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PERMINUS NYAGA NDIMITU
DR. CYRUS IRAYA MWANGI
DR. SIFUNJO KISAKA
DR. MIRIE MWANGI

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# THE RELATIONSHIP BETWEEN INTERNAL AUDIT AND INTERNAL CONTROLS IN WATER SERVICE PROVIDERS IN KENYA

Perminus Nyaga Ndimitu[1], Dr. Cyrus Iraya Mwangi[2], Dr. Sifunjo Kisaka[3], Dr. Mirie Mwangi[4]

**Abstract**

**The aim of this study was to establish the association between internal audit and internal controls of Kenyan water service providers. To attain this objective, the researcher collected data on a population of 93 Water service providers. This cross sectional descriptive study that attained a response rate of 78% of the targeted 93 water service provider units was guided by a positivist research philosophy. Correlation analysis and regression analysis was then used to test the hypotheses. Correlation research analysis found a statistically significant positive relationship between internal audit and internal controls. The null hypothesis was rejected as the regression analysis found that a unit change in internal audit leads to a change of 0.505 in internal controls. . This infers that internal audit influences internal controls of Water service providers in Kenya. This study has provided an empirical foundation for investigating the relationship between internal audit and internal controls. Further, the study has made a unique contribution to policy formulation and development to benefit the understanding on how internal audit in the Kenyan context influences internal controls resulting to formulation of reforms in various public institutions to strengthen internal audit.**

**Key Words:** Internal Audit, Controls, Water Service Providers in Kenya

[1] PhD Candidate, Department of Finance and Accounting, School of Business, University of Nairobi. *ndimitu@gmail.com*
[2,3,4] Department of Finance and Accounting, School of Business, University of Nairobi

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## Introduction

Internal audit is a constituent of the wider internal control of the organization set up by the management and charged with the responsibility of ensuring that all the other elements of control system are reviewed and that the firm operates efficiently and effectively. The efficacy of internal audit relies on its independence, resources provided by management and the oversight role of board audit committee. The internal audit is a part of management team and offers consulting service to the management that ensure adherence to internal controls (McCall, 2002). The strategic goals of internal audit are dependent on the strategic objectives of the firm and therefore internal audit in water service providers must match the strategic plan of the organisation which are achievable only when the laid down procedure and policies are followed (Cohen & Sayag, 2010; Mihret & Yismaw, 2007; Mihret et al., 2010; Theofanis et al., 2011; Unegbu & Koda, 2011).

Internal audit is conducted in diverse organizational environment that a firm faces such as: legal, culture, the size of a firm, technological development, location, complexity of the firm and its structure. The approach of auditing may vary according to the environment and exposure to organization's information in order to be able to consult and guide the management in the areas of risk assessment and control (Gunther & Moore, 2002). Internal audit can make greater contributions towards enhancement of firm performance by providing the management, the board and other stake holders with assurance services, consulting services, compliance control services, and ensuring independence and objectivity in reporting (Unegbu & Koda, 2011). The association between internal audit and firm efficiency emanates from the value added to the organisation by the t internal audit through enhancement of internal procedures. Internal audit deals with issues that are fundamental to the survival and prosperity of firms and looks beyond financial risks as well as financial statements to consider such issues as organisational reputation, growth, firms' impact on the environment and the way it treats its employees.

The assurance services of internal audit involve delivering assurance on compliance with regulation and stakeholders demands. This enables the management lead with confidence, navigate risks and opportunities. To enhance effectiveness and efficiency in management of organization, the internal audit provides assurance on performance of control systems, procedures and assess whether public resources are managed in accordance with the law (such as: procurement Act 2015 & Finance Act, 2012)systems and principles and practices of financial control. The internal audit reviews budget and budgetary controls, strategic plans to be able to assure the BOD that the all regulations are complied with. The internal audit is also responsible for assuring that the organization has good risk management policy. Internal audit contributes to the organisations because they deal with core fundamental control matters necessary for firm's survival and prosperity. Internal audit goes beyond external audit role of financial risks and statements to consider organisational reputation, culture, development and firm corporate social responsibility and assure the managers and the board on how well

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the systems and processes designed to achieve firm objectives are working(Finance Act,2012; Reid & Ashelby, 2002).

Internal audit must assess whether public resources are managed in conformity with the laid down systems, procedures and practices of financial controls making sure that companies achieve their mission. Effective management of public sector organization establish internal controls to enable them deal with changes in environment, promote efficiency, reduce risks and ensure reliability of financial statements and compliance with laws and regulations (COSO, 2013; Reid & Ashelby, 2002). Internal controls are operated by management of an organization to mitigate risks (WASREB, 2014).

The area of internal audit in an organisation is wide and may include: efficiency of operations, the effectiveness of financial reports, exposure and investigation of fraud, protection of assets and making sure that organisations comply with laws and regulations. Internal auditing is a facilitator for improving efficiency and effectiveness in a firm through assessment of the business operations (Gunther & Moore, 2002). Internal Audit offer management added benefit of consultancy services out of its good understanding of the strategic risk universe, control and governance concerns and priorities of the organisation. Economic changes, ever increasing dependence on technology, regulations and organisational change treads contribute to increased risks that threaten business performance. The internal auditing function is exposed to all entity information and is provided with an enabling audit environment and resources so as to maximize their performance in the consulting role (Albrecht et al., 1988). The internal auditor, who has full knowledge of the company operations, acts as consultant whenever there is need.

With commitment to honesty and accountability, internal audit acts as an objective source of independent advice and therefore must have ethical, competent staffs who work according to the international standards of internal audit. Internal audit today should be more included with the top management as consultants and as independent assessors which are often at the expense of their assurance role as the doubles roles often conflict (Gunther & Moore, 2002). The internal audit may not be objective when reviewing activities they participated in their implementation. The consulting role of internal audit may include: Provision of advice, facilitating workshops, availing management tools and techniques to analyse risks and controls, introduction of Enterprise Resource Management system into the organisation, couching the organisation on risk and control and co-ordinating, monitoring, reporting on risks and supporting managers identify and mitigate risks. Internal audit identify the possible risks which may compromise achievement of the set goals and then make recommendations to the management to improve on operational efficiency and aligning internal controls to the internal process of the company (IIA, 1999).

Internal audit gauges and contributes to the evaluation and assessment of controls using orderly and guided methods. Internal audit provides means for improving firm performance through risk management and

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assessment of internal controls (Reid &Ashelby, 2002; Unegbu, & Koda, 2011). Internal audit assesses adherence to the existing internal controls identifies areas of weaknesses and then makes recommendations to the management for improving corporate governance (Vanasco, 1996).

Internal audit reports to the audit committee functionally and organizationally to the C.E.O. so as to establish its independence from the management as well ensuring objectivity in reporting (McCall, 2002; Vanasco, 1996).The audit committee ensures that the management implement an effective process to identify, monitor, and manage potential risks that relate to financial reporting, internal control, regulatory compliance, conflict of interest and investigations (Goodwin, 2003).Internal audit must be free to determine its scope of audit, be reasonably independent of management and yet be able to work with that management by exercising due care, honesty and integrity to safeguard the much needed independence and objectivity. Without physical and mind-set independence, the internal audit will lose its objectivity and then have biased judgement as they perform the duo-role of consulting and assurance provision to the management. The internal audit must maintain good working relationship with managers in the organisation he/she works for in order to improve organisational performance.

Objectivity of internal audit emanates from the impartiality that enables execution of its duties honestly and without significant compromises on audit matters to those of other people. The internal audit should not allow their judgements to be compromised on audit matters to those of other people. A divergence of interest may create indecency that undermines the assurance of the internal audit and the profession of internal audit. Internal audit is an asset in financial management and a tool for improving the efficiency of public entities and it is on this basis that it is viewed by many stakeholders, as a major support of corporate governance (Diamond, 2007).

Internal control systems are procedures and policies implemented by the Board of directors, top management and other employees, intended to offer realistic assurance of the achievement of goals in: effectiveness and efficiency of operations, efficiency of financial reporting, compliance with pertinent laws and regulations (COSO, 1992). Controls are therefore essential elements of corporate governance structures for risk management that ensure operational efficacy and efficiency (COSO, 1992).

Internal controls can be classified into financial controls and administrative internal control (David, 2009). Financial control refers to financial management systems that endeavour to adopt sound financial management best practices. These include operating procedures followed such as checking that the company's payments are for legitimate services rendered which helps in prevention and detection of fraud. The non-financial control activities include separation of duties to ensure checks and balances.

Approval of transactions is by authorised officers and their levels are clearly stated and observed, there are physical safeguard of asset which include use of CCTV cameras, locks, wall and buildings to safeguard property(Morgan, 1979& COSO, 2013). To deter loss by theft; there are information technology controls; human resource controls and operational controls. Installing and adhering to proper internal controls which best suit the company's situation is an expensive and complex venture. Operating manuals, policies, rules and regulations are meant to safeguard assets form losses through accidents or fraud. Internal controls help firms to prevent or reduce fraud and theft by including control activities such as bank reconciliation, internal audit reviews which may uncover cash misappropriations by staff (Alkins 2011; Nilniyom & Chanthinok, 2011).

Glance (2006) posited that control system encompasses policies, procedures and processes established by local governing council to ensure that its objectives are met. Baltaci and Yilmaz (2006) posited that when internal controls and internal audit practices do not receive the needed attention, detection and control of fraud are hindered. Without adequate controls, detection and control of bad behaviour in the water service providers would not be possible. Therefore, it is necessary for WSPs to institute effective and efficient systems in order to improve the effectiveness of internal audit. Fondi and Yuo (2010) and Jokipii (2010) expounded on the importance of internal controls and advised that more studies be done in the area of internal control system and its relationship with internal audit for improved firm performance needs to be done.

Segregation of duties is a major internal control as it ensures that the work of an individual is counterchecked by another person in the system. The process of separation of duties identifies levels of reporting and authorization; institutes information technology controls such as: Access to systems and data, segregates IT roles, reviews of access logs, audit trail and control of human resource matters about remuneration. The separation of duties may be difficult to achieve for small firms which do not have adequate resources but it is necessary to engage people from other departments or externally to take up the required functions. Segregation of duties improves accuracy and quality of accounting reports and the credibility of those reports to the ultimate users for decision making as well as for detection of errors and frauds. The IT controls include controls to: accessing programs, development and program changes. Information technology application controls are designed to ensure that complete and accurate processing of raw data is done to give the expected output. Complete checks for valid data inputs; identification of users to ensure uniquely and irrefutably identified users by application of passwords; authorisation of access controls that provide authentication mechanism to deter or eliminate cyber-crimes, enhance controls for safety, control access to systems and data is limited to authorized personnel. Reassessment of access logs .and safeguards that ensure staff work efficiently by use of electronic cloaking in and out and job analysis models; and analysis of operating procedures for risk controls.

Human resource controls relate to process documentation, recordkeeping and security; payroll and recruitment of employees. The human resource controls include compliance function directed to ensure adherence to state employment and labour laws and regulations. Effective human resource control system provide accountability, effective and efficient compliance environment that has procedures capable of identifying control points where errors or irregularities may occur and then mitigate the risks to allow managers to focus on strategic goals. Electronic cloaking time cards detect fraud, the creation of fake employees and identify theft which can cripple firm financially and erode trust. Additionally, human resource procedures that do not control risks often reduce effectiveness and efficiency of firm performance. Control of employee's attendance to duty and working hours may be controlled using electronic timecards authorised by human resource manager before payment. Segregation of duties in payroll procedures should also be observed.Operational controls are the controls are those controls used over execution of normal business process. Operational controls involve: Organising, assignment of tusks, designing objectives of the firm and giving authoritative direction required to achieve the mission. Operational controls are usually given in the working and procedural manuals, company and internal audit charters. In the light of the foregoing, this study sought to answer the research question:To what extent does internal audit influence internal controls in water service providers in Kenya?

## Literature Review

Internal controls at WSPs are the procedures, policies and practices established by the management to improve achievement of goals for those companies. Water services regulatory Board (WASREB), has issued policies, directives and regulations to guide the management of the WSPs in Kenya. WSPs are required to be licensed by the water service boards (WASBs) and supervised by water service regulatory board that regulates the tariffs and ensures good corporate governance structures which include: audit committee, internal audit, management and the External audit. The WSPs in Kenya are also guided by international accounting standards, international financial reporting standards (IFRS) and finance Act 2012 of Kenya and by COSO, 1992 internal controls framework, operating manuals which include: finance manual, internal audit manual, technical services manual, procurement manuals, risk management policy and other operating policies of the board of directors so as to improve firm efficiency.

The operating manuals, policies rules and regulations are meant to safeguard assets from losses through accidents or fraud, to ensure separation of duties, identify levels of reporting and authorization; institute information technology controls such as: Access to systems and data, segregation of IT duties, review of access logs, Audit trail and control of human resource issues of remuneration. Clocking in and out electronically and separation of payroll duties; and to ensure efficiency and truthfulness of financial reporting, accurate, timely and complete information, to ensure compliance with law and regulations; promote efficient and proficient procedures and improve performance of WSPs that accomplish objectives and goals which ultimately ensures profitability, financial sustainability and improved service delivery (WASREB, 2013)

A research by Badara and Saidin (2013) examined the effects of effective internal controls on the internal audit efficacy. The study focus was to establish the influence of internal controls on internal audit in the local authorities of Kano state. The results were that internal controls have a positive influence on internal audit in local authorities of Kano state of Nigeria. The study never focused on the effect of institutional characteristics on the association between internal audit and performance of WSPs in Kenya. Additionally Gamage, Lock & Fernando (2014) investigated the association between the internal controls and financial performance of state corporations in Nigeria. The finding was that efficient controls positively influence firm performance. The study failed to capture the influence of internal audit on internal control which is a clear indication of knowledge gap that this study sought to address.

**Research Methodology**

A cross-sectional survey was used in this study. The design was appropriate since it included data collection at a point in time which relates to two or more variables in an effort to determine associations between the variables. The study was also a correlation study conducted in the natural environment of the companies with no interference, manipulation or control of study variables by the researcher. A survey was suited for the study because WSPs in Kenya are few but spread to all parts of the country. Data collection and other relevant costs were minimal as most of the secondary data was easily accessible from WASREB and most of the respondents were within reach at monthly WASPA meeting.

The population of the study was 93 water service providers in Kenya which were regulated by WASREB as at 2015. Population census was best for the research as the WSPs are few and although spread in the entire country , Kenya, data collection costs were minimal as the respondents were within reach at WASPA monthly meetings and the secondary data was readily accessible from WASREB impact assessment reports.

The study used both primary and secondary data (Saunders, Lewis & Thornhill, 2007). Primary data was obtained by self-administered, pre arranged questionnaire made up of closed ended questions prepared in line with the goals, theories upon which the study was anchored, empirical studies and corresponding hypotheses of the study. Study assistants were recruited and trained. The data collection instruments were delivered to the Chief Executive Officer who was considered as best placed to have the required information.

The objective was to establish the association between internal audit and internal controls of water service providers in Kenya. The dependent- independent variables relationship is modelled as:

$$Y = a + \beta_1 X_1 + \varepsilon$$

Where: Y = Internal Controls

a= intercept

$X_1$ = Internal Audit

$\beta_1$ = beta coefficient

$\varepsilon$= Error term

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## Results and Discussion Of Findings

### Response Rate

A total of 93 questionnaires were circulated to the 93 WSPs. 73 questionnaires were correctly filled and returned representing a 78% response rate. According to Borg (2007) a response rate of 50 percent in a survey is adequate.

### Descriptive Statistics

The researcher sought to conduct a descriptive analysis on internal audit and internal controls and institutional characteristics. Table 1 below the summary of these statistics.

**Table 1: Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Statistic | Statistic |
| Firm performance | 73 | .15 | 1.00 | .726 | .207 |
| Assurance services | 73 | 1.00 | 5.00 | 3.575 | 1.058 |
| Compliance policies | 73 | 1.00 | 5.00 | 3.312 | 1.131 |
| Consulting management | 73 | 1.00 | 5.00 | 3.266 | 1.026 |
| Independence | 73 | 1.00 | 5.00 | 3.466 | 1.192 |
| Objectivity | 73 | 1.00 | 5.00 | 3.445 | 1.233 |
| Segregation of duties | 73 | 1.00 | 5.00 | 3.966 | .709 |
| IT Controls | 73 | 1.00 | 5.00 | 3.215 | 1.084 |
| Human resources Controls | 73 | 1.00 | 5.00 | 2.484 | .986 |
| Operational Procedures | 73 | 1.00 | 5.00 | 4.137 | .909 |

### Correlation Analysis

The Pearson product-moment correlation coefficients measures the strength of a linear relationship between two variables and is denoted by r and for this study the correlation analysis of variables are shown in table 2 below.

**Table 2:Pearsons Correlation Coefficient**

| | Internal Audit Practices | Internal Controls |
|---|---|---|
| Internal Audit Practices | 1 | |
| Internal Controls | .656** | 1 |

The results establishes a statistically significant positive relationship between internal audit and internal controls (r=0.656). This implies a strong causal effect between these two variables.

### Regression Analysis

The researcher sought to establish the influence of internal audit on internal controls whether positive or negative and if is statistically significant. The results are as per tables 3 - 5 below.

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**Table 3: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .656[a] | .430 | .422 | .57157 |
| a. Predictors: (Constant), Internal audit practices | | | | |

The model summary in table 3 above shows that the r - squared was 0.656. This implies that 65.6% of variability in internal controls can be explained by variability in internal audit. The overall impression is that the model had an acceptable goodness of fit.

**Table 4: Analysis of Variance**

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 17.513 | 1 | 17.513 | 53.605 | .000[b] |
| | Residual | 23.195 | 71 | .327 | | |
| | Total | 40.708 | 72 | | | |
| a. Dependent Variable: internal controls | | | | | | |
| b. Predictors: (Constant), Internal audit practices | | | | | | |

The ANOVA table above shows the results of the test for the significance of the overall model. This test was used to evaluate whether the model is statistically significant in explaining the relationship between internal controls and internal audit practices. As evident above, the model is statistically significant in explaining the relationship between internal controls and internal audit practices ($F(1, 72) = 53.605$, $P<0.05$)

**Table 5: Model Regression Coefficients of Internal Audit and Internal Controls**

| | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| | (Constant) | 1.739 | .245 | | 7.110 | .000 |
| | Internal audit | .505 | .069 | .597 | 7.322 | .000 |

As presented in table 5 above, the influence of internal audit on internal controls is positive and is statistically significant ($\beta=0.505$, $t=7.322$, $P<0.05$). This infers that for every unit increase in internal audit, internal controls increase to the extent of 0.505 units.

**Conclusion And Recommendations**

The study findings confirm empirical study conclusions by Badara and Saidin (2013) and Johl, Subramaniam and Cooper (2013) that internal audit enhance internal controls. The study results agree with the contingency theory perspective that the organisational performance is driven by internal controls which are partly contingent on internal audit. The study also agrees with the findings of Cohen and Sayag (2010) that effectiveness of internal audit to enhance internal controls depends on support from top management to provide adequate resources required for internal audit activity. As explained by Hays and Davis (2004), the role of internal audit in monitoring operational activities is provided for in the monitoring theory. The study recommends that firms should enhance their internal audit function due to the beneficial effect it has on internal controls. The ultimate goal of better internal controls is increment of firm performance.

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