation of trust. According to

(Cressey, 1986), three factors that are present in every situation of fraud: motive or pressure – the need for committing fraud: need for money, etc; rationalization – the mind-set of the fraudster that justifies them to commit fraud; and opportunity – the situation that enables fraud to occur – often when internal controls are weak or non-existent.

To understand the level of internal control effectiveness a categorical variable type of different item questionnaires was constructed and distributed to the respondents. This was the justification for the use of logistic regression as a technique of data analysis.

There are eight 5-scale point questions for measuring fraud prevention and detection. In the current study the average of response of the questions used to determine the fraud prevention and detection status of sector. Based on the reality of the five scale points the following cut points used to determine the fraud prevention and detection status of a certain office. The first response and the second response were highly disagree and disagree respectively and coded as 1 and 2, the third responses was neutral which was coded as 3 and the fourth and fifth responses were agree and disagree which were coded as 4 and five respectively.

Average = [1, 2] implies there is no fraud prevention and detection in the respondents sector

Average = (2, 4) implies there is partial prevention and detection of fraud in the sector

Average= [4, 5] implies there is strong prevention and detection of fraud in the sector is available

3.8.2 Independent Variable

This study was focus on five independent variables that might have an impact on the internal control effectiveness in Governmental sector offices. Those predicted variables would be investigated in this research are: control environment, risk assessment, control activities, information and communication, and monitoring. It should be noted that the data for the independent variables would be collected from the Office Head, Plan and Budget head, finance department and internal audit department from woreda administration.

Therefore, the independent variables represent the perceptions of the concerned bodies regarding these concepts. All of the independent variables items was measured continuous on a five point Likert-scale where the lowest scale represent strongly disagree and the highest scale represent strongly agree. Different item of questionnaires was constructed to identify each of

the independent variables of the control environment, risk assessment, control activities, information and communication, and monitoring; and the Office Head, finance department and internal audit department, was asked to express their view for those items.

3.9 Method of Data Analysis

Data analyses were conducted through a descriptive statistics to provide details regarding the demographic question and internal control on fraud prevention and detection in the woreda administration. To evaluate the effects of various factors of IC on the fraud prevention and detection in the woreda administration the logistic regression analysis is used.

The Data was keyed into SPSS version 20 for further analysis. SPSS was used for data screening and preliminary analysis, while Logistic regression was applied for the remaining multivariate analysis.

3.9.1 Model Specification

The following model is formulated for this research in order to test the research hypothesis set earlier.

Dependent Variables: Fraud Prevention and detection status (no prevention and detection, partial prevention and detection, strong prevention and detection)

Independent variables:

1. Control environment
2. Risk assessment
3. Control activities
4. Information and communication
5. Monitoring

Multinomial logistic regression analysis will be used to analyze the data since it involves multi-categorical dependent variable.

3.9.2. Multinomial Logistic Regression

The logistic regression model is the standard method of analysis for describing the relationship between a nominal-scaled outcome variable and one or more predictor variables. The logistic regression model can be generalized to handle cases when the outcome variable can take on

more than two values. The resulting model is often referred to as the multinomial logistic regression model.

Let Y be a categorical response with J categories. Let J denote the number of categories for Y . Let $\{\pi_1, \dots, \pi_J\}$ denote the response probabilities, satisfying $\sum_j \pi_j = 1$. With n independent observations, the probability distribution for the number of outcomes of the J types is the multinomial. Multi-category also called poly- tomouslogit models for nominal response variables simultaneously describe log odds for all $\binom{J}{2}$ pairs of categories. Given a certain choice of $J-1$ of these, the rest are redundant.

In the current study Y be a fraud prevention and detection status that can take on 3 categories ($0 = no\ prevention\ and\ detection, 1 = partial\ prevention\ and\ detection, 2 = strong\ prevention\ and\ detection$) denoted as $(0, 1, 2)$ and let $Y = 0$ be the reference value. We have a collection of 5 independent predictor variables $X = (X_1, X_2, \dots, X_p)$. The multinomial probabilities of each outcome value conditional on a given x are

$$P(Y = 0 | X) = \frac{1}{1 + e^{g_1(x)} + e^{g_2(x)}}$$

$$P(Y = 1 | X) = \frac{e^{g_1(x)}}{1 + e^{g_1(x)} + e^{g_2(x)}}$$

$$P(Y = 2 | X) = \frac{e^{g_2(x)}}{1 + e^{g_1(x)} + e^{g_2(x)}}$$

Where

Y = Fraud Prevention and detection status ($0 = no\ prevention\ and\ detection, 1 = partial\ prevention\ and\ detection, 2 = strong\ prevention\ and\ detection$)

β_0 = Constant

X_1 = Control environment

X_2 = Risk assessment

X_3 = Control activities

X_4 = Information and communication

X_5 = Monitoring

β_j = is the coefficient

It follows that the logit model of category j versus the baseline category (no prevention and detection) is

$$g_j(X) = \ln \left[\frac{P(Y = j | X)}{P(Y = 0 | x)} \right] = \beta_{j0} + \beta_{j1}x_1 + \dots + \beta_{j5}x_5 \text{ for } j=0,1,2$$

Logit models pair each response category with a baseline category, often the last one or the most common one. The model $\ln \left[\frac{P(Y = j | X)}{P(Y = 0 | x)} \right] = \beta_{j0} + \beta_{j1}x_1 + \dots + \beta_{j5}x_5$ simultaneously describes the effects of \mathbf{x} on these 2 logits. The effects vary according to the response paired with the baseline. These $J-1=2$ equations determine parameters for logit with other pairs of response categories. It specifies the probability for each possible way the n observations can fall in the J categories. Here, we will not need to calculate such probabilities. Multi nominal logistic models simultaneously use all pairs of categories by specifying the odds of outcome in one category instead of another.

3.9.3. Goodness of Fit Test

A goodness-of-fit test compares the model fit with the data. This approach regards the data as representing the fit of the most complex model possible – the saturated model, which has a separate parameter for each observation. Let LM denote the maximized log-likelihood value for a model M of interest. Let LS denote the maximized log-likelihood value for the most complex model possible. This model has a separate parameter for each observation, and it provides a perfect fit to the data. The model is said to be saturated.

The deviance of a GLM is defined as **Deviance = -2[LM- LS]**

The deviance is the likelihood-ratio statistic for comparing model M to the saturated model. It is a test statistic for the hypothesis that all parameters that are in the saturated model but not in model M equal zero.

When the predictors are solely categorical, the data are summarized by counts in contingency table. The deviance statistic then has the G^2 form

$$G^2(M) = 2 \sum \text{observed} [\log(\text{observed} / \text{fitted})]$$

When the fitted counts are all at least about 5 and $G^2(M)$ have approximate chi-squared distributions. Large values provide evidence of lack of fit.

CHAPTER FOUR

4. RESULT AND DISCUSSION

4.1. Descriptive Statistics

About 114 respondents were participated in the current study. A well-organized questionnaire was used to collect the data. Information on their gender status, age group and year of services were collected. The respondents were asked eight questions on control activity practice, five questions on risk assessment, seven questions on monitoring, control activities, and four questions on information and communication. Each question had five responses (1=strongly disagree, 2=disagree, 3=undecided, 4=agree and 5=strongly agree). Also the respondents were asked eight questions on fraud prevention and detection status with five responses each.

After data collection the data were entered in SPSS software for further analysis. For each respondent the average of their responses on the five independent variables and one dependent variable calculated. If the average for each variable is less than or equal to two taken as in lower/least level, if it is less than 4 and greater than two taken as in medium level, and if the average of the responses was greater than or equal to four taken as higher level.

4.1.1. Age and Gender of the Respondents

Among the respondents about 42.1% were males and about 57.9% were females .As shown in the table 4.1 below about 26.3% of the respondents were aged between 20 and 29 year, about 28.1% of them were aged between 30 and 39 years, about 22.8% were aged between 40 and 49 years, and about 22.8 of the respondents were age 50 years and above.

Table 4.1: Gender and age of the respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	48	42.1	42.1	42.1
	Female	66	57.9	57.9	100.0
	Total	114	100.0	100.0	
Age	20-29	30	26.3	26.3	26.3
	30-39	32	28.1	28.1	54.4
	40-49	26	22.8	22.8	77.2
	>=50	26	22.8	22.8	100.0
	Total	114	100.0	100.0	

4.1.2. Year of Experience of the Respondents

Table 4.2 shows the years of services of the respondents. Among 114 respondents about 44 respondents have experience of 5- 10 years and about 70 respondents had experiences of above 10 years. That is about 38.6% of the respondents have experiences of 5-10 years and about 61.4% have experiences of more than 10 years.

Table 4. 2: Years of services of the respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
5-10 years	44	38.6	38.6	38.6
>10 years	70	61.4	61.4	100.0
Total	114	100.0	100.0	

4.1.3. Control Environment Status of the Respondents' Office

The respondents asked eight questions to know the control environment status of their office. Table 4.3 shows the summarized information about the control environment status of their office. As shown in table4.3 about 36% of the respondents were in a good participants in

control of environment, about 58.8% were in medium control, and about 5.2% of the respondents' contribution on environment control was very low.

Table 4.3: Control Environment

	Frequency	Percent	Valid Percent	Cumulative Percent
Good Control	41	36.0	36.0	36.0
No control	6	5.2	5.2	41.2
Partial control	67	58.8	58.8	100.0
Total	114	100.0	100.0	

4.1.4. Risk Assessment Practices in the Study Area

The respondents asked five questions to know the risk assessment status of their office. As shown in table 4.4 among 114 respondents about 43 respondents were in good risk assessment practices, about 53 respondents were in medium risk assessment practices and about 18 respondents were in lower level or they were disagree on the risk assessment practices in their office. That means about the 37.7% percent of the respondents were in a good risk assessment practice, about 46.5 percent of them in medium assessment activities, and about 15.8 percent of them were in passive risk assessment practice. This indicates that the magnitude of good risk assessment status in the study area was very small and those who were in low level of risk assessment relatively large. This might be because of unaccountability of higher level administrators.

Table 4.4: Risk Assessment practice

	Frequency	Percent	Valid Percent	Cumulative Percent
Good	43	37.7	37.7	37.7
Medium	53	46.5	46.5	84.2
Passive	18	15.8	15.8	100.0
Total	114	100.0	100.0	

4.1.5 Control Activity Status in Study Area

The respondents were asked nine questions to know the control activity status of their office. As shown in table 4.5 among 114 respondents about 8 respondents were in good control activity practices, about 89 respondents were in medium control activity practices and about 17 respondents were in lower level control activity practices. That is about the 7.0% percent of the respondents were in a good control activity practice, about 78.1 percent of them in medium control activities, and about 14.9 percent of them were in passive control activity practice. As we have seen from the table the level of good control activity practice was very low, this might because of unaccountability of higher level administrators and staff members. As well known in the Hararghe region the workers could not attend at afternoon session.

Table 4.5: Control Activity

	Frequency	Percent	Valid Percent	Cumulative Percent
Good activity	8	7.0	7.0	7.0
Medium	89	78.1	78.1	85.1
Passive activity	17	14.9	14.9	100.0
Total	114	100.0	100.0	

4.1.6. Information and Communication Level

The respondents were asked nine questions to know the information and communication level of their office. As shown in table 4.6 among 114 respondents about 75 respondents were in good information and communication level, about 39 respondents were in medium information and communication level. In percent as shown in the Table 4.6 about 65.8% of the respondents were in good information and communication level and about 34.2% of the respondents were in medium information and communication level. This indicates that there was good level of information and communication and; this might because of a good culture of Hararghe people.

Table 4.6: Information and Communication

	Frequency	Percent	Valid Percent	Cumulative Percent
Good	75	65.8	65.8	65.8
Medium	39	34.2	34.2	100.0
Total	114	100.0	100.0	

4.1.7. Monitoring level

The respondents were asked seven questions to know the monitoring level of their office. As shown in table 4.7 among 114 respondents about 46 respondents were in good monitoring level, about 66 respondents were in medium monitoring level and only 2 respondents disagree on monitoring status of their office. That means as shown in the table 4.7 about 40.0% of the respondents were in good monitoring practices, about 58% of the respondents were in medium monitoring practices and 2.0 % of the respondents were in that of passive monitoring practice.

Table 4.7: Monitoring practices in the study area

	Frequency	Percent	Valid Percent	Cumulative Percent
Good	46	40.4	40.4	40.4
Medium	66	57.8	57.8	98.2
Passive	2	1.8	1.8	100.0
Total	114	100.0	100.0	

4.1.8. Fraud Prevention and Detection

About 114 respondents were participated on the survey and eight questions with five responses each asked to know their fraud prevention and detection status. The summarized information about their fraud prevention and detection was presented in table 8. As shown in the table 4.8 about 7 respondents were in lower or no prevention and detection level, about 60 respondents were in medium level of fraud prevention and detection, and about 47 respondents were higher level of fraud prevention and detection level. By percent as shown in the table 4.8 about 41.2% of the respondents were good fraud prevention and detection , about 52.6% of them were in

partial prevention and detection level and about 6.2 % of the respondents were in bad or no prevention and detection level.

Table 4.8: Fraud Prevention and detection

	Frequency	Percent	Valid Percent	Cumulative Percent
No prevention and detection	7	6.2	6.2	6.2
Partial prevention and detection	60	52.6	52.6	58.8
Prevention and detection	47	41.2	41.2	100.0
Total	114	100.0	100.0	

4.2. Reliability test

This research used Cranach’s alpha to test the reliability of the questionnaire. Cronbach’s alpha is the most common measure of internal consistency and reliability. It is considered to be a measure of scale reliability where it can be correlation efficient when the range is between zeros to one. In terms of reliability, if the alpha value is less than 0.6, it is considered not acceptable, while the alpha value is over 0.6, the result (questionnaire) is acceptable

Table 4.9 Reliability Statistics

Cronbach's Alpha	N of Items
.720	5

Table 4.9 shows that Cronbach’s alpha for this study. All variables have Cronbach’s alpha of more than 0.70. This indicates that all questions are acceptable.

4.3. Multicollinearity

Tables 4.10 and 4.11 below show the results of the logistic regression model that present the tests of collinearity, multicollinearity, the VIF and Tolerance of the study. To detect multicollinearity in this study, Pearson correlation of SPSS was employed as shown in Table 4.10. Examining table 4.10 below, it is obvious that there is no variable that is highly correlated with one another. In view of the fact that the correlation values are well below the threshold of 0.9, it can be concluded that there is no multicollinearity problem among the variables under investigation. The VIF is below the threshold of .20 and tolerance is above 5 which is acceptable.

Table 4.10 Correlations

	CE	RA	IC	CA	MP
CE	Pearson Correlation 1				
RA	Pearson Correlation .221	1			
IC	Pearson Correlation .194	.512	1		
CA	Pearson Correlation .075	-.0293	.042	1	
MP	Pearson Correlation .0205	.128	.229	.318	1

Table 4.11 **MultiCollinearity Test**

Variables	Collinearity Statistics	
	Tolerance	VIF
CONTROL ENVIRONMENT	.645	1.551
RISK ASSESSMENT	.575	1.740
INFORMATION COMMUNICATION	.716	1.397
CONTROL ACTIVITIES	.721	1.387
MONITORING PROCESS	.595	1.680

4.4. Goodness of Fit Test

Table 4.12 shows the goodness of fit test for the model used in the current study. As shown in the table the likelihood ratio test statistics was 59.358 with degrees of freedom of 10 and the p-value is less than 0.01. this indicates that the final model is highly significant and the hypothesis that all independent variables are zero is rejected. In conclusion the model fits properly.

Table 4.13: Parameter Estimates of multinomial logistic Regression model

		B	Std. Error	Wald	Def	Sig.	Exp (B)	95% Confidence Interval for Exp(B)	
Fraud Prevention and detection								Lower Bound	Upper Bound
Medium	Intercept	29.134	1466.045	.0001	1	.984			
	Control environment [lower level]	-13.693	888.724	.0001	1	.988	1.130E-6	.000	
	Control Activity[higher level]	13.842	1.175	138.716	1	.000	1.027E6	102621.157	1.028E7
	Risk assessment [lower level]	-14.165	891.652	.0001	1	.987	7.050E-7	.000	
	Information and communication[lower level]	-.313	.896	.122	1	.727	.731	.126	4.236
	Monitoring [lower level]	-13.568	854.098	.0001	1	.987	1.281E-6	.000	
Good	Intercept	31.766	1466.045	.0001	1	.983			
	Control environment [lower level]	-15.321	888.724	.0001	1	.986	2.219E-7	.000	
	Control Activity[higher level]	12.558	.000	.	1	.	2.844E5	284439.317	284439.317
	Risk assessment [lower level]	-13.421	891.652	.000	1	.988	1.484E-6	.000	
	information and communication[lower level]	-2.534	1.065	5.661	1	.017	.079	.010	.640
	Monitoring [lower level]	-14.557	854.098	.000	1	.986	4.763E-7	.000	

Information and communication level and the control activities were significant factors of the fraud prevention and detection status of the respondents' office.

The coefficient value of information and communication measures the levels of increase in logit of the fraud prevention and detection level relative to higher level of information and communication. $\text{Exp}(B) = 0.079$ is the relative risk ratio comparing lower level of information and communication to higher level for low fraud prevention and detection status relative to middle level of fraud prevention and detection given that the other variables in the model are held constant. For comparing lower level of information and communication to higher level, the relative risk for lower level of fraud prevention and detection relative to middle fraud prevention and detection would be expected to increase by a factor of 12.66 given the other variables in the model are held constant. This indicates that increasing the level of information and communication is very important tool for fraud prevention and detection.

The coefficient of control activities measures the levels of increase in logit of the fraud prevention and detection level at lower level of control activities relative to higher level of control activities given that other factors in the model held constant. $\text{Exp}(B) = 1.027 \times 10^6$ is the relative risk ratio comparing higher level of control activities to lower level for low fraud prevention and detection status relative to middle level of fraud prevention and detection given that the other variables in the model are held constant. For comparing lower level of control activities to higher level, the relative risk for lower level of fraud prevention and detection relative to middle fraud prevention and detection would be expected to increase by a factor of 12.66 given the other variables in the model are held constant. This indicates that increasing the level of control activities is very important tool for fraud prevention and detection.

4.6. Discussion and Results

From the logistic regression result, there is plausible evidence that there is a significant factor of CA and IC on the fraud prevention and detection while the CE, RA and MP have not significant factors on the fraud prevention and detection.

This result indicates that the control activities are contributed significantly toward an on fraud prevention and detection in public sectors. One supportive study observed that authorization, segregation of duties verification before making the payments, control over access to resources, reconciliation, review operations and supervision as the control activities in any organization.

The justification of this result is built on the argument that the internal control systems in woreda public sectors, Management should establish control activities that are effective and efficient, Proper documentation of policies and procedural guidelines in these aspects help to determine not only how the control activities are to be executed but also provide adequate information for auditors examination of the overall adequacy of control design and practices in evaluation of their internal control systems on fraud detection and prevention.

Internal control activities have been gaining a much more important presence in public sector as the time passes. Additionally, it is also worth mentioning that modern internal control system approach has started to gain importance instead of traditional approaches and methods. It is also clear that the public sectors have been trying to improve and put forward distance and internal control practices through reducing centralized control functions. Establishment of an internal control organization in which the participation of all employees adopts control self assessment practices, take risks for the public sector to achieve its mission and general objectives into internal control process, has been the main priority for each public sector in this regard. The existence of information & communication also the significant factors on the fraud prevention and detection.

Effective communications should occur in a wider sense with information within the various sections of the organization . Most of the recent literature on internal control system frameworks gave concerned on information and communication as one of the internal control system on fraud detection and prevention, because of their importance in influencing the positive working relationship within the organization at all levels . Hence, such information must be communicated throughout the entire organization in order to permit personnel to carry

out their responsibilities with regard to objective achievement. Therefore, effect of effective information and communication on fraud detection and prevention indicated that relevant information must be identified, recorded and communicated in a form and time frame that enables people to carry out their duties and responsibilities itself.

Findings of this study were compared with empirical studies relating to internal control aspects involved in fraud detection and prevention. (Kenneth, Lauden et.al. 2009), found that pertinent information must be identified, captured and communicated in a form and timeframe that enables people to carry out their responsibilities. Huge amounts of money are spent on information systems and technology hardware, software, telecommunication and management consulting services due to importance attached to information and communication. Management use of technology and the impact of technology make it a very interesting area in frauds control.

Organizations are moving towards a digital firm where nearly all the significant business relationships with customers, employees, suppliers are digitally enabled and mediated (Kenneth, 2009). Digital firms respond to the organization environment of achieving operational excellence faster than the traditional methods. Information systems produce reports, containing operational, financial and compliance-related information that make it possible to run and control the business.

(Mahdi, Mahmoud, Shiri and Fatemeh, 2011) Investigated the effectiveness of internal control in the Iranian banking sector with special reference to Bank Mellat. The paper evaluated the effect of control environment, control activities, risk assessment, information and communication and continuous monitoring on failure of internal control quantified as reported errors and fraud. The empirical evaluation found out that all the elements of the internal control have significant effect on occurrence of errors and fraud, though the magnitudes are different.

Accordingly, Weakness of control environment, control activities, risk assessment, information and communication and monitoring as a component of internal control system in an incident of error and fraud is effective. Therefore, the more the increase in the weakness of a control environment, control activities, risk assessment, information and communication and monitoring in Bank Mellat, the more is the incident of error and fraud.

Effective internal control is a system of internal control whereby the designs, functions and programs of internal control achieve their intended results . Internal control facilitate the companies effective and efficient operation by enabling it to respond appropriately to significant business, operational, financial, compliance and other risks to achieving the company's objectives. This includes the safeguarding of assets from inappropriate use or from loss and fraud, and ensuring that liabilities are identified and managed.

The empirical literature indicated that; though internal control is reasonably a preventive shield of fraud and misappropriation of stewards of resources, several reported cases of multibillion dollar fraud and reporting scandals over the world have so far refueled public policy debates on internal control, that internal control become an issue of considerable interest to policy makers and management to avoid those fraud. Thus the studies reviewed internal control of organizations, and government units ICS in essence of preventing fraud.

CHAPTER FIVE

5. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter presents summary of the findings, conclusions, study recommendations and suggestions for further study. From the analysis and data collected, the following discussions, conclusions and recommendations were made. The study had intended to find the effect of internal control system on fraud prevention and detection in woreda public sectors.

5.1 Summary of Findings

The current study aim is to assess effect of internal control system on fraud prevention and detection in woreda public sectors. From the logistic regression result, there is plausible evidence that there is a significant factor of control activities and information and communication on the fraud prevention and detection while the control environment, risk assessment and monitoring have not significant factors on the fraud prevention and detection.

For comparing lower level of information and communication to higher level, the relative risk for lower level of fraud prevention and detection relative to middle fraud prevention and detection would be expected to increase by a factor of 12.66 given the other variables in the model are held constant. This indicates that increasing the level of information and communication is very important tool for fraud prevention and detection.

For comparing lower level of control activities to higher level, the relative risk for lower level of fraud prevention and detection relative to middle fraud prevention and detection would be expected to increase by a factor of 12.66 given the other variables in the model are held constant. This indicates that increasing the level of control activities is very important tool for fraud prevention and detection.

The final portion of this research aims to conclude the finding of the study focusing on the effect of internal control system on fraud prevention and detection in woreda public sectors 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 control environment, risk assessment, control activities, information and communication and monitoring on fraud prevention and detection in the woreda administration offices.

5.2 CONCLUSION

This study is one of very few studies which have investigated the effect of internal control system on fraud prevention and detection in public sectors. The paper's primary contribution is finding that Control activities and Information and communication significant factors on fraud prevention and detection in public sectors while Control environment, Risk assessment, Monitoring process was not have significant factors on fraud prevention and detection in public sectors.

This study contributes to the existing literature a new knowledge on the antecedents of effect of internal control system on fraud prevention and detection in public sectors. The findings of this research has significance for the regulatory authorities to re-assess its supervisory role with the perspective of strengthening the Internal control system process in the government sector offices and ensure full and efficient implementation of internal control components in all the public sector. On the other hand, the academic community is easily placed to significantly contribute to this increasing public policy requirement and debate for more effective internal control system and corporate administration.

5.3 RECOMMENDATIONS

Fraud detection is based on the premise that fraud is not a random occurrence but occurs where the conditions are right for it to occur. Fraud detection attacks the root causes and enablers of fraud. Improving organizational procedures to reduce or eliminate the causal factors of fraud is the single best defense against fraud. Therefore there is need for treasury staffs to maintain effective, efficient and transparent governance and financial systems to minimize or eliminate fraud .This will address the weakness within the organization structure that normally exposes resources to risk of loss due to fraud.

- Management should always ensure that, risks are effectively assessed and managed, laws and regulations strictly complied with, and that, there is effective communication and monitoring within the district treasuries. This will ensure effectiveness and efficiency of operations, reliability of financial reporting, and compliance with laws and regulations and finally prudent use of public funds The five identified and studied components of effective internal controls: control environment; risk assessment; control activities; information and communications and monitoring, need to be applied in a interactive linkage to form an integrated system that reacts dynamically to changing conditions.
- Fraud risk assessment should be carried out to identify potential risk areas and events that public sectors needs to mitigate fraud.
- Auditors should design effective audit procedures to be followed in attempting to identify the perpetrators, extent of the fraud, techniques used and cause of fraud.
- There should be regular evaluation of control in order to learn their effectiveness in detecting fraud and identify weaknesses.

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APENDIX A
JIMMA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF ACCOUNTING AND FINANCE
MSc in Accounting and Finance

Dear Respondent:

The intent of this questionnaire will be to explore information regarding the effect of internal controls on fraud prevention and detection in public sectors in oromia regional state west hararge zone and to conduct Master Thesis (Research) for the partial fulfillment of Master's Degree in accounting and finance at public sectors in oromia regional state West Hararghe zone. To supplement the data obtained from different sources, the investigator seeks to gather relevant information from a sample of public sector using self-administered questions.

In line with this, you are kindly requested to complete this questionnaire. Your responses will be kept strictly confidential and would be used only for the purpose of this research.

Your honest and thoughtful response is valuable

Thank you in advance for your support and participation.

With best Regards

Yours faithfully,

Researchers' Address:

Solomon Abate

Mobile: 0913989165

E-mail: solab099@gmail.com

West Hararghe

Ethiopia

I. Personal information of the respondent (Please, tick in the appropriate circle)

Female Male
1. Your gender

2. Age: 19 or less 20–29 30–39 40–49 50 or more

3. Your year of service >5 <= 10 years greater than 10

4. Your educational level Diploma Degree Above

5. Your field of profession Management Accounting Other

6. What is your level of position title in your organization? -----

II. Independent Variables: Component of Internal Control Systems (ICS) In W/Hararge Zone woreda Administration’s

This questionnaire is prepared based on the elements of internal control and its components.

Please, tick in the appropriate box against the statements as defined below; 1 = strongly

Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree and 5 = Strongly Agree.

	Control Environment	1	2	3	4	5
CE1	The administration demonstrates a commitment to integrity and ethical values.					
CE2	In the town administration there is clear separation of roles and responsibilities.					
CE3	The policies, procedures and guidelines in the administration are documented and communicated to all employees.					
CE4	All employees in charge of the administration objectives are aware of the guidelines of the objective.					
CE5	Your organization has an organizational chart with clear reporting lines and authority					
CE6	All staff in charge performs their responsibilities as per the regulations and guidelines in alignment with objectives.					
CE7	Segregation / separation of roles can lead to attainment of set town administration objectives.					
CE8	The administration holds individuals accountable for their internal control responsibilities in the pursuit of objectives.					
	Control Activities					

CA1	Authorizing and executing transactions and events are only done by persons acting within the scope of their authority.					
CA2	No single individual or team should control all key stages of a transaction or event. Key duties include authorizing and recording transactions, processing, and reviewing or auditing transactions.					
CA3	Access to resources and records is limited to authorized individuals who are accountable for the custody and/or use of the resources.					
CA4	Transactions and significant events are verified before and after processing,					
CA5	Records are reconciled with the appropriate documents on a regular basis, e.g. the accounting records relating to bank accounts are reconciled with the corresponding bank statements.					
CA6	Operating performance is reviewed against a set of standards on a regular basis, assessing effectiveness and efficiency.					
CA7	Operations, processes and activities should be periodically reviewed to ensure that they are in compliance with current regulations, policies, procedures, or other requirements.					
CA8	Competent supervision helps to ensure that internal control objectives are achieved:					
CA9	Assets are properly safeguarded and periodically verified.					

	Risk Assessment					
RA1	Management has defined appropriate objectives for the organization					
RA2	Management identifies risks that affect achievement of the objectives.					
RA3	Management has a criteria for ascertainment of which fraud-related risks to the organization are most critical					
RA4	Management has put in place mechanisms for mitigation of critical risks that may result from fraud					
RA5	Management take necessary action to manage risks identified.					
	Information and Communication					
IC1	Management has identified individuals who are responsible for coordinating the various activities within the entity					
IC2	Transactions are promptly recorded and classified to provide reliable information.					
IC3	Communication helps to evaluate how well guidelines and policies of the organization are working and being implemented					
IC4	The reporting system on organizational structures spells out all the responsibilities of each section/unit in the organization					

	Monitoring					
M1	Performance of ongoing and/or separate evaluations to ascertain whether the components of internal control are present and functioning.					
M2	Independent internal audit unit that objectively evaluates the entity's control system and feedback to management on the functioning of the control system.					
M3	Engagement of external evaluators to objectively evaluate the control system and report to management on the functioning of the other components of the control system					
M4	Evaluation and communication of internal control deficiencies in a timely manner to those parties responsible for taking corrective action					
M5	Evaluation and communication of internal control deficiencies in a timely manner to senior management and the woreda committee as appropriate					
M6	Management tracking of whether deficiencies are remediated on a timely manner					
M7	Internal audit reports to management and woreda committee on unresolved deficiencies.					

III. Questionnaire for dependent variable/fraud prevention and detection in woreda administrations/

		1	2	3	4	5
FPD 1	Internal control system of the organization was assess employees' and management's style, to determine if the style might lead to fraudulent of assets and financial reporting.					
FPD 2	Your organization performs and updates its risk assessment regularly to understand evolving fraud risks and the specific vulnerabilities that may apply to the organization over time.					
FPD 3	Auditors periodically reassess organizational risk assessment criteria as organization grows and changes to make sure Auditors are aware of all possible types of fraud that may occur					
FPD 4	Effective internal control is improved by reducing the level of irregularity and fraud under the administration activities.					
FPD 5	The quality of service rendered by the woreda administration assures the public that budget is used for the intended purpose.					
FPD 6	Internal control achiever reliability and integrity of financial and operational information					
FPD 7	Internal control ensures economical, effective and efficient use of resources in the organization of operations.					
FPD 8	In the organization internal control insures activity performed is Compliance with established policies, procedures, laws and regulations.					

APPENDIX B: Reliability Statistics for Variables

Reliability Statistics

Cronbach's Alpha	N of Items
.720	5

APPENDIX C: MultiCollinearity

Correlations

	CE	RA	IC	CA	MP
CE	Pearson Correlation 1				
RA	Pearson Correlation .221	1			
IC	Pearson Correlation .194	.512	1		
CA	Pearson Correlation .075	-.0293	.042	1	
MP	Pearson Correlation .0205	.128	.229	.318	1

MultiCollinearity

Variables	Col-linearity Statistics	
	Tolerance	VIF
CONTROL ENVIRONMENT	.645	1.551
RISK ASSESSMENT	.575	1.740
INFORMATION COMMUNICATION	.716	1.397
CONTROL ACTIVITIES	.721	1.387
MONITORING PROCESS	.595	1.680

APPENDIX D: Goodness of Fit

Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	113.315			
Final	53.358	59.956	10	.000

APPENDEX E:Multinomial logistic Regression model

Fraud Prevention and detection		B	Std. Error	Wald	Def	Sig.	Exp (B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
Medium	Intercept	29.134	1466.045	.0001	1	.984			
	Control environment [lower level]	-13.693	888.724	.0001	1	.988	1.130E-6	.000	
	Control Activity[higher level]	13.842	1.175	138.716	1	.000	1.027E6	102621.157	1.028E7
	Risk assessment [lower level]	-14.165	891.652	.0001	1	.987	7.050E-7	.000	
	Information and communication[lower level]	-.313	.896	.122	1	.727	.731	.126	4.236
	Monitoring [lower level]	-13.568	854.098	.0001	1	.987	1.281E-6	.000	
Good	Intercept	31.766	1466.045	.0001	1	.983			
	Control environment [lower level]	-15.321	888.724	.0001	1	.986	2.219E-7	.000	
	Control Activity[higher level]	12.558	.000	.	1	.	2.844E5	284439.317	284439.317
	Risk assessment [lower level]	-13.421	891.652	.000	1	.988	1.484E-6	.000	
	information and communication[lower level]	-2.534	1.065	5.661	1	.017	.079	.010	.640
	Monitoring [lower level]	-14.557	854.098	.000	1	.986	4.763E-7	.000	

APPENDIX F: Regression Result for ICS

CE

	Frequency	Percent	Valid Percent	Cumulative Percent
Good Control	41	36.0	36.0	36.0
No control	6	5.2	5.2	41.2
Partial control	67	58.8	58.8	100.0
Total	114	100.0	100.0	

RA

	Frequency	Percent	Valid Percent	Cumulative Percent
Good	43	37.7	37.7	37.7
Medium	53	46.5	46.5	84.2
Passive	18	15.8	15.8	100.0
Total	114	100.0	100.0	

CA

	Frequency	Percent	Valid Percent	Cumulative Percent
Good activity	8	7.0	7.0	7.0
Medium	89	78.1	78.1	85.1
Passive activity	17	14.9	14.9	100.0

IC

	Frequency	Percent	Valid Percent	Cumulative Percent
Good	75	65.8	65.8	65.8
Medium	39	34.2	34.2	100.0
Total	114	100.0	100.0	

MP

	Frequency	Percent	Valid Percent	Cumulative Percent
Good	46	40.4	40.4	40.4
Medium	66	57.8	57.8	98.2
Passive	2	1.8	1.8	100.0
Total	114	100.0	100.0	

