

**ADDIS ABABA UNIVERSITY
SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION
DEPARTMENT OF ACCOUNTING AND FINANCE
(GRADUATE PROGRAM)**

**THE CONTRIBUTION OF INTERNAL AUDIT REENGINEERING
TO ITS EFFECTIVENESS: AN ETHIOPIAN PUBLIC ENTERPRISE
CASE STUDY**

**BY
ASMAMAW GETIE MIHRET**

JUNE 2011

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*A Thesis Submitted to the School of Graduate Studies of Addis
Ababa University in Partial Fulfillment of the Requirements for the
Degree of Master of Science in Accounting and Finance*

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Statement of declaration

I, the undersigned, declare that this thesis is my original work, has not been presented for award in any other university and that all sources of materials used for the thesis have been duly acknowledged.

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Place and date of submission: Addis Ababa University, June 2011

Abstract

This study aims to understand the contribution of internal audit reengineering to its effectiveness in Ethiopian public enterprises. The study adopted a case study design and research questions were tested using an organization that went through internal audit reengineering. The questionnaire data were analyzed using descriptive statistics and data from interview and documentary review were interpreting qualitatively. The result shows that internal audit reengineering basically change organizational setting and has low influence on internal audit quality and auditee attribute and there is no influence on management support. Since the effectiveness of internal audit function is mainly influenced by management support and internal audit quality (Mihret and Yismaw, 2007), internal audit reengineering has low contribution to the effectiveness of the function.

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Acronyms

ACCA	Association of Chartered certified Accountants
BPR	Business Process Reengineering
CAE	Chief Audit Executive
CEO	Chief Executive officer
CFO	Chief Financial Officer
CIA	Certified Internal Auditor
CSRP	Civil Service Reform Program
EELPA	Ethiopian Electric Light and power authority
EEPCo	Ethiopian Electric Power Corporation
IAF	Internal Audit Function
IIA	Institute of Internal Audit
IT	Information Technology
MoFED	Ministry of Finance and Economic Development
PPESA	Privatization and Public Enterprises Supervisory Agency

Chapter 1: Introduction

1.1. General background of the study

Internal audit has extended its area of involvement, from more traditional accounting and financial control, to operational control and to risk management and corporate governance (Arena and Azzone, 2009). The increasing complexity of business transactions, a more dynamic regulatory environment and significant advances in information technology have resulted in opportunities and challenges for internal auditors (Cooper *et al.*, 2006; Hass *et al.*, 2006; Allegrini *et al.*, 2006). Reengineering of the internal audit function is one of the activities to deal with the ever-changing business environment (Gupta, 2001). Hence, reengineering the internal audit function helps to make the function in line with the changed organization.

Gupta, (2001) noted that changes in organizational business risk profile and related control structures, treat of outsourcing due to increased competition from alternative service providers, and the need to deliver efficient and effective service are the major drivers of internal audit reengineering. Furthermore, Dittenhofer (2001) noted that the issuance of standards as a reason of internal audit reengineering.

Gupta (2001) define internal audit reengineering as

Optimal restructuring of the internal audit function to re-relevance its core and support business process to help organizations achieve their business objectives in risk intelligent way.

The definition signifies that internal audit reengineering is aimed at structuring the function in a way favorable to provide the required service to organizations thereby help to achieve organizational objectives. Gibbs and Keating (1995) noted that the intent of process reengineering is to restructure the functional form of organizations so as to achieve the quantum gain in quality, cycle time and productivity.

Dittenhofer (2001) noted that internal audit reengineering changes the relationship of the function to the parent organization. He further pointed out the areas of improvement in internal audit function: philosophical, methodological, and operational. Similarly, Gupta (2001) in the study of internal audit reengineering in Fortune 500 companies noted that reengineering changes the working environment of internal audit function.

As organizations change their way of achieving their purpose, the risks involved, control activities and governance process will be changed. This change means that the internal audit process, competencies and roles need to be changed accordingly in order to respond to the need of the organization and thus enhance its effectiveness (Arena and Azzone, 2009). Effectiveness is acknowledged if it provides the required service expected from the function (Mihret and Yismaw, 2007; Arena and Azzon, 2009). Dittenhofer (2001) noted that internal audit is effective if it achieves the goal of the function.

To provide effective service internal audit function need to have favorable organizational setting, internal audit quality, management support and suitable auditee attributes (Mihret and Yismaw, 2007). Arena and Azzone (2009) also noted that internal audit effectiveness is a function of resources and competency of the internal audit team, process and activity and organizational link of the function.

There are studies in the area of internal audit reengineering and internal audit effectiveness. However, they confine their study on the two areas separately. The first set of studies confined to the analysis of the need and the way of reengineering the internal audit function (Dittenhofer, 2001; Gupta, 2001). The second set of studies on the other hand assess the effectiveness of internal audit function (Mihret and Yismaw, 2007; Dittenhofer, 2001; Arena and Azzone; 2009). However, reengineering of internal audit has impact on organizational structure, focus of the function and the overall set of internal audit function (Gupta, 2001; Dittenhofer, 2001) which will further have influence on the effectiveness of internal audit function (Mihret and Yismaw, 2008; Arena and Azzone, 2009). Despite this being the case, there is a dearth of empirical studies that examine the influence of internal audit reengineering to its effectiveness.

The aim of this study was to understand the contribution of internal audit reengineering to the functions' effectiveness. The study used the model of factors influencing internal audit effectiveness developed by Mihret and Yismaw, (2007). The Case study design was employed and used Ethiopian electric power corporation as a unit of analysis. Data were collected using self administered questionnaire to all internal auditors at head office, interview with the chief auditor and review of relevant documents. Data from questionnaire results were analyzed using descriptive statistics. On the other hand, data from interview and document review were interpreted qualitatively. The discussions results reveal

that internal audit reengineering has low contribution to the effectiveness of the function.

1.2. Statement of the problem

The government of Ethiopia has gone through a number of reforms including business process reengineering (BPR) to enhance the capacity of public institutions and to create a favorable environment to investment and economic growth (Mengesha and Common, 2007). To achieve organizational objectives, internal audit plays a great role by providing value-adding services (Mihret and Woldeyohannis, 2007; Mihret and Yismaw 2008; Roth, 2000) which in turn is influenced by the effectiveness of the function (Mihret et al., 2010; Mihret and Woldeyohannis, 2008).

The implementation of BPR in public entities also causes reengineering of internal audit function as part of the overall organization. Internal audit reengineering changes the relationship, the resource needed and the required characteristics of the internal audit team (Gupta, 2001; Dittenhofer, 2001). Besides, internal audit effectiveness is influenced by the characteristics of the internal audit team and activity, the audit process and activity and the relationship between internal audit function and top management (Arena and Azzone, 2009; Mihret and Yismaw 2008).

Although, internal audit reengineering seems to exert influence on the effectiveness of the function, there is a paucity of empirical studies that examine how this link established and strengthened. The lack of prior empirical research that assesses the influence of internal audit reengineering to the effectiveness of the function served as a motivation for this study. Against this background, this

study examined the influence of internal audit reengineering to the function's effectiveness in Ethiopian public enterprises¹ based on a case study.

1.3. Objective of the study

Based on the gap in the existing literature, the intent of this study was to enhance understanding of how internal audit reengineering fosters the functions' effectiveness in Ethiopian public enterprises. To this end, the following guiding research question (RQ) and research issues (RI) were pursued:

RQ: How does internal audit reengineering influence internal audit effectiveness?

RI₁: How does reengineering improve the organizational setting in which internal audit function operates?

RI₂: How does internal audit reengineering impact of internal audit quality?

RI₃: To what extent does internal audit reengineering enable internal audit to garner management support?

RI₄: To what extent does reengineering influence attributes of the auditee?

¹ Public Enterprises Proclamation No. 25/1992 define public enterprises as ' a wholly state owned public enterprise established pursuant to this Proclamation to carry on for gain manufacturing, distribution, service rendering or other economic and related activities'

1.4. The model

To achieve the research objective and to test the research questions, this study used the model developed by Mihret and Yismaw, (2007).

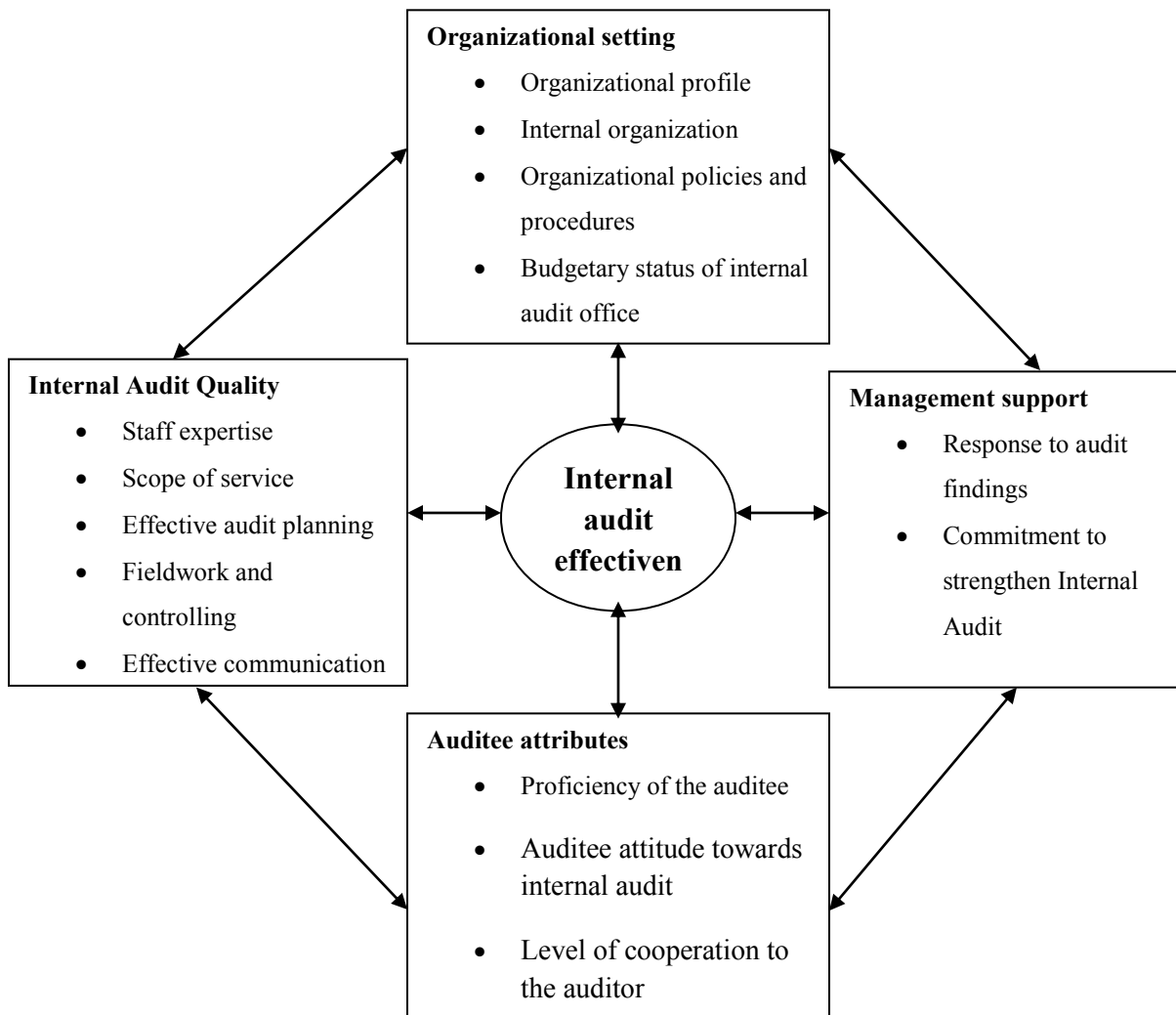


Figure 1; Factors influencing internal audit effectiveness

Source: Mihret and Yismaw, (2007)

1.5. Scope of the study

This study was confined to examining the effect of internal audit reengineering on the effectiveness of internal audit in a selected public enterprise. Analyzing the effectiveness of the reengineering itself and Public sectors and other private enterprises are out of the scope of this study.

1.6. Limitation of the study

Like any other study, this study has its own limitations. The major limitation is that it is partly based on perceptions of the internal audit director and of internal auditors of the case organization. As such, individuals' perceptions are not claimed to accurately measure the underlying reality that they are supposed to represent. Furthermore, the interpretation of any single case study conclusion should be done with caution as replication might be required before fully-fledged conclusions are made on a population.

1.7. Significance of the study

This study will be significant in three ways. Firstly, it will help public enterprises in Ethiopia and in other countries with same settings to evaluate the success of reengineering internal audit departments. Secondly, the study will contribute to the existing literature regarding the effect of internal audit reengineering to internal audit effectiveness. Further, the study identified future research areas that will have advantage for future researchers to conduct further study in this area.

1.8. Organization of the paper

This research report is organized in five chapters. The first chapter states the general introduction of the study. The second chapter synthesizes existing literature and identifies the gap in the existing literature. The third chapter outlines the research methodology. The fourth chapter presents discussion of case study evidence and its results. The last chapter draws conclusions and implications and wind up the report by highlighting future research areas.

Chapter 2: Literature review

2.1. Introduction

This chapter presents review of literature related to internal audit effectiveness and internal audit reengineering. It consists of general overview about internal auditing, internal audit effectiveness and internal audit reengineering. In general, this chapter synthesized existing empirical research in the area of internal audit effectiveness and internal reengineering and ends by summarizing the review and identifying the gap in the existing literature.

2.2. Internal auditing

Internal audit has developed gradually on the bases of social and economic development and the inherent needs of enterprise management (Xingdong, 1997). Similarly, Dittenhofer, (2001) noted that internal auditing is developing as a management process in both private and public sectors. The function aims at providing an independent opinion about whether the objectives of an organization are achieved, and if not to define the circumstance that hinder from accomplishing them (Tatiana *et al*, 2010). Thus, internal audit plays significant role to achieve organizational objectives.

The Institute of Internal Auditor (IIA, 1999) defines internal auditing as

Internal auditing is an independent objective assurance and consulting activity designed to add value and improve organization's operations. It helps an organization accomplish its objective by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance process

The definition signifies that internal auditing is shifted from traditional assurance service to consulting and value-adding (Roth, 2000; Bou-Road, 2000; Gupta, 2001; Nagy and Cenker, 2002; Mihret and Yismaw, 2007; Mihret and Woldeyohannis, 2008; Brody and Lowe, 2000). The function is required to provide value-adding service to organizations and help to achieve their organizational and business objectives. To provide the required value-adding service, it is expected to be effective (Mihret and Yismaw; 2008; Mihret et al, 2010). Hence, effective internal audit function provides the expected value-adding service from the function to the parent organization.

2.3. Internal audit Effectiveness

Internal audit is effective if it provides the required service from the function or in other words if it achieves the objectives of the function (Dittenhofer, 2001; Mihret and Yismaw, 2007; Arena and Azzone, 2009). Barrett (1986) noted that effectiveness of internal audit can be described, but it is difficult to quantify and thus, effectiveness is determined by the perception of auditees. For this study, internal audit effectiveness stands for the functions ability to provide the required service. Internal audit function has objectives and to achieve its objectives there are factors that influence the achievement of those objectives.

2.4. Factors influencing internal audit effectiveness

The effectiveness of internal audit function is influenced by organizational setting, management support, internal audit quality, auditee attributes and the interplay among them (Mihret and Yismaw, 2007). Thus, the favorability of the four factors positively influences the effectiveness of the internal audit function. Similarly, Arena and Azzone, (2009) noted that effectiveness of internal audit function is influenced by resources and competencies of an IA team, activities and processes performed and organizational role. Generally, the effectiveness of internal audit function is influenced by human and capital resources available, the scope of internal audit function and the level of interaction with higher management. Different studies have been conducted to determine internal audit effectiveness, the characteristics of internal audit department and the value adding role of internal audit function (see for example Arena and Azzone, 2009; Michael *et al.*, 2007; Arena *et al.*, 2006)

Arena and Azzone (2009) conducted a survey study in 153 Italian companies to understand the organizational drivers of internal audit effectiveness. The result revealed that internal audit effectiveness is influenced by; the characteristics of the IA team, the audit processes and activities, and the organizational links. The effectiveness increases in particular when; the ratio between the number of internal auditors and employees grows, the Chief Audit Executive is affiliated to the Institute of Internal Auditors (IIA), the company adopts control risk self-assessment techniques, and the audit committee is involved in the activities of the internal auditors.

Michael *et al.*, (2007) studied process model of internal auditing. The purpose was to investigate and understand the reasons why internal auditing is often perceived to not add value. It was based on process analysis, identified areas of potential inefficiency and conflict. The literature review identified the standards

and guidance that influence the way internal auditing is managed and its current trends. Questionnaire was sent to auditors and auditees, to gain their views on audit effectiveness and quantify their perception of value. The finding reveals that variations exist in the perceived value of internal auditing, particularly of some key stages in the process. The management of internal auditing is too focused on programme achievement, not the resulting value from improvement action. This study focused on the value adding practice of internal audit. This on the other hand is influenced by the effectiveness of the function.

Arena *et al.*, (2006) assessed internal audit in six Italian companies. The objective was to describe the main characteristics of Internal Audit Departments and investigate the influence of enacted regulations on their development. The research has been carried out through a multiple case study, which compared the Internal Audit Departments of six Italian companies, gathering evidence by interviews with chief internal auditors, by obtaining examples of internal audit reports, policy documents and corporate briefing notes. The findings reveal that the range of situations considered highlighted the diversity in Internal Audit Department characteristics, confirming the relevance of institutional pressures, but also providing evidence of the influence of additional elements in their development

2.4.1. Organizational setting of internal auditing

According to Mihret and Yismaw, (2007) the organizational setting in which internal audit function operates has significant influence on the effectiveness of the function. It includes; Organizational status and internal organization, Organizational policies and procedures, and budgetary status of internal audit office.

The function should be given sufficiently high status in the organizational structure to enable better communication with senior management. In addition,

it requires having favorable internal departmental organization to ensure independence of internal audit from auditees. Independence is seen as an important attribute to the quality of internal audit function (Bethea, 1992; Traver, 1991; Farbo, 1985; Clark *et al.*, 1980). It helps internal auditors to provide the required service objectively.

Furthermore, mandate of the internal audit function needs to be presented in a written charter that is comparable with the charter of the audit committee and consistent with standards of Institutes of Internal auditors (IIA, n.d). In addition, the IIA (n.d) recommendations suggest that the internal audit charter has to be reviewed and updated regularly and needs to include;

- Role and responsibilities of the internal audit function.
- Functional reporting relationship to the audit committee.
- Administrative relationship.
- Access to corporate employees, facilities and records (including those of contractors).
- Any restrictions of the scope or authority of internal audit.
- Requirement that managers cooperate with internal audit and respond to reports.
- Code of ethics.
- Internal audit standards.
- Relationship with external auditors.
- Distribution of audit reports and summaries.

- Follow up of recommendations.
- Specific mention of areas such as fraud technology, safety, environment, and the likes.
- The right of Chief Audit Executive to attend committee meetings.

The charter describes authority, responsibility, method of operation position in the organization and reporting structure (Dittenhofer, 2001). Thus, internal audit function to be effective, it needs to have clear policies and procedures against which the function's practices are gauged (see for example Mihret and Yismaw, 2007).

Furthermore, the internal audit function needs to have adequate resources to achieve its objectives (Arena and Azzone, 2009; Mihret and Yismaw, 2007; Dittenhofer, 2001). Assessing the sufficiency of resources should generally include comparisons with similar organizations, the business risks, and the degree of change with in the organization. According to IIA, (n.d) insufficiency of internal audit resources may be an indication for;

- Management does not respect the role and contribution of internal audit.
- Management include internal audit in general under-funding to meet short term forecasts.
- Management diverts internal audit resources to meet short-term goals, operational crisis and special projects.

Lack of authority for budget administration adversely influences performance of the internal audit function (Mihret and Yismaw, 2007). Hence the function needs to administer its own budget.

Generally, if an internal audit function has favorable organizational profile, internal organization, clear policy and procedure and sufficient budget, the effectiveness of the function will be enhanced.

Carcello *et al.*, (2005) examined changes in internal auditing during the time of the Enron and WorldCom disasters and the related legislative and media focus on internal control and corporate governance. The finding reveals that internal audit budgets, staffing levels, meetings with the audit committee, and meeting length increased markedly during this time. Thus, as the business environments change, the internal audit function also changes to cope with the change in organizational risks. The findings further reveal that, internal audit required to have adequate resources and effective communication with the management body to provide effective service.

Christopher *et al.*, (2009) studied independence of the internal audit function in Australia. The objective of the study was to critically analyze the independence of the internal audit function through its relationship with management and the audit committee. It was based on a critical comparison of responses from questionnaires sent out to chief audit executives versus existing literature and best practice guidelines. The findings reveal that; with respect to the internal audit function's relationship with management, threats identified include: using the internal audit function as a stepping stone to other positions; having the chief executive officer (CEO) or chief finance officer (CFO) approve the internal audit function's budget and provide input for the internal audit plan; and considering the internal auditor to be a "partner", especially when combined with other indirect threats. With respect to the relationship with the audit committee, significant threats identified include CAEs not reporting functionally to the audit committee; the audit committee not having sole responsibility for appointing,

dismissing and evaluating the CAE; and not having all audit committee members or at least one member qualified in accounting.

2.4.2. Quality of internal audit department

The quality of internal audit is demonstrated by the office's capability to provide useful audit findings and recommendations (Mihret and Yismaw, 2007). Those authors further noted that the quality of the internal audit function is determined by staff expertise, scope of service, effective audit planning, fieldwork and controlling, and effective communication. Hence, to say internal audit possess the expected quality, it needs to have sufficient staff experts, reasonable scope of service, effective audit planning, effective field work and controlling and effective communication with the auditee and the higher management.

2.4.2.1. Staff Expertise

An internal auditor must possess the ability to make well-justified judgments in conducting an audit (Greenawalt, 1997). Internal audit function needs to have competent staffs at the required level of experience and educational qualifications to understand the risks and business they audit. The staff is required to be multidisciplinary team of experienced business experts, qualified to perform world-class internal consulting work (Roth, 2000). Furthermore Roth, (2000) noted that whatever their background is, internal auditors need to learn and develop rapidly since the environment is ever-changing. Similarly, IIA (, n.d) noted that staff requires continued training in their disciplines and must stay abreast of technological advances and changes in the organizations business.

IIA, (n.d) recommended that the qualifications of internal auditors are required to be established and included in job description. Then internal audit recruits only people with appropriate qualifications and/or experience in auditing, accounting, information technology, organizational analysis, industry knowledge and the likes. In addition, internal audit promotes professional

development and formal certification of audit staff and the budget includes adequate funds for professional development and planned use of external experts when the staff lacks specialized experts. Furthermore, internal audit needs to have adequate budget to attract and retain skilled people. The audit committee should be aware of if there is excessive turnover that could indicate poor management or lack of respect for the function in the organization.

Fadzil *et al.*, (2005) conducted a study to determine whether the internal audit department of the companies listed in the Bursa Malaysia complies with the Standards for the Professional Practice of Internal Auditors IIA (2000); and, to determine whether compliance to internal audit standards will affect the quality of the internal control system of the company. The study used both descriptive and inferential analyses. The findings reveal that management of internal audit department, professional proficiency, objectivity and review significantly influence the monitoring aspect of the internal control system. Thus, it is arguable that proficiency and objectivity of the internal audit function has significant influence on the function's effectiveness.

Generally, the staff needs to be composed of at the required level of skill and experience. In addition, auditors are expected to be ready for further development and qualification, and then they can develop knowledge to easily understand the auditing and the business environment. Thus, the quality of internal audit function positively contributes to the effectiveness of the function.

2.4.2.2. Scope of internal audit

Internal auditing has undergone dramatic changes that have expanded its scope in a way that allows it to make greater contributions to the organization it serves. It is also performed in diverse legal and cultural environments; within organizations that vary in purpose, size, and structure; and also by persons within or outside the organization (Fadzil *et al.*, 2005). Similarly, Nagy and

Cenker, (2002) noted that the orientation of internal audit has shifted towards consulting and value added services and away from traditional assurance service.

Basically, there are three types of audits performed by internal auditors. These include financial audit, operational audit, and compliance audit. Financial audit aims to determine whether financial statements are prepared based of generally accepted accounting principles or not. On the other hand, operational audit is a significant area in which internal audit frequently provides a unique service (Greenawalt, 1995). This type of audit helps to assess the efficiency and effectiveness of the organizational unit and recommend alternative course of actions to improve the function. Similarly ministry of finance and economic development (MoFED, 2004) noted that performance audit is a forward looking evaluation of operations to identify areas in which economy, efficiency and effectiveness (the three E's) may be improved or to evaluate compliance with and the adequacy of operational policies, plans and procedures. Hence, performance audit or can be termed as operational audit, management audit or three E audit is to evaluate the overall operation of the organization and to identify areas of improvement. Compliance audit on the other hand is an audit aimed to determine whether the rules and procedures are followed by the employees while running the operation.

2.4.2.3. Audit planning

Internal audit consults management to mitigate risk, which will prevent organizations from achieving their purpose. To mitigate those risks, the function should adequately plan activities at organization level and in each specific engagement (Prawitt, 2003). Planning is a vital audit activity and it includes preparing strategic plan, and audit programs for individual audit assignments (Mihret and Yismaw, 2007). In order to improve the likelihood of a successful

engagement, internal auditors can obtain management's cooperation early in the planning process by emphasizing that their purpose is to assist management in adding value to their divisions or departments and by asking managers to sign off on planning documents prior to beginning the engagement or service.

Annual internal audit plan is the key to match the work of internal audit to the needs and expectations of the audit committee, external auditors and senior management (IIA, n.d). It allows the audit committee to confirm that board priorities are addressed and provides a basis for evaluating Internal Audit Performance. Thus, effective audit planning helps the internal audit function to effectively discharge its objective in risk intelligent way.

2.4.2.4. Field work and controlling

Fieldwork involves performing the tasks identified in the audit programs to collect evidence for assessment of the auditee's current operations considering the identified audit criteria (Mihret and Yismaw, 2007). At the time of field work, internal auditors are required to be careful while collecting evidence and assessing the current operation of auditees. Thus, effective field work and controlling positively contribute to the effectiveness of the internal audit function.

2.4.2.5. Communication

According to IIA, (n.d) the internal audit function is expected to report administratively to the Chief Executive Officer or other senior executive and has a functional reporting relationship to the audit committee to ensure objectivity in planning and execution of internal audit work. This will help the function to communicate results independently.

Audit reports, as historical records of audit work and audit findings are expected to be written, include the scope and objectives of the audit, the findings and

recommendations for improving control. In addition they need to be action oriented and include comments and proposals for corrective action for the management of the audited business unit. Furthermore, the good risk and control practices as well as weaknesses observed and recommendations are expected to be rated as high, medium and low in order to assist management in assigning priorities for action to the issues raised. Then, the chief audit executive provides summaries of reports to senior management and audit committee.

The CEO and senior management team is expected to include the Chief Audit Executive in senior management meetings such as strategic planning sessions and operational committee where appropriate. This shows support by helping the Chief Audit Executive understand what is going on at senior level and exposes him or her to other executives in collegial environment. Thus, effective communication of the audit reports to the auditee and senior management has significant influence to the effectiveness of the function.

2.4.3. Management support

The effectiveness of internal audit function is highly influenced by the support of senior management (Sarens and De Beelde, 2006; Mihret and Yismaw, 2007). Internal audit reports are only of value when managers address the problems and deficiencies identified by the audits or make informed decisions to accept the risks (IIA, n.d)

According to (IIA, n.d) The critical part of audit committee's role is to assess the relationship of the Chief Audit Executive and the management team whose support can greatly influence the effectiveness of the internal audit function and its value to the audit committee. Further more, there should be a good working relationships and mutual respect for the role of internal audit that includes;

- Response to audit findings by addressing and requiring timely responses on audit reports including those that are justifiably critical of management controls.
- Inclusion of Chief Audit Executive, where appropriate in the communications and forums of the senior management team to keep the chief audit executive informed of strategic and business plans.

Hence, internal audit to provide the required service from the function, there should be sufficient management support. Without the support of the higher management body, internal audit will not be effectively discharge its objective (Mihret and Yismaw, 2007).

The increasing complexity of business transactions, a more dynamic regulatory environment and significant advances in information technology have resulted in opportunities and challenges for internal auditors (Cooper *et al.*, 2006; Hass *et al.*, 2006; Allegrini *et al.*, 2006). Those studies suggested that, more work needs to be done to prepare internal auditors for the expanded set of skills and knowledge required to perform audits of the future. As organizations developed the required service from internal audit function also increase that in turn needs the internal audit function to model accordingly.

In the value added internal auditing function, its audit approach, methodology and products and services are closely aligned to the organizations strategic and business objectives (Gupta, 2001). Thus, internal audit to provide value adding service should be designed in line with organizational objectives. When organizations change their way of doing their business, the risk involved and the related control activities will be changed. Internal audit plays a key role in assessing and reporting on an organizations risk management, internal controls and management information systems (IIA, n.d). This further means that the

function needs to change accordingly to provide the required value-adding service.

2.4.4. Auditee attributes

To conduct effective audit work, auditors are required to have full and unrestricted access to all activities, records and properties, and be provided with cooperation from the auditee (Mihret and Yismaw, 2007). Without the auditees' acceptance of the internal audit function, its objective will not be achieved. It contains auditees' proficiency in maintaining records, attitude towards the internal audit function and their cooperation with internal auditors. If auditees have good record keeping system and at the same time consider internal audit as a value adding service, they can cooperate with them and contribute to the effectiveness of the internal audit function.

Yee et al, (2008) studied the role and effectiveness of internal audit function in Singapore. The purpose of this paper was to examine the perceptions that Singaporean senior, middle and junior managers, as important customers of internal audit services, presently have about the role and effectiveness of IA in Singapore. Results suggest that both Singaporean senior and junior managers appreciate internal auditors that serve in the business partner role. By contrast, mid-level managers often regard internal auditing activities negatively and in terms of "watchdog" activities. Although this study investigated the perceptions of managers about the role and effectiveness of internal audit function, it is one component of internal audit effectiveness.

2.5. Internal audit in Ethiopia

The development of modern auditing in Ethiopia is marked after the issuance of Ministry of Finance directives in 1942, which focused on public sector fund utilization (Kinfu, 1990). Today's internal audit in Ethiopia is mainly performed

based of the internal audit standards developed by Ministry of Finance and Economic Development (MoFED). These standards are similar with the standards developed by Institute of Internal Auditors (IIA) (Mihret and Yismaw, 2007).

According to MoFED, (2004) internal auditors are responsible for;

an independent, objective assurance and consulting activity designed to add value and improve the public body's operations. It helps the public body accomplish objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance process.

The responsibilities stated are similar with the internal audit definition of institute of internal auditors. The responsibilities include providing value-adding service to the organization thereby help to achieve organizational objectives. Different studies have been conducted in the internal audit function in Ethiopia. These includes (Mihret and Yismaw, 2007; Zeleke, 2007; Mihret and Woldeyohannis, 2008; Mihret 2010; Mihret *et al.*, 2010).

Mihret and Yismaw, (2007) conduct a case study research. The purpose of the study was to identify factors impacting the effectiveness of internal audit services in Ethiopian public enterprise by employing a case study design. The findings suggest that management support and internal audit quality have significance influence on the effectiveness of the function. The researchers conclude that, there is a limited effectiveness in the case organization. However, this study was conducted before the implementation of internal audit reengineering in Ethiopian public enterprises. The reengineering has been implemented in order to improve the performance of the function.

Zeleke, (2007) conduct a study entitled "effective Implementation of Internal Audit Function to Promote Good Governance in the Public Sector". The primary

objective of this study was to evaluate to what extent the current and planned internal audit function is positioned to contribute towards one of the major objective of the Civil Service Reform Program (CSRP) of ascertaining good organizational governance system in public sector for public accountability and service delivery improvement Findings reveal that, the existing IAF in the public sector has less satisfactory involvement to assess the effectiveness of governance structure due to lack of resources, poor leadership for IAF, absence of appropriate frame work to measure IAF performance and lack of competent personnel. However, the study evaluated the internal audit function with respect to the corporate governance perspective and did not assess the role of the reengineering to the internal audit function effectiveness.

In addition Mihret and Woldeyohannis, (2008) conducted a case study research in an Ethiopian public enterprise. The purpose of the study was to draw inferences on how the attributes of a value adding internal audit department would vary among organizations. The finding reveals that the traditional/compliance audit is dominant in the organization under study contrast to value-added auditing. The study concluded that goals and strategies pursued and the level of risk faced by organizations to which internal audit provides service, appears to shape the attributes a value adding internal audit department. The study also demonstrates that the quality of strategic planning for and marketing of internal audit would influence the extent to which an appropriate value-added profile is attained in a particular context. This study assessed the value-adding role of internal audit function in an Ethiopian public enterprise. The value adding role of internal audit function is determined by the perception of auditees and internal auditors. Internal audit effectiveness on the other hand, stands for the functions capability to achieve the functions objectives.

Mihret, (2010) explored the internal audit practices in selected Ethiopian organizations. The objective of the study was to identify factors associated with attributes of internal audit departments. It used analytical survey responses of 188 internal audit directors and staff from Ethiopian government ministers, state owned enterprises and private companies. The result shows that internal audit proficiency, scope of internal audit work and quality of internal audit planning and execution are higher in organizations where organizational policy authorizing internal audit is clearly defined, organizational risk profile exposure is high and internal audit's linkage with external audit is strong. Although this study identifies factors associated with attributes of internal audit function in Ethiopian organizations, no attempt has been done to assess the effectiveness of the internal audit function.

2.6. Internal audit reengineering

The ever-changing business environment has been compelling organizations to check their way of doing business to function in line with the change. One of the mechanisms to respond the changing environment is reengineered structure and process (Gupta, 2001). Organizations has been modifying and refining their way of achieving their purpose by rearranging their structure of roles and relationships and their managerial process (Miles et al., 1978). In the changing business environment value adding internal audit plays a great role by assisting its customers to achieve their objectives (Gupta, 2001) which in turn determined by the effectiveness of the function (Mihret and Woldeyohannis, 2008; Mihret et al., 2010).

Internal audit reengineering can be used in the same sense as business process reengineering which considers internal audit function as a business process; it aims to create sufficient discontinuity in its history and experience to enable it to think outside the box and start perceiving itself in a much broader role (Gupta,

2001). Thus, internal audit reengineering changes the existing activity and leads to the new approach of doing business.

Gupta (2001) define internal audit reengineering as

Optimal restructuring of the internal audit function to re-relevance its core and support business process to help organizations achieve their business objectives in risk intelligent way.

The definition highlighted that the intent of internal audit reengineering is to model the function in the way favorable to provide the expected service from the function there by to help to achieve organizational objectives.

Gupta (2001) in the study of internal audit reengineering in Fortune 500 companies noted that effective internal audit reengineering understand the level of complexity in the organization, focus on its customer, develop mission and vision of the internal audit function, take a process view of the internal audit function, develop internal audit process model, develop internal audit's strategic plan, make continuous improvement a habit, use information technology as enabler and learn how to market the internal audit function.

Thus, the intention of internal audit reengineering is arguably to make the function value-adding to the organization. This is evidenced from (Roth, 2000) which identifies organizational structure, staffing and work environment, risk assessment of the internal audit universe, audit service, other assurance and consulting service, audit department performance measures, marketing and reinventing internal auditing as the profile of value adding internal audit function. These factors are much similar with elements of effective internal audit reengineering (Gupta, 2001). Hence, effectively

implemented internal audit reengineering has a significance advantage to the value adding role of the function which is influenced by the effectiveness of the function (Mihret and Woldeyohannis, 2008; Mihret, 2010).

Dittenhofer (2001) noted that the required service from internal audit function has been increasing and the function needs improvement in three broad areas including; Philosophical, methodological, an operational.

Reengineering the function of internal audit may not be an easy task to cope with the changing environment. Wascott (1995) as sited in Gupta (2001) notes:

Internal audit reengineering is neither easy, free, a quick fix, nor initially successful. It is realistically difficult, will come at cost, and must be done with a long-perspective. Short term results are fleeting and can discourage even the best of the intentions. However, internal audit reengineering can succeed and produces superior results. The radical approach may not be entirely necessary, but its elements are worth thinking about...Reengineering your own thinking is the first essential element in leading change. Reengineering how your staff thinking about their profession and job is the second element in meeting the competitive challenge...With all these in place, internal audit can secure for itself a vital place in the brave new world of globalization, the information superhighway, business consolidations, deregulation, and competition for resources.

Thus, reengineering of the internal audit function is not a quick fix to make the function effective rather it requires a great effort to achieve effectiveness.

2.7. Drivers of Internal audit reengineering

There are factors that lead to the reengineering of internal audit function. Gupta, (2001) identified that change in business risk profile and the related control structure of business organization, treat of outsourcing and to achieve efficiency and effectiveness as causes of internal audit reengineering.

Business process reengineering and organizational transformation have thrust risk and control issues to the forefront as never before. Hence, the internal audit function is required to cope with the change and engages in the reengineering of its function. In addition, the treat of outsourcing from alternative internal audit function may lead to the reengineering of the function to provide better service. Furthermore, the need to provide the required value adding service in cost efficient way may lead to the reengineering of internal audit function.

2.8. Effect of reengineering on internal audit practice

Reengineering results significant change from fragmented, highly functional and hierarchical structure to process based and flat organizational structure (Debela and Hagos, 2011). Gibbs and Keating (1995) noted that the control environments have been significantly changed as a result of downsizing, flattening and decentralization trends in the business. They further noted that many of the controls on which auditors have traditionally relied, such as separation of duties and authorizations, actually tend to work at cross-purposes to the goals of the reengineered virtual corporation. From these we can understand that reengineering creates difficulty in the function of internal audit function.

2.9. Internal audit reengineering and its effectiveness

The effectiveness of the internal audit function is influenced by organizational setting, management support, auditee attribute and internal audit quality

(Mihret and Yismaw, 2007). Internal audit reengineering on the other hand influence the organizational setting in which internal audit function operate, the quality of resources required and activities and the general attitude of internal auditors (Dittenhofer, 2001; Gupta, 2001).

Reengineering of internal audit has impact on organizational structure, focus of the function and the overall set of internal audit function (Gupta, 2001; Dittenhofer, 2001) which will have influence on internal audit effectiveness (Mihret and Yismaw, 2008; Arena and Azzone, 2009). Thus, internal audit reengineering arguably has influence on the effectiveness of the internal audit function.

2.10. Summary and gap in the existing literature

The development of internal auditing is closely linked with the complexity in the economic environment (Xingdong, 1997). In the ever-changing business environment, internal auditing plays a vital role by providing value adding service to the organization. This value adding service on the other hand is influenced by the effectiveness of the function (Mihret et al, 2010; Mihret and Woldeyohannis, 2008). Besides, the effectiveness is influenced by the organizational setting, internal audit quality, management support and auditee attributes (Mihret and Yismaw, 2007). To cope with the changing business environment and to provide value adding service, internal audit reengineering a practice of most organizations (Gupta, 2001).

The changes in the business environment, competition from alternative service providers and the need to provide efficient and effective service are the factors that lead to the reengineering of the internal audit function (Gupta, 2001). This activity (the reengineering) influence the operating environment of the function, resources required, the qualities and the relationship between internal audit

function and the parent organization (Gupta, 2001; Dittenhofer, 2001). Thus, factors influenced by internal audit reengineering also seems to have influence on internal audit effectiveness which is influenced by organizational setting, internal audit quality, management support and auditee attributes.

Although there are studies in this issue, they focus on the two areas separately. The first set of studies focus on internal audit reengineering separately (Gupta, 2001; Dittenhofer; 2001). The other set of studies focused on measuring the effectiveness of internal audit function (Dittenhofer; 2001; Mihret and Yismaw, 2007; Arena and Azzone, 2009; Yee *et al.*, 2007). Even though internal audit reengineering seems to exert influence on the effectiveness of the function, there is a dearth of empirical study that examines how the link is created.

Chapter 3: Methodology

3.1. Introduction

This chapter consists of four sections. The first section presents the research design and the case selection for this study. The second section outlines the data collection methods. The third section presents data analysis and interpretation methods and the final section outlines the internal and external validity of the study.

3.2. Research Design

This study employed a case study design. This design has a case which is the object of the study and characterized by a complex functioning unit, investigated in its natural setting and it is contemporary (Johansson, 2003). This design helps the researcher to use multiple data source and cross validate the result through triangulation (Yin, 1994; Tilles, 1997; Johansson, 2003; Benbasat et al., 1987; Soy, 1997). Thus, the case study design enables using flexible research approach by using multiple sources of data involving document review, interview, and questionnaires and to use both qualitative and quantitative analysis techniques. Due to this advantage of the case study design, prior internal auditing research has employed this design and advocated its potential for internal audit research (Arena et al, 2006 ; Mihret and Yismaw, 2007; Mihret and Woldeyohannis, 2008).

3.2.1. Case selection

The case study design follows replication logic rather than sampling logic that aims to generalize sample results to a population (Yin, 1994; Tellies, 1997). In other words, the assumption behind a case study research is that the conclusions will be validated by replicating the study on other similar settings. Thus, a case that serves as a unit of analysis is not treated like a respondent in survey design and a multiple subject in experimental design that uses statistical techniques. Thus, the number of cases being studied in case study research will not have much impact on the study since it is enough to achieve the research objective (Yin, 1994; Tilles, 1997). The case can be selected based on information richness, critical, revolutionary, unique or extreme nature of the case (Jonhsson, 2003). Hence, this study used the internal audit function of Ethiopian Electric power Corporation (EEPCo) as a study unit.

3.3. Data and collection methods

This study used both primary and secondary data. Primary sources of data include interview and questionnaire, whereas secondary sources data was generated through a review of relevant documents.

3.3.1. Document review

The review of documents helps the researcher to understand the key facts of the organization. The review includes available documents before and after the implementation of internal audit reengineering. It helps to understand the way that internal audit function before and after the reengineering. Those documents reviewed are organizational policy and procedural manuals, internal audit plan, internal audit service business process reengineering study documents.

3.3.2. Interview

Semi structured interview with the internal audit director (chief auditor) of the Ethiopian Electric Power Corporation (EEPCo) was conducted. It allows the investigator some degree of flexibility at the time of interviewing for the pursuit of unexpected line of enquiry that developed as the study progresses. It is used to understand the way that internal audit functions before and after the implementation of internal audit reengineering. Questions in the interview checklist were constructed based on the review of literature.

3.3.3. Questionnaire

Self-administered questionnaire were distributed to all internal auditors at head office in the case organization. The response helps to understand the opinion of internal auditors about the reengineering and the extent to which major dimensions of effective internal audit function have changed over the time period under study. The response was classified into before and after the implementation of internal audit reengineering. The classification help respondents to respond only the period that is appropriate with their employment period.

The data collection instrument developed by Mihret (2010) was used with permission of the author. It requires respondents their level of agreement on the function of internal audit in the two periods using Likert scale of measurement. It includes Strongly Agree (SA or 5), Agree (A or 4), Neutral (N or 3), Disagree (DA or 2) and Strongly Disagree (SD or 1) to gain understanding of the respondents attitude towards the way of internal audit function in the two periods. Since it is difficult to use one scale for all types of questions because of difference in their nature, there was another scale which ranges from Always (or 5), Often (or 4), Sometimes (or 3), Seldom (or 2) to Never (or 1).

3.4. Data analysis and interpretation

The analysis was conducted by separating the period under study into pre-implementation and post-implementation periods. The classification helps the researcher to conduct a clear analysis about the factors of effective internal audit function in the two different periods and to identify the change associated with the reengineering.

Data collected using questionnaire was analyzed through descriptive statistics using Statistical Packages for Social Scientists (SPSS). It helps to describe what the data look like, where their center is, how broadly they are spread in terms of one aspect to the other aspect of the same data (Leedy, 1983). Thus, it helps to describe the data clearly before and after the implementation of internal audit reengineering. Data collected from document review and interview was interpreted qualitatively.

The generalization in case study research is analytical instead of statistical and it is based on reasoning (Yin, 1994; Tellis'1997; Johansson, 2003). Thus, this study is based on inductive reasoning and generalizations were drawn based on Mihret and Yismaw's (2007) framework.

3.5. Validity of the study

This section contains two sections. The first section presents the internal validity of the study and the second section presents the external validity of the study.

3.5.1. Internal validity

It refers to the extent to which the researcher can demonstrate he has reliable and adequate evidence for the statement (Grix, 2004). This study used multiple sources of data including document review, interview and questionnaire that helps to cross validate the data. In addition, the study used instruments developed by Mihret (2010). Since questions are tested up on their clarity and

understandability and significant conclusions are drawn using those questions, it adds to the internal validity of the data collected. Furthermore, case study protocol is used. The protocol which contains instruments, procedures and general rules to be followed to use the instrument minimize errors and enhance the reliability of the case study research (Yin, 1994).

3.5.2. External validity

Validity stands for the extent to which the conclusion is generalized to the population (Yin, 1994). Although this study followed a case study design, there are conditions that enhance the external validity of the result. Firstly, all public enterprises in Ethiopia operate under the same jurisdiction and their operations are defined by Public enterprise proclamation No.25/1992 (The Government of Ethiopia, 1992). Furthermore, both public enterprises use the same legal documents that guide internal audit function. These includes the Ministry of Finance and Economic Development's (MoFED) internal audit manual (MoFED 2004), the Federal Auditor General Proclamation (Government of Ethiopia 1997), the Federal Government of Ethiopia Financial Administration Regulation (Federal Government of Ethiopia 1996), and Privatization and Public Enterprises Supervisory Agency's (PPESA) Regulations (PPESA, 2004, 2005).

Thus, the finding is expected to be applicable to other public enterprises in Ethiopia and other countries having the same setting with caution.

Chapter 4: Discussions of case study evidence and its results

4.1. Introduction

This chapter consists of four sections. The first section highlights general background of Ethiopian Electric Power Corporation (EEPCo) and its internal audit function. The second section presents discussions of data from questionnaire results. The third section presents discussions of data from interview and review of documents. The final section presents the results of the discussions.

4.2. Background of Ethiopian Electric Power Corporation (EEPCo) and its IAF

Ethiopian Electric Power Corporation (EEPCo) is a public enterprise engaged in the business of producing, transmitting, distributing and selling electrical energy in accordance with economic and social development policies and priorities of the government and to carry on any other related activities that would enable it achieve its purpose. It was established in 1956 named Ethiopian Electric Light and Power Authority (EELPA). However, it was formally established as a public enterprise and got its present name (EEPCo) in 1997 by regulation No. 18/1997, and conferred with the powers and duties of the previous Ethiopian Electric Light and Power Authority (EELPA).

At the time of establishment in 1997, the authorized capital of the corporation was 6.1 billion birr of which 2.67 billion birr was paid up in cash and kind. It was determined by the establishment regulation that the corporation shall have its head office in Addis Ababa and may have branch offices elsewhere, as may be necessary.

History of the corporation's internal audit function is as old as the establishment of the corporation in 1956. It passed through different names including audit service, audit and quality assurance, audit and inspection division and got today's name corporate internal audit process after the implementation of internal audit reengineering. Despite its long existence the function did not come out as a strong internal audit function (EEPCo, 2007). Decision making is decentralized to regions, projects and low level works. To cope with the change in business activities in the organization and to provide quality and timely service, the function implemented business process reengineering in the year 2009.

The next section presents discusses of internal audit function before and after the implementation of internal audit reengineering. First, data from questionnaire were analyzed followed by analysis of data from interview and document reviews together to corroborate each other.

4.3. Discussions of data from questionnaire results

Below is analysis of data from questionnaire result before and after the implementation of internal audit reengineering. A total of 42 questions were distributed to all internal auditors at head office. Those respondents that employed before the reengineering responded each question in both before and after the reengineering and respondents employed after the reengineering responded only after the reengineering.

4.3.1. Internal audit function before the reengineering

In this section, the questionnaire results of internal audit function before the implementation of internal audit reengineering were analyzed.

4.3.1.1. Organizational setting of the function before the reengineering

Table 1- Descriptive Statistics of organizational setting before the reengineering

Question reference	Minimum	Maximum	Mean	SD
Policies and procedures				
Q1	1.00	4.00	3.0000	1.41421
Q2	2.00	5.00	3.5000	1.73205
Q3	2.00	4.00	3.0000	1.15470
Q4	2.00	4.00	2.5000	1.00000
Internal organization				
Q5	2.00	5.00	3.0000	1.41421
Q6	1.00	4.00	3.0000	1.41421
Q7	4.00	4.00	4.0000	.00000
Q8	1.00	4.00	3.2500	1.50000
Budgetary status				
Q9	4.00	5.00	4.2500	.50000

Notes: (1) Q1, Q2, . . . - question number in the questionnaire (Part II); (2) 5 - strongly agree; 4-agree; 3 - neutral; 2 - disagree; and 1 - strongly disagree

Source: Questionnaire results

continued

Four questions (Q1-Q4) were distributed to internal auditors to assess the existence of clear and adequate organizational policies and procedures. Only Q2 had a mean response greater than 3.00. This implies that internal audit has policies to higher internal audit staff. On the other hand, Q4 has a mean response of less than 3.00-which shows the disagreement regarding the existence of adequate internal audit manual to guide their activity. Both questions have a standard deviation of greater than 1.00. This indicates that the respondents' perceptions are far away from one another.

Q5-Q8 were distributed to internal auditors to assess the internal organization and independence of the internal audit function. The mean responses of Q7 and Q8 were above 3.00 which indicate the agreement on this statement. Thus, in the view of respondents, internal auditors were free from interventions and free to include any audit findings in their audit report. The standard deviation of Q8 is greater than 1.00-suggesting that the respondents' perceptions were far from one another.

Q9 assess the budgetary status of the internal audit function. The mean response was above 3.00 and the standard deviation was above 1.00. It indicates that the respondents' perceptions were close to one another. This shows that in the view of respondents the department obtains enough budget to carry out its duties.

4.3.1.2. Quality of internal audit before the reengineering

The quality of internal audit function is determined by extensive staff expertise, reasonableness of the scope of the service, effective planning, execution and communication of internal audits findings and recommendations.

Table 2- Descriptive Statistics of internal audit quality before the reengineering

Question reference	Minimum	Maximum	Mean	SD
Staff Expertise				.
Q10	2.00	4.00	2.7500	.95743
Q11	2.00	4.00	3.5000	1.00000
Q12	1.00	3.00	1.7500	.95743
Scope of internal audit work				
Q13	4.00	5.00	4.2500	.50000
Q14	3.00	5.00	4.0000	.81650
Q15	3.00	4.00	3.5000	.57735
Q16	3.00	5.00	4.0000	.81650
Q17	4.00	5.00	4.5000	.57735
Q18	4.00	5.00	4.5000	.57735
Q19	2.00	4.00	3.0000	.81650
Q20	3.00	5.00	4.0000	.81650
Q21	3.00	5.00	4.0000	.81650
Q22	2.00	5.00	3.7500	1.25831
Q23	3.00	4.00	3.5000	.57735
Q24	3.00	4.00	3.5000	.57735
Q25	4.00	5.00	4.2500	.50000
Q26	3.00	5.00	4.2500	.95743

Q27	3.00	5.00	3.5000	1.00000
Audit Planning				
Q28	4.00	5.00	4.7500	.50000
Q29	2.00	5.00	3.2500	1.25831
Q30	2.00	4.00	3.2500	.95743
Q31	3.00	4.00	3.3333	.57735
Field work and controlling				
Q32	3.00	4.00	3.2500	.50000
Q33	1.00	4.00	2.0000	1.41421
Q34	4.00	5.00	4.7500	.50000
Communication				
Q35	1.00	5.00	3.7500	1.89297
Q36	3.00	5.00	3.7500	.95743
Q37	4.00	5.00	4.7500	.50000

Notes: (1) Q1, Q2, . . . – question number in the questionnaire (as shown in part II); (2) 5 – strongly agree; 4 -agree; 3 – neutral; 2 – disagree; and 1 – strongly disagree

Source: Questionnaire results

Continued

4.3.1.2.1. Staff expertise

Q10 up to Q12 were distributed to internal auditors to assess the staff expertise in the function. Two of the three questions Q10 and Q12 had mean responses of less than 3.00 and the standard deviation of less than 1.00. This indicates that in the view of respondents, the internal audit function exhibited low staff expertise. On the other hand, Q11 had a mean response greater than 3.00 which suggests the existence of short term training for internal auditors.

4.3.1.2.2. Scope of service

The scope of internal audit service was assessed in questions Q13 up to Q27. From the total of 15 questions in the questionnaire 13 questions had mean responses of greater than 3.00. This implies that in the view of respondents, internal audit function often perform those activities. Those questions were focused on financial performance and compliance audit activities. Detailed interview was conducted with the chief auditor to assess the scope of the function and this is presented in discussion of interview and questionnaire results.

4.3.1.2.3. Audit planning

The audit planning practice was assessed in questions started from Q28 up to Q31. All questions had mean responses greater than 3.00. This implies that, in the view of respondents, the annual audit plan is prepared and it is based on risk assessment and by considering the resources available. Q29 have the standard deviation greater than 1.00 indicating that there is variability in rating of this question.

4.3.1.2.4. Fieldwork and controlling

From the total of three questions under field work and controlling, two questions had mean responses greater than 3.00. This indicates that those activities were often performed. Q33 have a mean response less than 3.00-suggesting that internal audit supervisor (manager) seldom review internal audit working paper. On the other hand the standard deviation was greater than 1.00-indicating difference in perceptions' of respondents regarding this question.

4.3.1.2.5. Communication

The three questions under communication had mean responses greater than 3.00. This indicated that in the view of respondents, there was good communication of internal audit findings with auditees and management. Q35 had a standard

deviation greater than 1.00 which implies that there is variability in rating of the question.

4.3.1.3. Management support before the reengineering

Table 3 -Descriptive Statistics of management support before the reengineering

Question reference	Minimum	Maximum	Mean	SD
Part III Management support				
Q38	1.00	3.00	1.7500	.95743
Q39	1.00	2.00	1.5000	.57735

Notes: (1) Q1, Q2, . . . - question number in the questionnaire (as shown in part II); (2) 5 - strongly agree; 4-agree; 3 - neutral; 2 - disagree; and 1 - strongly disagree

Source: Questionnaire results

Q13-Q14 were distributed to internal auditors to get information about the management support of the internal audit function. Both questions had mean responses less than 3.00 and standard deviations of less than 1.00. This indicates that the perceptions of respondents are close to one another. The result shows that in the view of respondents, there is low management support..

4.3.1.4. Auditee attributes before the reengineering

Table 4- Descriptive Statistics of Auditee attributes before the reengineering

Question reference	Minimum	Maximum	Mean	SD
Q40	2.00	4.00	3.0000	1.15470
Q41	2.00	4.00	3.5000	1.00000

Q42 2.00 5.00 3.7500 1.25831

Notes: (1) Q1, Q2, . . . – question number in the questionnaire (as shown in part II);
 (2) 5 strongly agree; 4-agree; 3 – neutral; 2 – disagree; and 1 – strongly disagree

Source: Questionnaire results

From three questions under auditee attributes distributed to internal auditors, two questions Q41 and Q42 had mean responses of greater than 3.00-which imply that in the view of respondents there is favorable auditee attributes. The standard deviations of all questions were greater than 1.00-indicated that there is difference in the perceptions’ of respondents.

4.3.2. Internal audit function after the reengineering

This section presents the internal audit function after the implementation of business process reengineering in the internal audit department.

4.3.2.1. Organizational setting of the internal audit function

Table 5- Descriptive Statistics of organizational setting after the reengineering

Question reference	Minimum	Maximum	Mean	SD
Policies and procedures				
Q1:	1.00	5.00	4.0000	1.22474
Q2	1.00	5.00	2.8889	1.36423
Q3	2.00	5.00	3.7778	1.20185
Q4	2.00	5.00	3.7778	.83333
Internal organization				
Q5	1.00	5.00	3.1111	1.45297

Q6	3.00	5.00	4.1111	.60093
Q7	2.00	5.00	4.1111	.92796
Q8	1.00	5.00	3.6667	1.32288
Budgetary status				
Q9	2.00	5.00	3.8889	.92796

Notes: (1) Q1, Q2, . . . - question number in the questionnaire (as shown in part II; (2) 5 strongly agree; 4 -agree; 3 - neutral; 2 - disagree; and 1 - strongly disagree

Source: Questionnaire results

Questions Q1 up to Q4 distributed to internal auditors assess the policies and procedures in the internal audit function. The mean responses of all questions were above 3.00. This indicates that there is a general agreement between respondents about the existence of clear policies and procedures. Q1 up to Q3 have standard deviations more than 1.00. It indicates that there is difference in perceptions between respondents.

Four questions under internal organization had the mean responses of above 3.00. This implies that in the view of respondents, there is good internal organization. On the other hand the standard deviation of Q5 and Q8 were above 1.00-indicating that the respondents' perceptions were far away from one another.

The budgetary status of the function was assessed in Q9. The mean response was above 3.00-suggesting that in the view of respondents, there exists sufficient budget to carry out the intended service.

4.3.2.2. Quality of the internal audit function after the reengineering

4.3.2.2.1. Staff expertise

The questionnaire result shows that only 33% of the respondents have bachelor degree and 67% have college diploma in accounting. From all respondents only one is in the progress of ACCA certification. The experience of staffs show that 67% of the respondents have experience as internal auditor 5 years and less than that and 33% have experience of 6-7 years. Q10-Q12 also assesses the staff expertise of the function. Those questions had mean responses above 3.00. this shows that in the view of respondents there is staff expertise. The standard deviation of Q10 and Q12 is more than 1.00-indicating the variability in perceptions' of respondents.

Table 6-Descriptive Statistics of internal audit quality after the reengineering

Question reference	Minimum	Maximum	Mean	SD
Staff expertise				
Q10	2.00	5.00	3.4444	1.01379
Q11	2.00	5.00	3.7778	.83333
Q12	1.00	5.00	3.2222	1.20185
Scope of internal audit				
Q13	4.00	5.00	4.5556	.52705
Q14	4.00	5.00	4.5000	.53452
Q15	3.00	5.00	4.1111	.60093
Q16	3.00	5.00	4.1111	.78174
Q17	4.00	5.00	4.5556	.52705
Q18	4.00	5.00	4.5556	.52705

Q19	2.00	5.00	3.6667	.86603
Q20	3.00	5.00	4.4444	.72648
Q21	3.00	5.00	4.2222	.66667
Q22	2.00	5.00	4.1111	.92796
Q23	2.00	5.00	3.8889	.92796
Q24	3.00	5.00	4.0000	.70711
Q25	4.00	5.00	4.2222	.44096
Q26	3.00	5.00	4.0000	1.00000
Q27	2.00	5.00	3.6250	1.30247
Audit planning				
Q28	4.00	5.00	4.7778	.44096
Q29	2.00	5.00	3.7778	1.09291
Q30	2.00	5.00	3.6667	.86603
Q31	2.00	5.00	3.1250	.99103
Field work and controlling				
Q32	2.00	5.00	3.6667	1.00000
Q33	2.00	5.00	3.6667	1.00000
Q34	4.00	5.00	4.6667	.50000
Communication				
Q35	1.00	5.00	2.6667	2.00000
Q36	3.00	5.00	4.3333	.70711

4.3.2.2.5. Communication

The communication of internal audit findings and recommendations with auditees and the top management were assessed in questions from Q35 up to Q37. Two of the three questions (Q36 and Q37) have the mean responses greater than 3.00. This indicates that in the view respondents there exists formal follow-up practice for implementation of corrective actions related to audit findings. In addition, it reveals that there is discussion of audit findings with auditee's before reporting. Q35 on the other hand had a mean response of less than 3.00- indicating that there is a disagreement regarding reporting of audit findings to the board of directors. This question had a standard deviation greater than 1.00. Which indicates that the perception of respondents were far from one another.

4.3.2.3. Management support after the reengineering

Table 7- Descriptive Statistics of management support after the reengineering

Question reference	Minimum	Maximum	Mean	SD
Q38	1.00	4.00	2.7778	1.30171
Q39	1.00	4.00	2.2222	.97183

Notes: (1) Q1, Q2, . . . - question number in the questionnaire (as shown in part II);

(2) 5 - strongly agree; 4 -agree; 3 - neutral; 2 - disagree; and 1 - strongly disagree

Source: Questionnaire results

The management's support of internal audit function was assessed in Q38 and Q39. Those questions assess the management's action regarding the internal audit recommendations and the commitment to strengthen the function respectively. Both questions had mean responses less than 3.00. it indicates that in the view of respondents, the management support is low. Q38 have a standard deviation greater than 1.00- which shows the variability in rating of this question.

4.3.2.4. Auditee attributes after the reengineering

Table 8- Descriptive Statistics of auditee attributes after the reengineering

Question reference	Minimum	Maximum	Mean	SD
Q40	1.00	5.00	3.3333	1.32288
Q41	2.00	4.00	3.2222	.83333
Q42	2.00	5.00	3.6667	1.11803

Notes: (1) Q1, Q2, . . . – question number in the questionnaire (as shown in part II); (2) 5 – strongly agree; 4-agree; 3 – neutral; 2 – disagree; and 1 – strongly disagree

Source: Questionnaire results

Auditee attributes were assessed in Q40 and 43. All questions had mean responses of greater than 3.00. This indicates that in the view of respondents, there is good auditee attributes. Q40 and Q43 have a standard deviation greater than 1.00. This implies that the perceptions of respondents are far away from one another.

4.4. Discussion of interview and document review results

This section presents the discussion of data from interview and review of relevant documents. Semi structured interview with the chief auditor of the function was conducted. It includes 4 open ended questions from each of the organizational setting, internal audit quality, management support and auditee attribute before and after the reengineering.

4.4.1. Internal audit function before the reengineering

This section presents the discussion of data from interview and documentary reviews related to internal audit function before the implementation of internal audit reengineering.

4.4.1.1. Organizational setting

The interview and the document review results reveal that the internal audit function reports to the board of directors functionally and to the chief executive officer administratively. These activities enable better communication with senior management and help to ensure independence of internal audit function from the auditees. Thus, this indicates that the function has given higher status in the organizational structure.

The interview and the review of documents reveal that internal audit function has chief auditor and internally the classification was not clear. Furthermore, there was lack of clear policies and procedures against which the functions' activities are gauged. In addition the interview and review of documents reveal that, the budget preparation is from bottom up; the department prepares its own budget and the higher management body allocate reasonable budget to the department. According to the interview result, even though the department is not a budget center, the function had sufficient budget to carry out its duties.

4.4.1.2. Internal audit quality

The interview and the review of documents reveal that internal audit staff is composed of only accounting and finance graduates and there was lack of experienced staff. In addition, there was no further employee development plan for further education and certification. Thus, there was low staff expertise during this period.

Furthermore, the interview result reveals that the scope of the internal audit function was mainly focused on financial audit. On the other hand the planning process was not detailed and lacks linkage with the strategic plan. Moreover, the interview and review of documents revealed that the field work and controlling and the communication practice were at appropriate level.

4.4.1.3. Management support

Before the reengineering, the interview result reveals that the support of management was limited. They were not committed to implement internal audit recommendations as well as to strengthen the department. Hence, the management support is limited during this period.

4.4.1.4. Auditee attribute

The attributes of auditees' include the proficiency, the attitude towards the internal audit and level of cooperation with auditors. The interview result shows that, auditees' consider the internal audit function as a problem finder rather than a value-adding service provider. In addition, the record keeping practice of auditees was poor which impacts the successful completion of the internal audit work. On the other hand the auditees' cooperation with internal auditors was favorable. Generally, the auditee attributes were not appropriate with respect to their perception and proficiency in record keeping.

4.4.2. Internal audit function after the reengineering

This section presents analysis of data from interview and review of relevant documents after the implementation of internal audit reengineering.

4.4.2.1. Organizational setting

The reporting line is to Board of directors functionally and to the chief executive officer administratively. Thus, internal audit function has given high status in the organizational structure.

The internal audit function had organized in three divisions. It includes technical and IT audit, Financial and performance audit and regional audit office. Both are responsible for the Chief Audit Executive (CAE). Below is the organizational structure of the function.

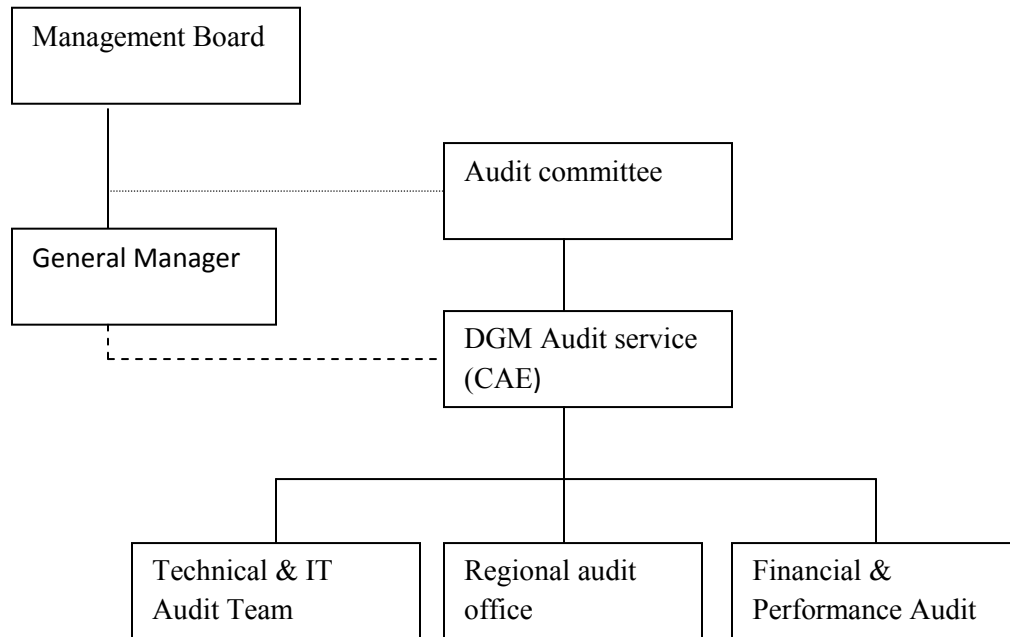


Figure 2: Organizational structure

The interview result also reveals that the internal organization makes the responsibility clear and helps to provide the required service. Similarly, the interview result reveals that the function has clear policies and procedures against which the function activities are judged. Furthermore, the result also indicates that the department prepares its own budget and approved by the higher body after making adjustment. Despite this being the case, the function gets enough budget to discharge its objectives.

4.4.2.2. Internal audit quality

The interview reveals that the staff is composed of management, and all engineering graduates in addition to accounting and finance graduates but it is not the appropriate proportion. In addition, the corporation's higher management allows the tuition fee for further certification of internal auditors. However, this is not a mandatory rule and most of the auditors are not willing to attend certification programs. Yet there is no certified auditor in the organization.

The interview result also reveals that implementation of business process reengineering makes decision making in the organization decentralized. In this environment, internal audit requires to provide assurance and consulting service. Thus, the scope of internal audit function is extended to include IT and technical audit in addition to financial and performance audit. In addition, the field work is performed based on the pre established standard of time, cost and quality. This makes the fieldwork and controlling activity more effective.

4.4.2.3. Management support

The interview result reveals that there is low response to audit findings and recommendations from the management side. On the other hand, management is committed to cover tuition fee for further certification of internal auditors but it is not mandatory rule in written form rather management is agreed orally to do so. This might imply that the management's action to strengthen the department by allowing further education is low. Hence, this does not show the full commitment of the management because it is not documented as a rule.

4.4.2.4. Auditee attribute

The interview result suggests that auditees consider internal audit function as a value adding service provider. In addition, they are willing to cooperate with auditors. Besides, there is still record keeping problem in the auditee's side.

4.5. Results of discussions

The previous discussion illustrates the change occurred in Ethiopian Electric power corporations internal audit function in the two periods. Table 9 summarizes the organizational setting, the quality of internal audit function, management support and auditee attributes in each of the two periods.

Table 9; Summary of internal audit before and after the reengineering

Factors affecting internal audit effectiveness	Before the reengineering	After the reengineering
Organizational setting		
➤ Organizational status	High status	High status
➤ Internal organization	Not clearly defined	Clearly defined
➤ Policies and procedures	Not clear	Clear
➤ Budgetary status of the function	Enough budget	Enough budget
Internal audit quality		
➤ Staff expertise	Low expertise	Low expertise
➤ Scope of service	Limited	Broaden
➤ Audit planning	Detailed	Detailed
➤ Field work and controlling	Good	Good
➤ Communication	Good	Good
Management support		
➤ Response to audit findings	Low	Low
➤ Commitment to strengthen the function	Low	Low
Auditee attribute		
➤ Proficiency of the auditee	Low	Low
➤ Auditee attitude towards internal audit	As a problem seeker	As a Value-adding
➤ Level of cooperation to the auditor	Good	Good

In summary the questionnaire, the interview and document review results reveal some changes in the internal audit function after the reengineering.

RI₁: How does reengineering improve the organizational setting in which internal audit function operates?

From Table 9 it can be seen that the organizational status before and after the reengineering had no change. It is responsible to BoD administratively and to the CEO functionally. Thus, the internal audit function has given high status in the organization in both before and after the implementation of internal audit reengineering. On the other hand, the internal organization became clear after the reengineering. This is evidenced from the questionnaire result and confirmed by the interview result. Although the questionnaire result shows that there was independence in the function before the reengineering, at the same time it reveals that the internal organization of the function was not clear (this is also confirmed by the interview and review of documents).

Furthermore, after the reengineering, policies and procedures of the function had changed in to more sufficient and clear. This is evidenced from both the questionnaire and the interview and review of documents. On the other hand the questionnaire result (also confirmed by the interview result) shows that there was enough budget to carry out the functions responsibility before and after the reengineering. Hence, no change has accounted in relation to the budgetary status before and after the reengineering.

Generally, changes accounted as a result of reengineering in the organizational setting are the internal organization of the function and policies and procedures. Besides, there is no change in organizational profile and the budgetary status of the function.

RI₂: How does internal audit reengineering impact of internal audit quality?

The internal audit quality is measured in staff expertise, scope of the service, effective audit planning, field work and controlling and effective communication.

Before the reengineering, the staff was composed of accounting and finance graduates only. After the reengineering, the staff consists of management and all types of engineering graduates in addition to accounting and finance graduates. Although this is the case, most of the staff is accounting diploma graduates and there is limited involvement in further certification programs. Thus, the staff expertise is limited in both before and after the reengineering. On the other hand, the scope of internal audit function is broadening to include IT and technical audit and reduce its reliance on financial audit which exists before the implementation of internal audit reengineering. Furthermore the interview result reveals that the planning process became based on the strategic plan of the organization after the reengineering. Besides, no significant change is accounted after the reengineering in field work and controlling and communication.

RI₃: To what extent does internal audit reengineering enable internal audit to garner management support?

From Table 9, it can be seen that there was no change in the management's action regarding audit findings and the commitment to strengthen the department in the two periods. The questionnaire result (also confirmed by the interview) reveals that before the reengineering there was low implementation of internal audit findings and the same is true after the reengineering. In addition, the management was not committed to strengthen the internal audit function in

both periods. Hence, the management support is limited before and after the reengineering.

RI₄: To what extent does reengineering influence attributes of the auditee?

Before the reengineering the proficiency of auditee's, was not good in terms of record keeping. Similarly, this is true after the reengineering. The interview result reveals that the record keeping practices of auditees are not sufficient both in before and after the reengineering. Besides, the attitude of auditees has changed and considers internal auditors as a value adding service provider. In addition, auditee's cooperation has improved.

Chapter 5: Conclusions and Implications

5.1. Introduction

This chapter presents conclusions and implications of the results. It has three parts; the first part presents conclusions of the study. The second part presents implications and the last part presents possible future research areas.

5.2. Conclusions

This study examined the contribution of internal audit reengineering to its effectiveness. Four research questions were developed and tested in this study. The first question is to understand how does the reengineering improve the organizational setting in which internal audit function operates. The second question is to understand how internal audit reengineering impact of internal audit quality. The third question is to understand to what extent does internal audit reengineering enable internal audit to garner management support. The last question is to assess to what extent the reengineering influence attributes of the auditee. The study used document analysis (including organizational policies and procedural manuals, internal audit plans, and internal audit BPR study documents), interview with the chief auditor and self administered questionnaire to all internal auditors in the organization. Questionnaire data were analyzed using descriptive statistics and data from interview and document reviews were interpreted qualitatively.

Research questions were tested using an organization that experienced reengineering in its internal audit function. The paper documented the changes in factors of effective internal audit function that occurred in the organization, tracing these changes over the two periods which covers before and after the reengineering. Based on Mihret and Yismaw's, (2007) frame work, the following conclusions were drawn

The reengineering of internal audit function positively influences the organizational setting by improving the internal organization of the function and the policies and procedures against which the functions' activities are gauged. Besides, the reengineering had no change on the organizational status and the budgetary status of the function.

On the other hand, the reengineering has low influence on the staff expertise of the function. Besides it makes the scope of the function more broad and includes additional areas. In addition, it makes the planning process more detailed and clear. Indeed, the reengineering has low contribution to internal audit quality.

The reengineering doesn't come up with the change in management support. There was limited management support before the reengineering and the same is true after the reengineering. Thus, the reengineering has no influence on management support.

The reengineering changes the auditee attributes in relation to the attitude towards the internal audit function. On the other hand it has no influence on proficiency of the auditee.

Generally, internal audit reengineering has greater influence on the organizational setting in which the function operates and little influence on internal audit quality and auditee attributes. Besides, there is no influence on management support. Since the effectiveness of internal audit function is mainly influenced by management support and internal audit quality (Mihret and Yismaw, 2007), the internal audit reengineering has low contribution to the effectiveness of the function.

5.3. Implications

The conclusions reveal that reengineering changes organizational setting in which the internal audit function operates. This implies that the functions responsibilities have clearly defined and these help the function to effectively carry out its responsibilities.

The conclusions also reveal that there is low staff expertise which will have greater influence on the quality of internal audit. This implies that the staff composition is required to be from different field of studies at the appropriate proportion. In addition, further certification of internal auditors like CIA, ACCA is required to be mandatory to qualify internal auditors and cope with the changing environment.

On the other hand there is no change in management support. This implies that the management needs to consider the value of internal audit function in the achievement of organizational objectives and better to consider internal audit findings and made commitment to strengthen the department.

5.4. Future research areas

While the research questions developed in this paper were tested using a single organization, future research needs to be conducted with other organizations that underwent internal audit reengineering in order to validate the findings of this study. Future research may also investigate the value adding role of internal audit reengineering based on Roth, (2000) profile of value adding internal audit department. In addition future research may be conducted on the effectiveness of the reengineering process itself by applying Gupta's, (2001) framework of effective internal audit reengineering.

References

- Allegreni, M., Paape, L. Meville, P. and Sarnes, G. (2006), “The European literature review on internal auditing”, *Managerial Auditing Journal*, Vol. 7, No. 8, pp. 845-853.
- Arena, M . Arnaboldi, M. And Azzone, G. (2006) “internal audit in Italian organizations: A multiple case study” *Managerial Auditing Journal* Vol. 21 No. 3, pp. 275-292
- Arena, M. and Azzone, G. (2011),“Identifying organizational drivers of internal audit effectiveness”, *International Journal Auditing*, Vol. 13, pp. 43-60.
- Barrett, M.J. (1986), “Measuring internal auditing performance”, *Internal Auditing*, Vol. 2, pp. 30-35.
- Benbasat, I., Goldstein, D.K. and Mead, M. (1987), “The case research strategy in studies of information systems”, *MIS Quarterly*, Vol. 11 No. 3, pp. 369-86.
- Bethea, P. Jr. (1992), A Descriptive Exploratory Examination of the Role and Responsibilities of Internal Auditors, UMI Microform, Ann Arbor, MI.
- Bou-Road, G. (2000), “Internal auditors and value-added approach: The newly business regime”, *Managerial Auditing Journal*, Vol. 13, No. 4, pp. 182-186
- Brody R.G. and Lowe D.J. (2000) “The New Role of the Internal Auditor: Implications for Internal Auditor Objectivity” *International Journal of Auditing*, Vol, No, 4, pp. 169-176
- Carcello, J.V, Hermanson, D.R. and Raghunandan K. (2005), “Changes in Internal Auditing During the Time of the Major US Accounting Scandals” *International Journal of Auditing* Vol, 9: pp, 117–127

- Christopher, J. Sarens, G. and Leung, P.(2009) “A critical analysis of the independence of the internal audit function: evidence from Australia” *Accounting, Auditing & Accountability Journal*, Vol. 22 No. 2, pp.200-220.
- Clark, M., Gibbs, T.E. and Schroeder, R.B. (1980), “Evaluating internal audit departments under SAS No. 9”, *The Women CPA*, 8-11 and 22.
- Cooper, B. J., Leung, P. & Wong, G. (2006), „The Asia Pacific literature review on internal auditing“, *Managerial Auditing Journal*, Vol. 21, No. 8, pp.822–34.
- Coram, P., Ferguson., C Moroney, R.(2008) “Internal audit, alternative internal audit structures and the level of misappropriation of assets fraud” *Journal of Accounting and Finance No*, 48 pp. 543–55
- Dittenhofer, M. (2001), “Internal audit Effectiveness: an expansion of present methods”, *Managerial Auditing Journal*, Vol. 16, No. 8, pp. 443-450.
- Dittenhofer, M. (2001), “Reengineering the internal audit function”, *Managerial Auditing Journal*, Vol.16, No. 8, pp. 458-468.
- Fadzil, F.H; Hasnah, H. and Muhamad, J., (2005), “Internal auditing practices and internal control system”, *Managerial Auditing Journal*, Vol. 20 No. 8, pp. 844-866
- Farbo, J.L. (1985), A Comparison of the Perceived Effectiveness of the Internal Audit Function Between Selected Private and Public Institutions in the Western United States, UMI Microform, Ann Arbor, MI.
- Federal Government of Ethiopia (1996), *Federal Government of Ethiopia Financial Administration, Proclamation No. 57/1996*.
- Gibbs,J. and Keating, P.(1995), Reengineering controls, *Internal Auditor*, PP. 46-49
- Goodwin, J. (2004), “A comparison of internal audit in the private and public sectors”, *Managerial Auditing Journal*, Vol.19, No.5, pp. 640-650.

- Goodwin, J., Kent, P. (2006), “The use of internal audit by Australian companies”, *Managerial Auditing Journal*, Vol. 21 No. 1, 2006 pp. 81-101
- Greenawalt, B.M. (1997), “The internal auditor and the critical thinking process: a closer look”, *Managerial Auditing Journal*, Vol, 12 No 2, pp, 80-86.
- Greenawalt, M.B. (1995), “ Operationalizing the operational audit work” *Managerial Auditing Journal*, Vol. 10 No. 3, 1995, pp. 26-30
- Grix, J. (2004), *The foundations of research*, Palgrave Macmillan, New York
- Gupta, P.P. (2001), *Internal Audit Reengineering: Survey, Model, and Best Practices*, The Institute of Internal Auditors, Altamonte Springs, FL.
- Hass, S., Abdolmohammadi, M. J. & Burnaby, P. (2006), „The Americas literature review on internal auditing“, *Managerial Auditing Journal*, Vol. 21, No. 8, pp. 835–44.
- IIA, (n.d), 20 Questions managers should ask about their internal audit functions, the institute of internal auditors research foundation.
- Johansson, R. (2003), “Case study methodology”, International conference paper „methodologies in housing research, international association of people-environment, Stockholm.
- Kinfu, J. (1990), “Accounting and auditing in Ethiopia: an historical perspective”, in Pankhurst, R., Zekaria, A. and Beyene, T. (Eds), *Proceedings of the First National Conference of Ethiopian Studies*, Institute of Ethiopian Studies, Addis Ababa University, Addis Ababa, pp. 189-225.
- Leedy, P.D. (1989), *Practical research: Planning and design*, 4th ed, Macmillan publishing, New York.

- Lindow, P.E, and Race, J.D. (2002), “Beyond traditional audit techniques”, *Journal of Accountancy*, Vol.194 No, 1, pp. 28.
- McNabb, D.E. (2004), *Research method for political science: Quantitative and Qualitative methods*, Prentice-Hall of India, New Delhi.
- Mengesha, G.H. and Common, R. (2007), “Public sector capacity reform in Ethiopia”, *Journal of Public Administration and Development*, 27, pp. 367-380
- Michael E., Ray, D and Janet, E. (2007), “An improved process model for internal auditing” *Managerial Auditing Journal* Vol. 22 No. 6, pp. 552-565
- Mihret, D.G, James, K., Mula, J.M., (2010) "Antecedents and organisational performance implications of internal audit effectiveness: Some propositions and research agenda", *Pacific Accounting Review*, Vol. 22, No. 3, pp.224 – 252
- Mihret, D.G. and Woldeyohannis, G.Z. (2008), “Value Adding role of internal auditing”, *Managerial Auditing Journal*, Vol. 23, No. 6, pp. 567-595.
- Mihret, D.G. and Yismaw, A.W. (2007), “Internal Audit Effectiveness: An Ethiopian public sector case study”, *Managerial Auditing Journal*, Vol. 22, No. 5, pp. 470-484.
- Miles R.E; Snow, C.C and Coleman H.J. (1979), “Organizational strategy, structure and process”, *Academy of management review*.
- MoFED (2004), *Internal Audit Standards and Code of Ethics for Internal Auditors and Internal Audit Procedural Manual*, MoFED, Addis Ababa.
- Nagy, A.L. (2002), “An assessment of the newly defined internal audit function”, *Managerial Auditing Journal*, Vol. 17, No. 3, pp. 130-137
- Prawitt, D.F. (2003) “Managing the internal audit function”, The Institute of Internal Auditors Research Foundation 247 Maitland Avenue, Altamonte Springs, Florida

- Privatization and Public Enterprises Supervisory Agency (2004), *Public Enterprises' Corporate Governance Directive*, Addis Ababa.
- Roth, J. (2000), *Best Practices: Value-added Approaches of Four Innovative Auditing Departments*, The Institute of Internal Auditors Research Foundation, Altamore Springs, FL.
- Sarens, G. & De Beelde, I. (2006), „The relationship between internal audit and senior management: A qualitative analysis of expectations and perceptions“, *International Journal of Auditing*, Vol. 10, No. 3, pp. 219–41.
- Soy, S.K. (1997), “The case study as a research method”, unpublished paper, University of Texas at Austin, available at: [www.gslis.utexas.edu/ , ssoy/usesusers/l391d1b.htm](http://www.gslis.utexas.edu/~ssoy/usesusers/l391d1b.htm) (accessed February 15, 2011).
- Spira, LF and Page, (2003), “Risk management: the reinvention of internal audit and the changing role of internal audit”, *Accounting, Auditing & Accountability Journal*, Vol. 16 No. 4, pp. 640-61.
- Tatiana. D., Anca, O., Raluca, S. (2010), “Risk based internal audit: Perspectives offered to corporations and banks” *Annales Universitatis Apulensis Series Oeconomica*, Vol. 12 No.PP.231-37
- Tellis, W.(1997), “Introduction to case study” *The Qualitative report*, Vol 3, No 2. Available at; <http://www.nova.edu/ssw/QR/QR-2/tellis1.html>
- Tesfaye, D and Atkilt, H. (2011), “The Design and Implementation of Business Process Reengineering in Ethiopian public sector” *Organization for Social science research in Eastern and Southern Africa*.
- Xiangdong, W. (1997), “Development trends and future prospects of internal auditing”, *Managerial Auditing Journal*, Vol. 12 Nos 4/5, pp. 200-204.

Yee, S.L., Sujan, A., and James, K. (2007), “The perceptions of the Singaporean manager class regarding the role and effectiveness of internal audit in Singapore”, *Asian Journal of Business and Accounting*, Vol. 1 No. 2, pp. 147-174.

Yin, R.K. (1994), *Case Study Research: Design and Methods*, 2nd ed., Sage, London.

Zelege, B. (2007), “A Study on Effective Implementation of Internal Audit Function to Promote Good Governance in the Public Sector” Presented to the “The Achievements, challenges, and Prospects of the Civil Service Reform Program Implementation in Ethiopia” conference, Ethiopian Civil Service College Research, Publication & Consultancy Coordination Office.

---- (2005), *Public Enterprises' Audit Committee Directive*, Addis Ababa

Appendix

Asmamaw Getie Mihret Msc student
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Faculty of Business and Public Administration

Department of Accounting and finance

May, 2011

Dear, sir/Madam

The enclosed questionnaire is aimed at exploring information regarding the internal audit practice before and after the implementation of Business process reengineering (BPR). The questionnaire has been sent to all internal auditors in the organization. The response will be used for part of the data needed for the study of *“The contribution of internal audit reengineering to its effectiveness: An Ethiopian public enterprise case study”*. The result of the study is expected to contribute the understanding of internal audit reengineering’s role to the effectiveness of the internal audit function. Therefore, I believe you will assist the completion of the study by participating.

The questionnaire includes all the directions necessary to complete the response without assistance. Since the success of this study depends on the cooperation of all targeted respondents, the information that will be obtained from the questionnaire will not identify individual respondents in the study. Hence, your response will be used in aggregate terms. I would also like to assure you that the information you provide will be accessible only to the undersigned researcher only.

Your honest and thoughtful response is invaluable

Thank you for your participation

Kind regards,

Asmamaw Getie

Asmamaw Getie

Section-I General Questions

The following questions are prepared to get general information. Please respond by putting (✓) or writing

Please indicate your:

1. Current position in your organization: _____
2. Field of study:
 Accounting, Management, Economics, Others
(specify)_____.
3. Level of education: Technical/vocational school certificate, (college/ University diploma, Bachelor's degree, Masters degree Others
(specify)_____
4. Professional certification:
 Certified internal auditor (CIA) Certified public accountant (ACCA, CPA..)
 Certified management accountant (CMA)
 Others
(specify)_____
- In progress of certification
(Specify)_____
5. Please indicate your years of experience as an internal auditor
1-5 () 6-10 () 11-15 () 16-20 () Over 20 years ()
6. When do you join the organization as an internal auditor?

Before the reengineering () During the reengineering () After the reengineering ()

Part II- Questions regarding the internal audit function

Instruction: Below are statements about internal audit departments’ organizational setting, quality, management support and auditee attributes in your organization. Please indicate whether you agree or disagree with each statement in each period (Before and after the internal audit reengineering) by ticking (✓) on the spaces that indicate your choice from the options that range from „Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) to Strongly disagree (SD). Or from ‘Always’ to ‘Never’

A. Organizational setting	Before reengineering					After reengineering				
	SA	A	N	D	SD	SA	A	N	D	SD
1. The purpose of internal audit is clearly defined.....	()	()	()	()	()	()	()	()	()	()
2. Internal audit has policies for hiring internal audit staff.....	()	()	()	()	()	()	()	()	()	()
3. Internal audit has policies for training of internal audit staff.....	()	()	()	()	()	()	()	()	()	()
4. There is a complete internal audit manual to guide internal audit....	()	()	()	()	()	()	()	()	()	()
5. Internal audit department is large enough to successfully carry out its duties.....	()	()	()	()	()	()	()	()	()	()
6. The internal audit staffs possess knowledge and skills in a variety of area (beyond accounting and finance) as necessary.....	()	()	()	()	()	()	()	()	()	()
7. Internal audit is free from intervention in performing its duties.....	()	()	()	()	()	()	()	()	()	()
8. Internal auditors feel free to include any audit findings in their audit report	()	()	()	()	()	()	()	()	()	()
9. Internal audit obtains sufficient budget to successfully carry out its duties.....	()	()	()	()	()	()	()	()	()	()

	Before the reengineering					After the reengineering				
A. Internal audit quality	SA	A	N	D	SD	SA	A	N	D	SD
10. Internal auditors possess sufficient experience to understand the organizations system	()	()	()	()	()	()	()	()	()	()
11. Adequate short tern training is arranged for internal auditors each year	()	()	()	()	()	()	()	()	()	()
12. There is no staff turn over										
Scope of internal audit work										
How often does internal audit conduct the following activities?	Always	Often	Sometimes	Seldom	Never	Always	Often	Sometimes	Seldom	Never
13. Check adequacy of the auditee's record	()	()	()	()	()	()	()	()	()	()
14. Verify accuracy of amounts in financial records	()	()	()	()	()	()	()	()	()	()
15. Review information contained in reports of operating departments	()	()	()	()	()	()	()	()	()	()
16. Review the systems for safeguarding of assets	()	()	()	()	()	()	()	()	()	()
17. Evaluating the internal control system and making recommendations for improvement	()	()	()	()	()	()	()	()	()	()
18. Performing audit of major fraud cases	()	()	()	()	()	()	()	()	()	()

19. Checking efficiency of operating results (e.g whether cost saving alternative areas are used)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Ascertaining compliance with organizational policies and procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Checking compliance with contracts when applicable....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Checking compliance with external laws and regulations when applicable..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Ascertaining that operating objectives are consistent with organizational goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Ascertaining that operating procedures are consistent with the operational goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Reviewing operations to ascertain they were implemented as intended...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Assisting the management by identifying risk exposures of the organization.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Providing consulting services to management where internal audit has the expertise.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Audit planning										
28. Annual internal audit plan is prepared.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29. Audit work is documented and maintained in a file of audit working papers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Risk assessment is done as part of audit planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Senior management input is considered in setting internal audit priorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Field work and controlling										
32. An internal audit supervisor (manager) supervises field work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. An internal audit supervisor (manager) reviews internal audit working papers..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. The reporting level varies with the importance of internal audit findings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication										
35. Internal audit provides reports to the board of directors (or audit committee).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Internal auditors follow-up implementation of corrective actions relating to audit findings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Audit findings are discussed with auditee's before being reported on..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Before the reengineering					After the reengineering				
	SA	A	N	D	SD	SA	A	N	D	SD
Management support										
38. Management take timely corrective action based on internal audit recommendations...	()	()	()	()	()	()	()	()	()	()
39. There is higher management commitment to strengthen the internal audit department...	()	()	()	()	()	()	()	()	()	()
Auditee attribute										
40. Auditees regard internal audit as a value-adding service.....	()	()	()	()	()	()	()	()	()	()
41. Internal auditors receive full cooperation from auditee (the unit being audited).....	()	()	()	()	()	()	()	()	()	()
42. Internal auditors have full access to records and information they need in conducting audits.	()	()	()	()	()	()	()	()	()	()

Part III- Open ended question

How do you explain the change as a result of Business process reengineering in internal audit function?

Additional

Comments
