

**ROLE OF INTERNAL AUDIT IN PROMOTING EFFECTIVE MANAGEMENT  
BY WATER SERVICE PROVIDERS: A CASE STUDY OF EMBU WATER AND  
SANITATION COMPANY LIMITED**

**BY  
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## DECLARATION

This research project is my original work and has not been presented in part or whole in any other university for an award of a degree.

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This research project has been submitted for examination with my approval as university supervisor.

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## **DEDICATION**

I dedicate this research project report to my wife Catherine, sons and daughters Adam, Alpha, Wanjiru, Wanja for their encouragement and support during the study.

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## ABSTRACT

The purpose of this study was to investigate the role of internal audit in promoting effective management in water provision services. Internal auditing is primarily directed at improving internal controls designed to provide reasonable assurance regarding achievement of objectives in effectiveness and efficiency of operations, reliability of financial reporting, compliance with laws and regulations. Internal auditor is considered one of the “four pillars” of corporate governances, the other pillars being the board of directors, management and the external auditor (Glascock, 2007).

According to Hamers (1998) duties and responsibilities of Internal Auditor (IA) are reviewing the compliance with the existing governance financial regulations, instructions and procedures, evaluating effectiveness of internal control systems, appraising the economy and the effectiveness with which financial and other resources are being used, reviewing the reliability and integrity of record keeping and reporting the financial and operation information system, post audit of payment, assessment of risk and consulting the management as need arises.

This study aims to establish the relationship between the role of internal audit and effective management in water services providers. The study used a summary based on a case study of the Embu Water and Sanitation Company Limited (EWASCO). The sample for the study was obtained using purposeful sampling technique, stratified sampling and cross-sectional methods since the respondents were from different layers of the company stakeholders, and that the cost of internal auditing function which results from implementation of internal audit practices (roles) was picked between years 2007 – 2011 in EWASCO Ltd.

The sample used is made up of various categories of stakeholders, roles of internal audit and the consequential cost of internal audit function which includes salaries and wages, traveling and accommodation, training and development among others. The benefits of the role of internal audit lead to increased effectiveness of management of EWASCO Ltd which was able to increase both revenue and house hold water connections. The research

established a relationship  $R \propto f(c)$  where R is the total revenue earned by EWASCO and C is the cost of implementation of the functional roles of internal audit.

The study used qualitative and quantitative methods of data analysis. Descriptive method was applied on qualitative data. Scales of 1 – 5 were used to quantify the qualitative data which captured the roles and benefits of the internal audit. Quantitative data was fed to the computer and analyzed using SPSS version 17 program. Person model of analysis, charts and tables were used to present the results conveying visual impression of relationships. Correlation coefficient was used to establish the relationship. In this study Person's correlation was determined at 1 tail test, 5% significant level and 95% confidence interval, and it was found to be 0.8999 which implies a very high correlation between variables cost of internal audit and revenue earned.

The study has revealed that an increase in cost of internal audit will lead to an increase in the revenue earned when all other variables remain constant. That is  $R \propto f(c)$ , (revenue is a function of cost). The water reforms by EWASCO which have called for development infrastructure and organizational structures that include well developed internal audit; will achieve greater efficiency and more responsiveness to the public needs.

The study found out that 83% of respondent's believe that the roles of internal audit increased effectiveness and integrity of financial and operations of EWASCO. 75% believe there is increased reliability and integrity of financial and operational information; 67% of respondents' believe there is increased compliance with laws and regulations; ability to validate and honor customer's needs and expectations and that communications of audit findings to the board of directors and shareholders is improved. However, the study found out that only 17% of respondents believe that role of internal audit enhance job satisfaction for internal audit staff.

There is efficient and effective internal audit and internal control system and investigating units at Embu Water Services Provision Company (EWASCO). Thus, the water services providers should be remolded and strengthened to position them to discharge their duties effectively and efficiently. The component sectors should be unbundled into separate distinct, independent entities that handle generation, transmission, distributions and marketing. The sector should be without falsifications and frauds currently being witnessed.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

ASX-	Australian Stock Exchange
BOD-	Board of Directors
CA –	Certified Accountant
CEO-	Chief Executive Officer
CG –	Corporate Governance
ERM –	Entire Risk Management
EWASCO –	Embu Water and Sanitation Company
IA –	Internal Audit (or)
IAF –	Internal Audit Function
IIA –	Institute of Internal Auditors
IT-	Information Technology
JICA –	Japan International Corporation Agency
KENAO –	Kenya National Audit Office
SOEs –	State Owned Enterprises
SPSS-	Statistical Package for Social Sciences
WASREB –	Water Services Regulatory Board
WSPs –	Water Service Providers

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

The internal auditor's role is generally seen to involve oversight and monitoring. The internal auditor may be instrumental in guiding and evaluating the economy, efficiency and effectiveness of an organization's operations and systems, and will be normally accountable to a governing body. It is important therefore, that the internal auditor be reasonable independent of management as well as be able to work alongside them (McCall, 2002).

Internal auditing is conducted in diverse legal and cultural environments; within organizations that vary in purpose, size, complexity, and structure; and by persons within or outside the organization. While differences may affect the practice of internal auditing in each environment, conformance with the IIA's international standards for the professional practice of internal auditing (standards) is essential in meeting the responsibilities of internal auditors and the audit activity (Gunther and Moore, 2002).

An internal auditor also uses collaboration and social relationship to help align goals and to improve intra organizational integration (Van Peurse, 2004). Examining patterns of social relations, is particularly useful, therefore, for explaining internal operations and their potential. The internal audit function has received attention as an important

component of government financial management and a tool for improving the performance of the government sector (Diamond, 2002).

An internal audit position is seen by many as little more than a corporate training ground for managers (Cooper, Leung and Mathews, 1994; Goodwin and Yeo, 2001). Brody and Lowe (2000) found it likely that, as a result, internal auditors will become more involved with top management as consultants rather than as independent assessors.

While maintaining good relationship with managers is important in order for internal auditors to be effective in carrying out their day-to-day activities, their reporting lines to company directors and to audit committees are also important. This relationship can be impaired if the internal auditor is not sufficiently independent of the activities which they, themselves, are monitoring or if the governing authority is, itself, not one that listens or responds to the issues they raise. The roles of the internal auditor can become conflated as they try to contribute to control systems and management processes while at the same time independently report to company directors (Vanasco, 1996; McCall, 2002).

The scope of internal auditing within an organization is broad and may involve topics such as the efficacy of operations, the reliability of financial reporting, deterring and investigating fraud, safeguarding assets, and compliance with laws and regulations. It is a catalyst for improving an organization's effectiveness and efficiency by providing insight and recommendations based on analyses and assessments of data and business processes. With commitment to integrity and accountability, internal auditing provides value to governing bodies and senior management as an objective source of independent advice.

Professionals called internal auditors are employed by organizations to perform the internal auditing activities (Wallace, 1985).

An internal audit position is seen by many as little more than a corporate training ground for manager (Cooper, Leung and Mathews, 1994; Goodwin and Yeo, 2001). Brody and Lowe (2001) found it likely that, as a result, internal control operations and their potential have to be monitored. The internal audit function has received attention as an important component of government financial management and a tool for improving the performance of the government sector (Diamond, 2002).

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve on organizations operations. Internal auditing helps organizations accomplish their objectives by having a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance process. Internal auditors are employees of an organization and are not responsible for the execution of company amenities, they advice the board of directors through audit committee regarding how to better executive their responsibilities. As a result of their higher scope of involvement, internal auditors may have a variety of higher educational and professional backgrounds (Adams, 1994).

The internal auditing frequently involves measuring compliance with entities, policies and procedures (Goodwin and Yeo, 2001). The scope of auditing within an organization is broad and may involve topics such as efficacy operations the reliability of financial

reporting deterring and investigating fraud, safeguarding assets, and compliance within laws and regulations.

The activities of concern to internal as well as to external auditors, and thus the importance of the internal auditors role has come to be recognized in new legislation and standards around the globe. In the US, the influential Sarbanes-Oxley Act 2002, which has inspired greater accountability worldwide (Ellis, 2004: Chan, 2004), effectively transfers US audit standard setting responsibilities from the accounting profession to the federal government. In addition, it redefines auditor independence and, significantly for internal auditors, requires corporate governance evaluation and reporting of internal controls. The Australian Stock Exchange (ASX) also became involved as its corporate governance council developed principles and practice of 'best' corporate governance resulting in further company disclosure requirements about their internal practices (Hamilton, 2003).

### **1.1.1 Brief overview of Embu Water and Sanitation Company**

Embu Water and Sanitation Company (EWASCO) is a public sector organization, mandated to provide water and sanitation services to Embu Municipal Council and its environs. EWASCO is currently the third best water provider company in Kenya as per WASREB rating of 2010. EWASCO has attracted funding from JICA (Japan International Corporation Agency). Worth Kshs. 2.5 billion and the project is currently on going, and it has also attracted funds from World Bank to the tune of Kshs. 200 million for construction of sewerage infrastructure. The Kenya government has been

increasingly concerned with the provision of clean water and sanitation services. The company is out on water reforms which have called for developing infrastructure and structures management, that will achieve greater efficiency and more responsiveness to public needs. There has been a rapid shift in economic, social and environmental endeavours the world over; more so due to globalization and enhanced public awareness of civil rights and obligations with regard to governance and public service, and thus the role of public sector has evolved from the regulator/provider to one that secure welfare of every member in the society.

EWASCO Limited is committed o ensuring compliance with the Provision of Water Act 2002 among other regulatory and supervisory corporate governance. Essential to the establishment of a good governance structures designed to ensure accurate reporting to the Board to facilitate an informed decision making process assessment and improvement of conformance (EWASCO Newsletter, 2009).

EWASCO Limited has a composition of Board members, board committees; these are, finance and administration committee, technical planning and strategy committee and audit committee. All these committees are charged with the responsibility of ensuring effective and efficient service delivery to the targeted clientele in terms of water and sanitation services.

The audit committee of the board of directors assists the Board of Directors in fulfilling its responsibility for oversight of the quality and integrity of the accounting, auditing and



reporting practices of the company, and such other duties as directed by the Board. In this regard, internal auditors play a vital role in promoting accountability and efficient management (governance) through the financial compliance and performance evaluation audits and risk identification. Consultation with management and promoting economic growth is another role of audit therefore providing efficient and effective use of resources in the company as well as supporting the public services towards result-based performance (Atak, 2004).

## **1.2 Statement of the Problem**

Public sector utilities in developing countries have often not been efficient in providing access to reliable water and sanitation, and accountability in terms of financial statements, accounting reporting and standard, regulation and governance and internal audit controls and auditing standards (Barasa, 2006).

It is roughly six years since enactment of the Water Act 2002. This Act paved way for the privatization of water and sanitation services in Kenya. To be in compliance with this Act, many water companies were formed in 2003 and some started their full operations in 2005 under direct supervision of respective water services boards. Some of the water companies which have been formed before the enactment of Water Act 2002 include Nyeri, Eldoret, Kericho, Kitale, Nyahururu and Kisumu.

However, no study on the role of internal audit in promoting effective corporate governance in the water service sub-sector has been done in Kenya. Chepkorir (2010)

observes that many questions have been raised on the roles and challenges of internal auditing in the banking industry in Kenya. Other research undertaken by Kibet (2008), was a survey on the role of internal audit in promoting good corporate governance in SOEs; Kibara (2007) similarly carried out a survey of internal auditors risk management practices in the banking industry in Kenya.

Faced with the current turbulent business environment, a study should be carried out on the roles of an internal auditor in promoting good corporate governance and the challenges they faced in carrying out these roles. Therefore this research seeks to carry out an investigation on the perceived roles of internal auditors in promoting good corporate governance in the company providing the water and sanitation services in Kenya.

In an attempt to fill the existing knowledge gap, this study analyzed the role of internal audit in the water and sanitation companies in Kenya, generally referred to as Water Service Providers (WSPs).

### **1.3 Objectives of the Study**

#### **1.3.1 General Objective**

The study investigated the role of internal audit in promoting effective management implementing the internal control system calls for the attention of the internal auditing that ensures that the roles of internal auditors are specific and implementable for functionality. This calls for cost in terms of salaries and wages, travel and

accommodations; training and development and use of fixed and current assets by the auditor. Implementation of the roles of internal audit calls for a cost that management is ready/not ready to incur for the sake of benefits accruing to the organization.

The improvement in effective management of the organization as a result of internal audit practices was measured using growth in revenue, profitability, stability of the company and performance measurement and effective management was measured using specific roles of internal audit; whose questionnaire was administered within EWASCO ltd. The overall result is measured using growth in revenue; profitability and area of coverage as given by increased household water connections.

### **1.3.2 Specific Objective**

The study sought to;

- i) Establish the relationship between internal audit and effective management.

### **1.4 Significance of the Study**

This study may provide critical information to various stakeholders in the corporate world.

#### **i) Management and Shareholders**

The management will discover the importance of the role of internal auditing function in their organizations. The management will be able to re-assess its position in giving prominence to the function of internal audit. The management will rely on this research to know whether their investment in a strong internal audit department is worthwhile.

The shareholders will use the information attested by the internal auditor to evaluate the performance of the company. The shareholders may want to rely on internal audit reports which are regular than relying entirely on external audit report which comes once a year and is based mainly on historical aspect of transactions rather than current and the near future expectations.

**ii) Researcher and Scholars**

Future researchers and academic scholars can use the findings of this study as a base on researching on the internal auditing. The study contributes significantly to the internal auditing debate.

**iii) Internal Auditors in General**

The internal auditors may understand their role in organizations and the challenges they are likely to face as they carry out their roles.

**iv) Government and Policy Makers, Water Trust Fund, WASREB, Donors  
Agencies and Development Partners**

Internal auditing provides assurance to the external donors, regulatory bodies, the government and policy makers. The study will provide the assurance about the contribution of auditing function to the corporate governance so that trust and assurance of quality of service delivery. Good governance will strength the relationship between water providers and the other stakeholders. These bodies can use this study to make it a

policy that all water provider organizations must have a fully developed internal audit function.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section draws on literature in the area of internal audit role and its effectiveness on sound corporate governance in the water service provision sector. Secondary materials such as books, journals, and articles which contain previous research work on the study topic are analyzed. The material is of importance to this study as it forms a bias for observations which will be made during the study in line with the study aims and objectives.

#### **2.2 Evaluation of Internal Auditing**

The internal auditing profession evolved steadily with the progress of management science after World War II. It is conceptually similar in many ways to financial auditing by public accounting firms, quality assurance and banking compliance activities. Much of the theory underlying internal auditing is derived from management consulting and public accounting professions. With the implementation in the United States of the Sarbanes-Oxley Act of 2002, the professions growth accelerated, as many internal auditors possess the skills required to help companies meet the requirements of the law (Chan, 2004).

Records show that internal auditing function started being utilized by kings or merchants to detect or prevent theft, fraud and other improprieties between 13<sup>th</sup> and 15<sup>th</sup> centuries, control techniques such as separation of duties, independent verification and questioning

of detect and prevention of fraud and other irregularities began at that time (Cooper, et al, 1994). As industry and commerce evolved, the auditing techniques improved. This started in England before moving to the United States of America during the industrial revolution. After World War I the economy of US grew quickly and hence need for internal audit was strengthened. However, the expansion was accompanied by price fixing, stock manipulation and false statement of business performance (Falsification of Financial Statements).

Internal auditing as a function emerged a lot in mid 20<sup>th</sup> century. This was after foreign corrupt practices Act of 1977. The Act was passed to prevent secret funds and bribery. It required organs to maintain adequate systems of controls to maintain complete and accurate financial records. The internal auditors, were ready to help management to fulfill the conditions of the Act. The testing and evaluation of internal controls within, increased significantly and hence the IA were viewed with new importance (Evans, 2003).

The evolution of internal audit tracks that changing business practices and concepts of internal control. The basic level is, internal controls and individual's preventive, detective, corrective, or directive actions that keep the operations functioning as intended or directed. Basic controls when aggregated, create whole networks and systems of control procedures, which are known as the organizations overall system of internal control. The business re-engineering and downsizing renowned several layers of management and flattered organizational structures. The very traditional controls were

loosened or disgruntled to improve efficiency and corporate governance, as well as lower costs (Daily; Dalton and Cannella, 2003).

### **2.3 Roles of Internal Audit**

Internal auditing is primarily directed at improving internal control. Internal control is a process effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in; effectiveness and efficiency of operations, reliability of financial reporting, and compliance with laws and regulations (Brody and Lowe, 2000).

Internal auditing activity as it relates to corporate governance is generally informal, accomplished primarily through participation in meetings and discussions with members of the Board of Directors (BOD). Corporate governance is a combination of processes and organizational structures implemented by the Board of Directors to inform, direct, manage, and monitor the organization's resources, strategies and policies towards the achievement of the organizations' objectives. The internal auditor is often considered one of the "four pillars" of corporate governance, the other pillar being the Board of Directors, management and the external auditor (Glasscock, 2002).

According to Havers (1998), duties and responsibilities of Internal Audit (IA), are; reviewing the compliance with the existing governance financial regulations, instructions, and procedures, evaluating the effectiveness of the internal control systems, appraising the economy and effectiveness with which financial and other resources are being used, reviewing the reliability and integrity of record keeping and reporting on financial and



operating information systems, post-audit of payment documents and of all documents used in initiating commitments, as well as contract agreements, verifying and certifying periodical financial returns such as pending bills returns, expenditure returns, revenue returns, staff returns, vehicle returns etc, reviewing and pre-auditing of annual appropriation accounts, fund accounts, and other accounting statements to ensure that accurate accounts are prepared to the required standards, carrying out spot checks on areas such as revenue and receipts collection points, projects, supply and delivery sites to ensure compliance with procedures and regulations and reviewing the budgetary reallocation process to ensure legislative and administrative compliance and advising when commitments are entered into when there is no budgetary provision or adequate cash.

### **2.3.1 Internal Auditor as ‘monitor’**

An equally complex situation is encountered with respect to the internal auditor’s activities as a ‘monitor’. These roles include; corporate assurance officer in large organizations, sole internal auditor in medium-sized organizations, internal audit manager in a major, listed corporations, and audit partner in a major CA (Certified Accountant) professional firm (Van Peurse, 2004).

Most of these internal auditors act as monitors between agent-managers and director-principals and yet at the same time are also the agents accountable to the CEO-director for proper oversight. This is another practice that leads to a conflation in their role. If an auditor becomes involved in changes being made to a system, it would be all too easy to

become involved in implementing that system and ultimately, monitoring their own work (McCall, 2002).

Finally, organizational complexity is often associated with greater decentralization which in turn leads to greater demand for monitoring (Carcello et al., 2005). Wallace and Kreutzfeldt (1991) found evidence that the more decentralized the company, the greater propensity to establish Internal Audit Function (IAF). We use organizational complexity as a construct in which the effects of various factors ranging from the industry in which the company operates to mergers and acquisitions, to internal operations being taken into consideration. In other cases, however, causal relationships may mask the more serious purposes of reinforcing their monitoring role. In particular, the internal auditor's relationships with association members seem to contribute to an 'independence of mind' for the auditor – as monitor by bringing them closer into the ethos of the audit community (Daily et al, 2003).

### **2.3.2 Internal Auditor as 'Agent**

Auditors act as agents to principals when performing an audit and this relationship therefore brings with it similar concerns with regard to trust and confidence as the director shareholder relationship, prompting questions about who is auditing the auditor. Agents (whether they are directors or auditors) may be trustworthy without a need for further incentives to align interests or monitoring mechanisms such as audit or increased regulation (Gunther and Moore, 2002).

We find that these internal auditors are obligated to a variety of individuals as an ‘agent’ and for a variety of purposes. Those parties to whom they are most commonly held to account are the external auditor, senior financial managers, the CEO (or equivalent), or their equivalents in government. In some cases they also report to middle –level managers, and this may be a reflection of issues specific to each organization (Evans, 2003). Other descriptions of their agency relationships appear to be more in tradition of what we might expect of auditors. These are the system and control or compliance functions to which internal auditors are in a unique position to contribute. Our participants refer to those measures that ensure that the projects are appropriately controlled in the traditional sense; “turn things around, assure that things are working properly, picking up on issues, internal consultancy”, audit activities, systems changes”, “for compliance, to check controls”, monitoring issues of interests, quality assurance”, “question, investigate, understand, listening, investigative queries” “to check controls, what’s needed for a project”, and monitoring issues of interest, quality assurance, project management, business objective not operational roles” (Glasscock, 2002).

### **2.3.3 Internal Auditor Independence**

Internal Auditors Independence from the board of directors is of great importance to shareholders and is seen as a key factor in helping to deliver audit quality. However, an audit necessitates a close working relationship with the board of directors of a company. The fostering of this close working relationship has led (and continues to lead) shareholders to question the perceived and actual independence of auditors and to demand tougher controls and standards over independence to protect them (Fama, 2006).

As far as independence and objectivity are concerned, auditors need to be conscious of threats to objectivity and apply suitable safeguards where necessary. Reputation is a key factor in promoting trust and auditor independence and, is an important quality that shareholders look for. Auditors have an important incentive to maintain independence to protect their reputation and thereby help them to retain and win audits (Goodwin and Yeo, 2001).

Finally, the causal relationships internal auditors appear to enjoy with other members of their profession may mask the serious services they contribute to the auditor's independence. Leaders in internal audit departments and auditors who find themselves working in isolation seem to benefit from ethos which their professional association provides. That their closest working colleagues, managers are also those to whom they may be charged to monitor highlights further the importance of these luncheons and seminars with their peers. This sharing of concerns, and how to resolve them, may be what turns the tide when it comes to making important decisions impacting independence (Vanasco, 1996).

The spotlight has only recently been placed on the independence of internal auditors, and there is little in the literature as yet to suggest how they are responding to it (Brody and Lowe, 2000). Audit committees, particularly those that include directors, assist the internal auditors in this regard as their presence and involvement are seen to enhance auditor independence (Spira and Page, 2003; Vanasco, 1996; Goodwin and Yeo, 2001).

In Order to be in a position to be ‘heard’, having an independent audit committee may help.

A recent study also indicates the forming or having the right to form, collegial relationships with members of the board and senior manager is also important toward reaching this goal. This concern with the independence aspect of the internal auditor’s role, with the potential conflation of their roles and with the nature of the relationships they form in the work place (Van Persuem, 2004).

#### **2.4 Corporate Governance and Internal Audit**

The economic crisis and the financial scandals highlight the significance of corporate governance. The internal audit function has gained great attention for assuring good corporate governance (Madani, 2009). The internal auditors execute governance related activities. These activities include: risk management, control assurance, compliance assessment and consulting services. Increasing public interest in corporate governance, particularly the changing concept of internal control, has driven organizations to review controls, has driven organizations to review their expectations of the internal audit function.

Moreover, with the development of risk management as an integral aspect of corporate governance changes have taken place in internal auditors’ roles. The wider approach to internal control offers the internal audit function the opportunity to claim expertise in the area of risk management. As a result, the importance of the internal audit function as a

key component of good corporate governance has increased (Gramling; Maletta; Schneider, and church, 2005).

Corporate governance creates heated debate since noticeable failures of accountability have been highlighted by the financial scandals and the economic crises. Certainly, the internal audit function has attracted the attention of boards those that face external pressure for assurance about corporate governance practices. Internal auditing is receiving attention unlike ever before (Carcello et al, 2005). The global emphasis on the need for sound corporate governance has caused an increasing interest in the internal audit function (Goodwin and Yeo, 2001).

The corporate governance regulations on internal controls constitute a formal pressure that can influence the internal audit function. These pressures are control mechanisms exerted on organizations to constrain their behaviour. Corporate governance as an institution is a social structure which provide professional groups guidelines of orientations, while controlling and constraining them (Haggerty and Golden, 2002). Bailey et al., (2003) asserts that the internal audit function has significantly changed to cope with evolutions in corporate governance, as well as IT evolution. However, it remains an ongoing challenge for the internal audit function to prove their added value to organizations through improving corporate governance in the extensive IT environment. The internal audit function should be changed in terms of practices and structure to maintain its legitimacy as a corporate governance tool that adds value.

## **2.5 Agency theory and the role in internal audit**

If as simple agency theory implies, principals do not trust agents to provide them with reliable and relevant information, then they will hire in external experts, who are independent of these agents. A simple agency model suggest that, as a result of information asymmetries and self-interest, principals lack reasons to trust their agents and will seek to resolve these concerns by putting in place mechanisms to align the interests of agents with principals and to reduce the scope for information asymmetries and opportunistic behaviour (Fama, 2006).

Jensen and Meckling (1976), in their seminal work on agency theory, defined agency as “a contract under which one or more (principals) engage another person (the agent) to perform some service on their behalf which involves delegating some decision – making authority to the agent”. It has been applied to many economics-related disciplines including finance (Thornton, 1985), and external financial audit (Wallace, 1985).

Agency theory, in its purest (and efficient market) form, also assumes that individuals will take into account all available information, rationally and instantly, to make these decisions. Assumptions of an efficient market can be relaxed to explain the importance of accounting practice and contracting services. In an imperfect market for information, contracting with accountants, auditors and others becomes one means of monitoring, and making visible agency costs to principals who cannot know everything at any one point in time (Watts and Zimmerman, 1986).

Agency theory is applied in the principles of agency theory to evaluate the relationships. Applying a financial-economics based theory such as “agency” is of value both to understand an aspect of organizational practice, and to influence the manner in which management plans, establishes and maintains controls systems. Though not widely applied to internal audit, agency theory has been suggested as a useful basis to analyze why some organizations have internal audit departments and others do not, to examine how organizational change affects internal audit departments and to evaluate how or why internal audit departments vary in the way they do (Miguel, 2002).

According to Adams (1994), agency theory has been applied to determine why some public accountants contract for internal auditing, and to examine moral hazards within management systems of different cultures. There is clearly room for further application. The issue of why internal audit departments vary is of concern here and, in particular, there is an interest in whether agency theory may be able to help explain the relationships between internal auditors and other (Van Puersem, 1995).

## **2.6 Benefits of Internal Audit**

The primary function of internal audit is to review the figures or process a company devised. The internal audit ensures compliance with the company law and state rules and regulations, effectively protecting the business against problems that might crop up. The internal audit ensures that proper accounting system is introduced and that there is an orderly arrangement of personnel, procedures, records, forms and devices to achieve



desirable results. The internal audit can point out the weak areas of management for corrective actions.

It dispenses the need to employ expensive consultants to carry out internal audit function; the internal auditors are intimately acquainted with business operations and have access to confidentialities information at all levels of management and thus have knowledge they can use to contribute for business management. The internal audit maintains a group of highly skilled people available to cope with non-recurring and exceptional jobs which not many ordinary employees could satisfactorily deal with efficiently and effectively.

The internal auditors are available in areas like operational audits, constant examination of internal checks controls, the detailed applications of normal auditing method and detailed review of the various type of management reporting. It offers employees a chance to train as executives for the future because they are exposed to detailed and intimate knowledge of the business by studying problems of all kinds at different levels of the organization.

## **2.7 Empirical Studies**

Several studies on internal auditing have been carried out both locally and globally. Locally studies have been done by researchers such as Chepkorir, Kibara and Kibet. Chepkorir (2010) in his study “the roles and challenges of internal auditing in the banking industry in Kenya: observed that the general roles of internal auditors is to provide assurance to management and the audit committee that internal controls are effective and

working as intended, examining and assessing organization policies, procedures, manuals and recommending best practices, risk assessment and management, and finally evaluation of projects and programs accomplishments.

Kibara (2007) conducted a survey of internal auditors risk management practices in the banking industry in Kenya. The study sought to establish banking internal auditors' perception of their distinct role in the bank wide ERM process, and whether there was any conflict between internal audit and risk management departments being established to take over the ERM process.

Kibet (2008) in this study on the role of internal audit in promoting good corporate governance in SOE's aimed to explore the role and the use of internal audit function in promoting good corporate governance in public sector enterprises and the challenges faced by the internal auditors in SOEs. The study followed an exploratory research design and the population comprised of all SOEs with government equity of over 50% located in Nairobi.

Globally, Donaldson and Davis (1991) conducted a study constructing stewardship theory and agency theory and agency theory on governance, incentive of the CEO and shareholder return. It sought to examine the effect of CEO duality on shareholder returns. A comparison was done of corporations whose board structure had a dual CEO-Chair and where the CEO was independent from the chair.

The sample for the study was a convenience sample of 337 US corporations taken from a compensation survey however only 321 firms had complete data and those were included in the sample. The companies covered a wide range of industries such as consumer products, technology, financial services, transportation, services and utilities. The study used a cross sectional design and examined changes in structure and their effects on changes in shareholder returns. Size data was taken from standard industrial reports and the mission's dollar directory. The board structure was coded as presence of CEO duality if the top executive was also chair of the board in 1987. The board structure was coded as independent if the board chair was not the CEO. Thus the board structure has a binary code. Shareholders returns were measured by ROE and gain in shareholder wealth.

Internal auditors may not always be in a strong position to monitor and control internal operations in an organization, however (Al-Twajjiry; Brierly and Gwilliam, 2004; Glasscock, 2002). An Australian survey concluded, for example, that internal auditors may not be seen as a true profession by all, including some of their own corporate managers. This can result in less value being attributed to their services or to their views than those of so-called 'external auditors (Cooper et al., 1994).

Auditing research has stayed relatively away from trying to be understood in its social context, particularly in terms of theoretical and empirical analysis of contemporary internal audit practice (Robson et al., 2007). Auditing research has stayed away from addressing the internal audit strategic response to the misalignment between the

institutional logics and the corporate governance structure in use especially using the institutional theory perspective.

In an historical context, there was little concept of auditors as independent experts. Watts and Zimmerman (1983) highlight the fact that audits of merchant guilds were conducted by a committee of guild members and in the mid nineteenth century company audits were often undertaken by individuals' shareholders whose independence from the agents running the company was not an issue. Hence, principals acted as auditors. However, in many agency relationships principals do not have the expertise and skills to check whether agents have met their responsibilities.

Fama (1980) used agency theory to examine the hierarchical relationships in large multi-division companies. In this context, the company's top management is viewed as the principal who delegates responsibility and authority to subordinate managers (agents) for effective utilization of a portion of the firm's resources, leading to the possibility of moral hazard problems between divisions and top management. Top management tries to mitigate this problem by instituting organizational controls, including internal auditing (Miguel, 2002). This argument suggests that there is more need for internal auditing in large multi-divisional companies than in smaller ones (Chow, 1982; Abdel – Khalik, 1993).

We believe that a similar rationale could be used to explain the roles and relationships that exist within an organization, and which involve the internal auditor contracts can and, using agency rationales, should be made to constrain self-serving managers on behalf of shareholder principals. Agency cost, such as internal monitoring, will then be incurred internally.

The Sarbanes – Oxley Act 2001 provides an example of how the internal auditor can be placed in a monitoring’ position, not only to shareholder-owners but also by requiring them to report to the public (Chan, 2004).

## **2.8 Chapter Summary**

This chapter has reviewed literature on the importance of various roles of internal audit for corporate governance. These include the roles of internal auditor as a ‘monitor’, and as an agent. The chapter also captures the relationship between corporate governance, internal audit; agency theory and the role in internal audit; and also various local and international empirical studies. The chapter has also tackled the challenges of internal audit roles in promoting effective corporate governance.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter provides a discussion of research methodology used in this study. It discusses the research design especially with respect to the choice of design. It discusses the population, sample and sampling techniques, data collection methods as well as data analysis and methods used to present the data in the study.

#### **3.2 Research Design**

The study used a case study. According to Kombo and Tromp (2006), a case study involves a careful and complete examination of a social unit, institution, family, cultural group and, an entire community and embrace depth rather than breadth of the study. The case study is deemed appropriate as it involves in depth investigation of a phenomenon such as the roles of internal audit and how they affect the quality of corporate governance in the Water Service Providers in Kenya. Saunders; Lewis and Thornhill (2003) assert that a descriptive research portrays an accurate profile of persons, events or situations.

The study used survey based on a case study of the Embu Water and Sanitation Company Limited (EWASCO Ltd). According to Saunders et al., (2003), a case study enables the researchers to understand the context of the research and the process enacted and have considerable ability to generate answers to questions “why”, “what” and “how”.

### 3.3 Population and Sample

According to Cooper and Schindler (2000), a population is referred to as the collection of elements about which we wish to inference. The sample for the study was obtained using purposeful sampling techniques and stratified sampling methods. Since the company had different layers of respondents, namely:- Members of the Board of directors, top management employees, other employees, water and sanitation services consumers and regulatory agents such as Tana Water Services Board (TWSB) and Kenya National Audit Office (KENAO). The choice of the sample was guided by the ease of reach of the employees, directors and water consumers who are within reach. Tana Water Services Board is always in contact with EWASCO and KENAO could be easily reached as they are based in Nairobi. The target population and the sample was distributed as follows:

**Table 3.1: Distribution of respondents by designation and target respondents**

<b>Designation</b>	<b>No. of People</b>	<b>Target respondents</b>
Board of Directors	12	6
Chief Executive Officer	1	1
Top Management Employees	2	2
Medium Management employees	4	4
Supervisors	6	5
Accountants	3	3
Water consumers	10	5
Customer Care manager	1	1
Other technical staff	46	13
Other Finance and Administration Staff	18	6
Chief Internal Auditor (TANA)	1	1
Kenya National Audit	1	1
Total	105	48

Source: Embu Water and sanitation company Ltd for establishment for employees, members of the board and major water consumers.



The sample used comprised of 48 persons out of 105 people. The sample size was considered adequate since it formed 45% of the population. According to Saunders Et al (2003), a sample should at least consist of a minimum thirty per cent of the population . Norman and Frantal (2001), suggest a sample of thirty percent, though the larger the better. The target respondents were selected using proportionate simple random sampling.

### 3.4 Data Collection

Data was collected from primary and secondary sources. Secondary data included cost of internal audit from the payments cash books and salaries journals. The cost was a direct implication of value attached to internal audit department by the EWASCO management. One of the benefits of internal audit is effective management was captured from the growth of revenue and water delivery to homesteads within a period under review which was years between 2007 – 2011.

**Table 3.2: Distribution of costs and benefits of internal audit as represented by growth in sale**

	2006	2007	2008	2009	2010	2011
Cost of Internal Audit	100,000	984,000	1,183,400	2,675,790	2,782,422	3,480,415
Revenue	47,819,496	58,970,604	79,219,659	97,490,068	120,347,805	154,866,210
Number of water connections	4020	4970	5688	7061	8959	11500

The cost of internal audit included salaries and other benefits to the internal auditor. Revenue represents the total income to the EWASCO and water connections represented water connections to homesteads for supply of water.

Primary data was collected by use of a semi-structured questionnaire developed by the researcher on the basis of research questions. The questions had three parts, first part had questions on general information about the respondents in relation to the case of water provider company; the second part had questions on the roles of internal auditors in water and sanitation company; while the third had questions on the benefits of those roles of internal auditors for effective management and the relationship therein.

To ensure research quality, different perspective of validity was checked when designing the questionnaires. The questionnaire indicate the various roles of internal audit and how those roles affected the management of the company. The questionnaire was formulated in a way that clearly showed the relationship between the roles of internal audit and management.

The questionnaire was designed to capture how well the internal audit roles are established, how they relate to effective management and the benefits achieved by the organization as a result of internal audit practices. The questionnaire was administered by drop and pick methods. The respondents included members of the board of directors, chief executive officer, regulatory body (TWSB) and the external auditor (KENAO), major water consumers and other employees.

The Board of Directors gave an evaluation of the audit function with regard to its benefits and value addition to the decisions and policies made; the Chief Executive Officer (CEO) considered the streamlining of the company operations in terms of improved efficiency, effectiveness; reliability and integrity of financial and operational information duly improved; improvement in safe guarding of organizational assets; compliance with law and regulations and contracts witnessed in the organization as a result of internal audit; the ability of the company to identify and validate customer's needs and expectations.

The top and middle management gave information on how the internal audit has kept check and control and given guidance or consulted at the times of need.

The water consumers gave an overview of the overall efficiency in water delivery by the organization while the external auditor and the water services board (regulator) were concerned about the quality and reliability of financial statements, truthfulness and fairness of the company's operations as given by the financial statements and other management reports. The stakeholders gave an external assessment of the effectiveness and efficiency of internal auditors in promoting overall effective management of the company.

### **3.5 Data Analysis**

Data analysis usually involves reducing accumulated data to a manageable level, developing summaries, looking for patterns, and applying statistical techniques (Cooper and Schindler (2002). The data collected from the field was checked for consistency, completeness and usefulness. This entailed field edits, data results validation and central

editing, Kothari (2004) pointed out that analyzing research data includes coding, tabulating responses, translating the responses to specific categories and then entering them in a statistical package for social services (SPSS)

The study used both qualitative and quantitative method of data analysis. To quantify the qualitative data, scales of 1 to 5 were used. 1 – not at all; 2 – less extent; 3 – moderate extent; 4 – large extent; 5 – to a very large extent.

The raw data capturing the roles of internal audit; their benefits for effective management and the relationship between the different roles and their contributions to effective management was used.

The quantitative data was fed into the computer and analyzed using statistical package for social sciences (SPSS) version 17 program. Further analysis statistical technique was used. Pearson model of analysis, charts and tables were used in order to present the results of the study in order to convey visual impression of relationships or to clarify information hidden within the data.

## CHAPTER FOUR

### DATA ANALYSIS AND INTERPRETATION OF FINDINGS

#### 4.0 Introduction

This chapter presents data analysis, findings, presentation and interpretation. The purpose of the study was to analyze the roles of internal audit in promoting effective management in water service provision companies. The study used both qualitative and quantitative method of data analysis. To quantify the qualitative data, scales of 1 to 5 were used. 1 – not at all; 2 – less extent; 3 – moderate extent; 4 – large extent; 5 – to a very large extent. The raw data capturing various roles of internal audit was processed using inferential statistics including correlations and coefficient of determination.

The quantitative data was fed into the computer and analyzed using statistical package for social sciences (SPSS) version 17 program. Further analysis statistical technique was used. Pearson model of analysis, charts and tables were used in order to present the results of the study in order to convey visual impression of relationships or to clarify information hidden within the data.

The data was analyzed with the aim of answering the research question. It denotes the practices at EWASCO ltd in terms of how the roles of internal audit affect the effectiveness of management. Presentation of data was done by use of tables and graphs. Statistical inferences were used also to interpret the model showing the analyzed relationships. The researcher focused on the role of internal audit and the benefits

accruing from them for the effective management of Embu Water and Sanitation Company Limited since year 2006 to date. Separate internal audit function and the benefits accruing from them were studied.

Implementing the internal control system calls for the attention of the internal auditing that ensures that the roles of internal auditors are specific and implementable for functionality. This calls for cost in terms of salaries and wages, travel and accommodations; training and development and use of fixed and current assets by the auditor. Implementation of the roles of internal audit calls for a cost that management is ready/not ready to incur for the sake of benefits accruing to the organization.

The improvement in effective management of the organization as a result of internal audit practices was measured using growth in revenue, profitability, stability of the company and performance measurement effective management was measured using specific roles of internal audit; whose questionnaire was administered within EWASCO Ltd. The overall result is measured using growth in revenue; profitability and area of coverage as given by increased household water connections.

#### **4.1 Inferential Findings**

This section was based on the findings from analytical deductions. Specifically, the section presents the Pearson's correlation as well as the analytical model. The analytical variables for this study were the cost of internal audit resulting from implementation of good internal audit practices of the roles of internal audit. This implies that the total

annual revenue and water connections for the organization were taken as factors determined by the cost of internal audit functions which include salaries and wages, allowances, staff training and development for the internal auditor. It is taken that as a result of importance of the roles of internal audit, the company invests heavily in the internal audit department; which consequently contributes heavily in promotion of effective management that is able to achieve increased revenue and market share of the company as well as financial stability. Thus, the analytical relationship can be written as follows:

$$R \propto f(C)$$

Where R is the total revenue earned by Embu Water and Sanitation Company for a particular period C is the cost of implementation of the functional roles of internal audit which includes salaries and wages among others.

#### 4.1.1 Pearson Correlations

Pearson's correlation coefficient (r) is a measure of the strength of the association between the two variables. It indicates the relationship between the analytical variables. In this study, Pearson's correlation was determined at 1 tail test, 5% significant level and 95% confidence interval. The results are as presents in Table 4.1.

**Table 4.1: Pearson's Correlation**

<b>Pearson Correlation</b>	Revenue	Cost of internal audit (Kshs)
Revenue	1.0000	0.8999
Cost of internal audit (Kshs)	0.8999	1.0000

As indicated by Table 4.1, the correlation coefficient between the cost of internal audit and the revenue is 0.8999 which implies a very high correlation between the two variables. This can be interpreted to mean that, an increase in the cost of internal audit will lead to an increase in the revenue. The opposite is also true.

#### **4.1.2 Analytical Model of Revenue as a Function of Cost**

Given that,

$$R \propto f(C)$$

Then,

$$R = \beta_0 + \beta_1 C + \varepsilon$$

Where

**R** is the total revenue earned by Embu Water and Sanitation Company Limited for a particular fiscal period. It represents the dependent variable.

$\beta_0$  is the independent variable representing the autonomous part of the model. It shows the value of the revenue when the cost of internal audit is zero and called the Y-intercept.

$\beta_1$  is the coefficient of the independent variable. In this study,  $\beta_1$  indicates that, a change in one unit of cost of internal audit will lead to a change in fiscal revenue equivalent to the value of the coefficient.



$C$  is the costs of internal audit function which includes salaries and wages among others. It represents the independent variable.

$\varepsilon$  is the error term representing all factors other than the cost, which are not captured in the analytical model.

**Table 4.2: Model Coefficients**

Model coefficients							
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	52,894,027	13,460,974		3.929	0.017	15,520,370	90,267,683
Cost of internal audit (Kshs)	25.103	6.082	0.900	4.128	0.015	8.217	41.988
Dependent Variable: Revenue							

As indicated in Table 4.2, the model can be indicated as:

$$R = \text{Kshs } 52,894,027 + 0.9C + \varepsilon$$

This indicates that, a change in one unit used as cost of internal audit by EWASCO leads to an increase in annual revenue by 0.9 units. At the same time, if there is nothing spent in a particular year on internal audit, the revenue for organization would stand at Kshs 52,894,027. This is the value that does not depend on the roles of an internal auditor in promoting effective management and the challenges they faced in carrying out these

roles. The model therefore indicates a direct relationship between the internal audit and the revenue that is earned by EWASCO during a particular fiscal period.

Findings also indicate that, for any amount spent on cost of internal audit but within the relevant range (level of operation), the least amount revenue earned would be Kshs 15,520,370 while upper boundary of the revenue earned would be Kshs 90,267,683 within an year. This would hold at 95% confidence level provided the level of operations for the organization remains within the relevant range. The positive relationship between the cost of internal audit and the revenue is indicated by the positive coefficient value given by the model.

#### 4.1.3 Values for Significant Level

To determine the level of significance of the different explanatory variables, the researcher considered the t value, standard error of the estimate, the F significant change as well as the  $R^2$ . These values are presents in both Table 4.2 and Table 4.3.

**Table 4.3: Values for Significant Level**

MODEL SUMMARY								
R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df 1	df 2	Sig. F Change
0.900	0.810	0.762	17,694,016	0.810	17.037	1	4	0.015
Predictors: (Constant), Cost of internal audit (Kshs)								

From Table 4.2, the level of significant of the explanatory variable (cost of internal audit) is 0.015 which is less than 0.05. In addition, the significant level for the autonomous value is given as 0.017, also less than 0.05. Given that this study was carried out at 5% (0.05) significant level, a significant level of less than 0.05 would lead to acceptance for the test of significance at 95% confidence level. The opposite would also be true. Therefore, this study indicates a significant influence of the role of internal audit (through the amount spent on it) on the amount of revenue that EWASCO earns within a particular year.

### **T-Ratio (t)**

This is also called the student ratio and tells us the statistical significance of the explanatory variable (cost of internal audit in our case). If  $t > 1$ , the explanatory variable is said to be statistically significant. The opposite is true if  $t < 1$ . From table 4.2 above, t-ratio is given as 4.128 which confirm the level of statistical significance of the explanatory model within the model is high. This value helps us determine several things:

- a) *Direction of the relationship:* The value (4.128) is positive implying that, an increase in the level of cost of internal audit leads to an increase in the level of revenue and vice versa.
- b) *Magnitude of change:* Its significance (greater than 1) confirms the magnitude of change
- c) *Relationship:* The value also shows that the level of cost of internal audit is directly related to the level of revenue.

When F is greater than 1, the set of explanatory variables is considered to be significantly determining any changes in revenue. This is also expressed by Table 4.3 as 17.017.

### **Adjusted R<sup>2</sup>**

Adjusted R<sup>2</sup> is called the coefficient of determination and tells us the proportion of the change in revenue that is caused by the change in cost of internal audit. Adjust R<sup>2</sup> is derived from R<sup>2</sup> by adjusting for error term given the size of the sample. Likewise, R<sup>2</sup> is derived by getting the square of the coefficient of the autonomous variable 'R' that is directly calculated from the model. Thus, from the model the value of R is given as 0.900 – also indicated as  $\beta_1$  is squared to give 0.810 – the value for the R<sup>2</sup>. The value of adjusted R<sup>2</sup> is given as 0.762 at 95% confidence level as detailed in Table 4.3

The value of adjusted R<sup>2</sup> being 0.762 implies that, 76.2% of change in revenue is explained by change in cost of internal audit. Other factors that influence the amount of total revenue at EWASCO and not captured in the cost of internal audit are explained by the error term whose value by deduction is 0.258. This study therefore shows that the role of internal audit in influencing the revenue of an organization is highly significant. This study has established that, internal audit is a catalyst for improving an organization's effectiveness and efficiency by providing insight and recommendations based on analyses and assessments of data and business processes which translated to better financial performance. Wallace (1985) argues that, the scope of internal auditing within an organization is broad and may involve topics such as the efficacy of operations, the

reliability of financial reporting, deterring and investigating fraud, safeguarding assets, and compliance with laws and regulations.

Thus, with commitment to integrity and accountability, internal auditing provides value to governing bodies and senior management as an objective source of independent advice, a fact that ensures that the proper processes are followed in generating and safeguarding the organizational wealth.

## CHAPTER FIVE

### SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary of the study, discussions, conclusions and recommendations. The chapter also presents suggestions for further studies.

#### 5.2 Summary of the Findings and Discussions

Given the model,  $R = Kshs\ 52,894,027 + 0.9C + \varepsilon$  the role of internal audit in operation has some impact on revenue generation. The study has revealed that the water reforms by EWASCO which have called for developing infrastructure and structures management; that will achieve greater efficiency and more responsiveness to public needs adopts various types and techniques that lead to meeting satisfactorily the customer water demand, provide credible bills based on proper tariff for water consumed within the billing month and therefore generate revenue. This has also lead to increased number of households with water connection in Embu County.

The audit committee of the board of directors at EWASCO assists the Board of Directors in fulfilling its responsibility for oversight of the quality and integrity of the accounting, auditing and reporting practices of the company, and such other duties as directed by the Board.

In this regard, internal auditors play a vital role in promoting accountability and efficient and effective management (governance) through the financial compliance and performance evaluation audits and risk assessment. Consultation with management and promoting economic growth is another role of audit therefore providing efficient and effective use of resources in the company as well as supporting the public services towards result-based performance (Atak, 2004).

The value of adjusted  $R^2$  being 0.762 implies that, 76.2% of change in revenue is explained by change in cost of internal audit. The value of adjusted  $R^2$  being 0.762 implies that, 76.2% of change in revenue is explained by change in cost of internal audit. This gives a wide scope of internal audit to determine the compliance by the management to the existing company policies. As asserted by Goodwin and Yeo, (2001) the internal auditing frequently involves measuring compliance with entities, policies and procedures.

The scope of auditing within an organization is broad involving among others the efficacy operations the reliability of financial reporting deterring and investigating fraud, safeguarding assets, and compliance within laws and regulations and assessment of risks. With presence of internal audit controls system, the company adopts measures, which ensures that no one individual can control both the recording function and the procedure relative to processing a transaction thereby segregating their duties. This implies that, the internal audit system at the company ensures that operations complies with set policies and promotes accuracy and reliability of transactions recorded. The study also revealed that opportunities for collusion, fraud, loss of revenue, embezzlement, assets conversion

and corruption arise as a result of weak internal control system. Weak internal control system show poor management and corporate governance. Periodic evaluation of the internal control system by an external auditor is used to effectively access the control activities and detect fraudulent practices. Internal control is a process that is effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in; effectiveness and efficiency of operations, reliability of financial reporting, and compliance with laws and regulations (Brody and Lowe, 2000).

### **5.3 Conclusions and Recommendations**

The incidence of internal control system weaknesses have always impeded the ability of most water supply companies to effectively supply water to their customers and therefore generate potential revenue. As such her contribution to the improvement of national goals and objectives is not very satisfactory. Towards this end, internal audit is necessary since it is a catalyst for improving an organization's effectiveness and efficiency by providing insight and recommendations based on analyses and assessments of data and business processes which translated to better financial performance.

Thus, with commitment to integrity and accountability, internal auditing provides value to governing bodies and senior management as an objective source of independent advice, a fact that ensures that the proper processes are followed in generating and safeguarding the organizational wealth. The study reveals that internal control system plays a major role in prudently managing the resources and funds entrusted to managers



of an organization. EWASCO has an organizational structure denoted by organizational charts, which indicated formal communication patterns within the organization. Based on the findings from this study and close examination and evaluation of the internal controls system in operation at EWASCO, the study recommends that:

Internal control system and the investigating units at water service provision companies should be remodeled and strengthened to position them to discharge their duties effectively and efficiently. This should be done by unbundling components of the sector into separate and distinct, independent entities that handle generation, transmission, distribution and marketing.

The companies should secure a cultural change within various cadres of staff that focuses on customer satisfaction, quality service and transparency in service delivery and procurement process. The water service companies should establish more customers care centers to mitigate complaints or wrong billing, disconnections wrongly done, improper address and names.

The company should consider prepayments of water bills as an alternative to further accumulation of debts. This will go a long way to improving cash flow position for the company.

#### **5.4 Limitations of the study**

There was a number of limitations to the study. They included, scope, research design, level of education of respondents, time and sample size.

A case study of Embu Water and Sanitation Company Limited (EWASCO) was not representative of all the water service provider companies. Each company is based on its own foundation of management structure. Thus, the role of internal audit may slightly differ from company to company. It was difficult to generalize the findings of the study as some companies are in rural and others in urban centres; large and small companies.

The research was designed to capture the importance of the roles of internal auditor and their benefits and relationships to effective management. All the variables are qualitative in nature and therefore difficulties in quantifying them. A general scale of 1-5 was however used, with its own limitations.

The questionnaire was not easy to understand by some respondents who have no accounting background. Time was taken to explain the set questions to some respondents from engineering department and some members of the board of directors. The level of education of some members of the board of directors provided a barrier. The researcher is the internal auditor at EWASCO and thus, some respondents were not objective because they thought they were evaluating the employee.

It is difficult to gauge the element of success in effective management as a result of internal audit. The study assumed that all the other components of corporate management like the board of directors, external auditors and the management team were successful and constant.

## **5.5 Suggestions for Further Research**

Based on scope and limitations of this study, the researcher suggests the following studies to be carried out.

A replica study should be done on a cross-sectional base to include more companies within the water provision industry. This will show whether the roles of internal audit affect management in the same way in all the companies, and if there is variation, it would provide room for further research.

A case study on the same concept should be done for water service company in a more cosmopolitan area. This will show whether urbanization has effects different from rural-urban companies like EWASCO.

A research should be done for periods including growth period and maturity and decline of water provider companies. This will show at what level of growth in cost of audit that it has no effects on growth of revenue. That is when  $R \propto f(c)$  does not hold. Do a study to establish the extent to which the role of internal audit is influenced and compromised by the management. Great influence would lead to ineffectiveness of the internal auditor as it denies the function of its independence and objectivity.

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## APPENDICES

### APPENDIX I: QUESTIONNAIRE

#### SECTION A: DEMOGRAPHIC INFORMATION

1) Gender of the respondents Male [ ] Female [ ]

2) Age of the respondent

Less than 30 years [ ] 40-49 [ ]

30—39years [ ] 50 years and above [ ]

3) What duration have you been in your organization?

Less than 2 years [ ] 2-4 years [ ]

4-6 years [ ] 6 years and above [ ]

4) Designation of the respondents

Member of BOD [ ]

Chief Executive Officer [ ]

Top Management Employees [ ]

Medium Management Employees [ ]

Supervisors [ ]

Accountants [ ]

Water Consumers [ ]

Customer Care Managers [ ]

Other Technical Staff [ ]

Other Finance and Administrative Staff [ ]

Masters level PhD level [ ]



5) Level of education of the respondents

Secondary level

Certificate/diploma level

Graduate level

Any other (Kindly specify) \_\_\_\_\_

**SECTION B: FUNCTIONS OF INTERNAL AUDIT**

6) Are the roles of internal audit well established in your organization?

Yes  No

Kindly explain your answer

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To what extent are the following roles performed by the department of internal audit in your organization:

Use the following scale as appropriate:

1-Not at all; 2- Less extent; 3-Moderate extent; 4-Large extent; 5-To a very large extent

	1	2	3	4	5
7) Review of the reliability & integrity of financial & operating information;					
8) Review of systems established to ensure compliance with policies, procedures, plans, laws & regulations impacting operations & reports;					
9) Review of the means of safeguarding assets;					
10) Appraisal of the economy & efficiency of any aspect or functional area of your organization; and					
11) Review of operations & programs.					

**SECTION C: RELATIONSHIP BETWEEN INTERNAL AUDIT PRACTICES  
AND GOOD CORPORATE GOVERNANCE**

12) In your opinion, do you think there is any significant relationship between effective management and corporate governance in relation to the role of internal audit?

Yes [ ]      No [ ]

How does internal audit assist in the following areas of corporate governance?

Use the following scale as appropriate:

1-Not at all; 2- Less extent; 3-Moderate extent; 4-Large extent; 5-To a very large extent

Any other (Specify) \_\_\_\_\_

	1	2	3	4	5
13) Ability to transcend all departments without fear of limitation of scope by being tied					
14) The board and audit committee know that the information they are receiving on the internal controls and risk management systems reflects a true description and has not been “watered-down” or filtered by management beforehand					
15) Enables the board/audit committee to directly and critically analyze and evaluate the internal audit function in its contribution to the fulfillment of the board’s responsibility for internal controls.					
16) Reinforces the board/audit committee’s knowledge of the business and its risk profile when dealing with management and stakeholders					

**SECTION D: CHALLENGES OF INTERNAL AUDIT IN AN ORGANIZATION**

To what extent have the following factors being a challenge for internal audit in your organization? Use the following scale as appropriate:

1-Not at all; 2- Less extent; 3-Moderate extent; 4-Large extent; 5-To a very large extent

	1	2	3	4	5
17) Internal audit may not be privy to all sources of information throughout the company if seen as “outside” the management structure.					
18) Developing a continuous focus on risks					
19) The chairman of the audit committee may not have allocated sufficient time, or have adequate resources/capacity to deal with the oversight of the internal audit function					
20) Designing internal audit role that does not conflict with that of finance/account department					
21) The audit committee would be assuming more responsibility and therefore, perhaps, more liability in relation to the adequacy of the internal control and risk systems of the organization					
22) Potentially restricts the ability of the CEO to use internal audit as a tool to reinforce control principles, or in special projects					
23) Aligning internal audit coverage to meet new expectations					

**SECTION E: VARIOUS BENEFITS RESULTING FROM INTERNAL AUDIT PRACTICE IN AN ORGANIZATION**

What benefits have been achieved by your organization as a result of internal audit practices? Use the following scale as appropriate:

1-Not at all; 2- Less extent; 3-Moderate extent; 4-Large extent; 5-To a very large extent

	1	2	3	4	5
24) Effectiveness & efficiency of operations of the organization					
25) Reliability & integrity of financial & operational information has been improved in our organization					
26) Safeguarding of organization assets has improved					
27) Compliance with laws, regulations, & contracts has been witnessed in our organization as a result of internal audit					
28) The organization has been able to identify and validate customers' needs and expectations					
29) Internal audit establishes business partner relationships with audit customers					
30) Develop communication strategies to effectively communicate audit findings to stakeholders Position internal audit as an agent of change					
31) Continually improve the audit process					
32) Integrate technology into the audit process					
33) Mix audit and operational expertise to maximize performance					
34) Enhance audit staff job satisfaction					

35) Any other comments

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**THANKS FOR YOUR CORPORATION.**

## **APPENDICES 2: ANALYSIS OF DATA**

On interview the following results about the importance of extent of the roles of internal audit in practice at EWASCO ltd were obtained.

1. 75% of respondent's belief that the extent of performance by the internal auditor is to large extent.
2. 67% of respondent's belief performance/coverage is to large extent to ensure compliance with policies, procedures, plans law and regulations.
3. 75% of respondents belief that internal audit roles safeguard assets of organizations to large extent.
4. 50% of respondents agree that the role of internal audit appraise economy and efficiency of any aspect or functional area of EWASCO.
5. 75% of respondents agree that the internal audit review operations and programs of company.

### **Relationship between internal Audit practices and effective management.**

1. 83% of respondents believe that the board of directors trust information given by the internal auditor on internal controls and risk management systems reflects a true description and not been watered down or filtered by management before hand. This results from independence of the internal auditors.
2. 67% of respondents belief that the role of internal audit enables the board/audit committee to directly and critically analyze and evaluate the internal audit function as it contributes to the fulfillment of the board's responsibility for internal controls. This ensures that the controls are administered from the top to the botton.
3. 100% of respondents belief that internal audit roles reinforce BODs knowledge of the business and organizational risk profile.

## **Benefits of internal audit**

The roles of internal audit enhance effective organizational management by increasing.

1. 83 % of respondents believe there is increased effectiveness and integrity of financial and operations of the organization.
2. 75% believe there is increased reliability and integrity of financial and operational information.
3. 67% believe there's increased safeguarding of company assets.
4. 67% believe that roles of audit improve compliance with laws, regulations and contract.
5. And that the company is able to effectively validate and honor customer's needs and expectations and thus increase area of coverage (market share).
6. The research has established that communication strategies and communication of audit findings to the board of directors and shareholders is greatly improved by internal audit practices.
7. 49% of respondents believe that Audit process improves to large extent.
8. 17% of residents agree that the role of internal audit enhances job satisfaction for staff members of audit department.
9. 75% believe that operational expertise is improved by internal audit function.
10. Include; cost and water connections Vs revenue.