ROLE OF INTERNAL CONTROLS IN MANAGEMENT OF COMPANY PHYSICAL ASSETS: A CASE STUDY OF INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE-UGANDA

BY

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DECLARATION

I, Maria Nanyanzi, do declare that the work herein is presented in its original form and has not been presented to any university for academic award.

Sign:……

Date……

APPROVAL

We certify that Maria Nanyanzi carried out the study and wrote this dissertation under our supervision. This dissertation has been submitted for examination with our approval as supervisors.

Signature…….

Date…….

Mr.Abdallah Mayanja Kambugu

Signature…….

Date…….

Mr. Ben Mugerwa

DEDICATION

This work is dedicated to my family, who offered me unconditional love and support throughout the course. My husband, Arby Wasike, without whose caring support it would not have been possible, my daughters Ama Mellisa Tendo, Amy Tiffany Kirabo and Aretha Marianne Kitiibwa whose smile always gives me the confidence to push on and work hard, I will always be grateful.

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ABSTRACT

The purpose of this study was to examine the role of Internal Control Systems in management of company physical assets. A cross sectional survey design was used. Data was gathered using a self administered structured questionnaire. Two separate self administered questionnaires (SAQ) were designed. One questionnaire was specifically designed for employees and board members while the second one designed for auditors. Questions were both structured and unstructured. The SAQ started with the main title then an introduction stating the purpose and intention of data collection, followed by section A which composed of questions about background characteristics of respondents while section B contained questions investigating the relationship between the study variables. The data was analyzed using SPSS, the findings revealed that Internal Control Systems have a significant positive effect in achieving effective asset management. The study further reveals that there's significant positive relationship between Control Activities, Information technology, Monitoring controls and Asset Management in the organization.

The findings revealed that Internal Control Systems have a significant positive effect in achieving Asset Management. The construct of Internal Control Systems (Control Activities, Information technology and monitoring) have a significant positive relationship with Asset Management. This implies that the more sound the ICS, the more chances that the organization will achieve Asset Management. Having known the significance of Internal Controls, organizations need to ensure that they continuously review them and ensure that they are operational.

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ABBREVIATIONS/ACRYONYM

ALCM	Asset Life Cycle Management
AM	Asset Management
COBIT	Control Objectives of related Information Technology
COSO	Committee of Sponsoring Tread way Organization
DTT	Deloitte Touché Tohmatsu
IAM	Institute of Asset Management
ICS	Internal Control Systems
IT	Information Technology
IITA	International Institute of Tropical Agriculture
NGO	Non Government Organization
SAQ	Self Administered Questionnaire
UMI	Uganda Management Institute

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Internal controls serve an important part in safeguarding the organizational operational process, information, assets and providing reliability of financial reporting. These controls are either preventive or detective whereby preventive controls are designed to discourage errors, fraud or accomplish objective of the organization whereas detective controls are designed to identify an error/fraud after it has occurred. Asset management are the policies and procedures that provide reasonable assurance regarding prevention or detection of un authorized acquisition, use or disposition of the company's assets. This chapter covers the background to the study, the statement of the problem, the purpose of the study, the objectives, research questions, hypotheses, scope of the study, significance, justification and operational definitions of the terms and concepts.

1.2 Background to the study

Internal control systems, according to Elder (2010) are defined as management procedures and policies designed to ensure efficiency and effectiveness in operations to protect resources, ensure maintenance and reporting of reliable information and enforce execution of operations in a way that is consistent with the established management procedures and policies. Asset management is an operational process that involves acquisition, maintenance and disposal of assets. Asset Management is the strategic management of physical assets during their

life in the organization. Physical assets have a life: they are planned and

created, used, managed and maintained, and when no longer required prepared for disposal. The elements of this study are further elaborated into historical, theoretical, conceptual and contextual backgrounds as indicated below.

1.2.1 Historical Background

The evolution process of developing a generally accepted definition and framework of internal control was realized in 1992 with the publication of a land mark report on internal control using the Committee of Sponsoring Organization (1992) framework. Non Government Organizations have safe guarding controls over asset management though these may differ depending on the structure and size of the organization and the level of assets that the company has and the asset management systems applied.

International Institute of Tropical Agriculture is labeled as a Non Government Organization and has existed in Uganda for the past 15years. Among its safeguarding controls is inventory tags and asset register which is a preventive control. IITA also performs periodic physical inventory checks that are detective controls. Asset acquisition at IITA involves filling a purchase request for items above 500,000 Uganda shillings approval by the budget officer is required before Local/International purchase order is prepared to which three (3) quotations from different suppliers are attached. Procurement of anew asset as soon as the purchase order is completed is followed by receiving and acknowledgement. When an asset is deployed, the system is updated with relevant data such as location, responsible party and any other data that can be useful in asset management.

Asets identified for disposal may be dispensed off using the procedures which involve private sale/private placement, transfer the asset to another institution, destroyed or cannibalized. This is done through bidding upon approval from the Asset Disposal Committee at the headquarters in

Nigeria. When approval is granted disposition is done depending on the depreciation value. These control systems have managed to safeguard IITA assets because they play an important role regardless of the size.

1.2.2 Theoretical Background

Internal control frameworks such as COSO and COBIT were designed to help NGOs and oversee assets. Such were designed to provide clarity by using common definitions and integrating various control concepts into frameworks that define components such as control environments, control activities, risk management, information and communication and monitoring. As it is mentioned before, asset management is a critical component of an organization's management. Czaplicki (2008) examined the terotechnology model which aims at obtaining maximum economic benefit from physical assets. The terotechnology model involves planning, designing, maintenance, decommission and recycling of physical assets. It's a concept that analyzes the whole asset life cycle and the economic management with an objective of obtaining maximum economic benefit from physical assets. Makaranga, Parsa & Manase (2012) further describe the asset life cycle as a process that includes asset acquisition, maintenance, operation, upgrade, renewal and disposal. These are activities which need to be strategically managed to achieve effective asset management.

1.2.3 Conceptual Background

Controls in management of physical assets are important in an organization and this has been recognized in recent decades. Windley (2002) identifies an asset life cycle as procurement, deployment, use and decommission. This life cycle has control systems that organizations can apply in asset management. The COSO framework highlights mechanisms of how management can better control the organization and oversee internal control. This framework clarifies on

internal control by using a common definition and integrating various control concepts such as control environment, control activities, risk management, information and communication and monitoring components of internal control.

Control environment is the foundation on which an effective control system is built and an appropriate control environment involves competent and knowledge people, who understand their responsibilities, and are mindful in doing what is right and in the right way. In the control environment, people are committed to following organization policies and procedures, its ethical and behavioral standards.

Control activities are key processes for asset management purposes that include authorizations and approvals, physical counts of assets, analysis and segregation of duties. Management and board of directors approve and authorize before any asset is acquired or disposed off and how maintenance should be carried out in accordance to organization's policies and procedures.

COSO's Guidance on Monitoring Internal Control Systems, vol.1, states that when monitoring is effective, it provides the necessary support for management to be confident that internal control is operating effectively. The internal control and audit function supports the management by evaluating the operation of internal controls and giving recommendations on development of control systems.

1.2.4 Contextual Background

The International Institute of Tropical Agriculture (IITA) is an Africa-based international research and development organization, established in 1967, and governed by a board of trustees. Its vision is to be one of Africa's leading research partners in finding solution for hunger and poverty. IITA

has more than 100 international scientists based in various stations across Africa but for the purpose of this study the focus is on IITA-Uganda

IITA has a fixed asset register which is maintained at the station, records of the register include acquisition date, value of the asset, location, value and acknowledgement of the person possessing the asset. Reliability of data in the asset register is required to ensure accountability for IITA assets. Asset management systems if developed in IITA will help reduce the acquisition of unnecessary assets and increase asset utilization.

1.3 Statement of the problem

Internal controls serve an important part in safeguarding the organizational operational process, information, assets and providing reliability of financial reporting (Thompson,2010). Internal controls are put in place to keep the organization on course towards profitability goals and management to deal with rapidly changing economic and competitive environments, shifting customer demands and priorities, and restructuring for future growth. Internal controls promote efficiency, reduce risk of asset loss, and help ensure the reliability of financial statements and compliance with laws and regulations. International Institute of Tropical Agriculture has safe guarding controls like inventory tags which is a preventive control and also performs periodic physical inventory checks which is a timely detective control however irregularities have been identified in the IITA-Uganda audit reports in the past five years (2007-2011). Relevant information required for management and control purpose were not provided , some assets were relocated to other stations without acknowledgment hence a loop hole in tracking and monitoring, some of the stations assets were not insured to mitigate the risks that these assets are exposed to thus affecting the asset maintenance policy. Also, disposal of some assets takes long yet they keep

depreciating thus losing their value. Therefore the study seeks to investigate which control systems can be used to manage the organization's assets and how the components of an effective control process are applicable to IITA.

1.4 General objective

This study seeks to assess the role of internal controls in management of company physical assets.

1.5 Specific objectives

1. To examine how control activities affect asset management at IITA.
2. To assess how information technology affects asset management at IITA
3. To examine whether monitoring controls affect management of assets at IITA

1.6 Research Questions

1. How do control activities affect asset management at IITA?
2. How does information technology affect asset management?
3. To what extent do monitoring activities affect asset management?

1.7 Hypothesis of the study

1. Control activities affect management of assets.
2. Information technology affects asset management in an organization.
3. To a greater extent, monitoring activities affect asset management.

1.8 Significance of the study

The study was to help IITA increase efficiency and reduce risk of asset loss in organization by providing more information on the right controls to use, provide more knowledge about control systems that can be applicable and have not yet been established into the organization.

The study was also to inform practitioners, auditors and regulators, who design, implement and evaluate controls about some of the potential costs and benefits of various types of controls so that costs are minimized especially on controls and maintenance procedures. Asset management systems if developed in IITA would help reduce the acquisition of unnecessary assets and increase utilization, tracking of assets that are transferred to other locations would be achieved through these systems.

1.9 Justification of the study

There has been misuse of company's assets and procedures of acquiring assets, maintenance and disposal have not been followed in IITA. This leaves a question on how controls should be affected to safe guard assets. Audit reports have shown that IITA still has a problem with asset management despite being in existence for more than 15years in Uganda and this has not been tackled yet. There has been a risk of un authorized use of equipments and loss of assets which was also noted in the audit reports and this has clearly shown that systems in IITA are still weak and have been misused in one way or another hence my area of interest.

1.10 Scope of the study

This study was limited to the dimensions of internal control systems which involved; control activities, monitoring and information technology in investigating the role of internal control

systems in management of company's physical assets. Asset management was limited to asset acquisition, maintenance and disposal. The ICS was the independent variable and asset management the dependent variable. The study was carried out at IITA-Uganda and limited to IITA management, employees, Board members and auditors. The study covered the period from 2007-2011, this was because it's in these years that audit reports have noticed irregularities in asset management process.

1.11 Operational definitions

1.11.1 An asset is something that has potential or actual value to an organization.

1.11.2 Asset management is a concept which recognizes that good asset management involves optimizing (within any absolute constraints) the mix of cost, risk and performance over the whole asset life. According to IAM (2012), Asset management is a systematic and coordinated activities and practices through which an organization optimally and sustainably manages its assets and asset systems, their associated performance, risks and expenditures over their life cycles for the purpose of achieving its organizational strategic plan.

1.11.3 Internal control is a process of integrated sets of activities originated by top personnel of an organization and embedded within all the organization's activities to achieve goals but in relation to this study, internal controls are procedures and policies designed to ensure efficiency and effectiveness in management and safeguarding company's assets.

1.11.4 Internal control systems mean the various policies, procedures and practices that are in an organization to ensure that assets are acquired, maintained and disposed off with applicable procedures and policies.

1.11.5 Components are part of the internal control system such as control activities, monitoring, information and communication, risk assessment and control environment. The components also have the sub components (internal controls).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review is an account of what has been published and written in attempt to bring out information related to the problem investigated. Our study focused at internal controls and asset management within IITA, hence literature was reviewed under sub themes such as; control activities and asset management, monitoring and asset management and information technology and asset management. This involved review of published journals, publications, text books, documents and organizational reports but limited to the key variable ingredients under study.

2.2 Internal controls

Cahill (2006) defines internal control as systems for financial checks and balances that are designed by management to achieve organizational objectives and goals, and supported by corrective actions. According to Romney and Steinbart (2006), internal controls have three different types i.e. preventive controls which deter problems before they arise, detective controls needed to discover problems and corrective controls which correct problems that have been discovered. Elder et al, (2010) recognized corrective controls as another classification of the internal controls and defined them as activities that ensure that detected problems are rectified; these can still be called corrective controls. Gupta and Arora (2004) stated that internal control systems should be established in any organization in order to safe guard company's assets among others. For the purpose of this study, internal control systems refer to all the policies, procedures and practices that are within an organization to ensure that asset acquisition, maintenance, use and disposal are conducted in regard to internal controls.

2.3 Theoretical Review

The importance of physical assets has been increasingly recognized in recent decades (Ali, 2008). Asset management is a process to manage demand and guide acquisition, use and disposal of assets to make the most of their service delivery potential, and manage risks and costs over their life time (Myburg 2007). According to Wirdley (2002), physical asset management is a continuous process covering the whole asset life involving acquisition, maintenance and disposal. It is a combination of tools, processes and people supported by corrective actions to achieve organizational goals (Thompson, 2010). This study presented empirical evidence that evaluates asset management models and internal control by assessing the components as described by the COSO framework of the internal control system.

In 1992, COSO issued the internal control-integrated framework which defines internal control systems and provides guidance for evaluating and enhancing internal control systems. COSO's internal control model identifies control environment, control activities, risk assessment, information and communication and monitoring as the five crucial components of internal control. Bowrin (2004) opines that all the five components must be present for an effective internal control. However the COSO framework does not recognize Information technology (IT) as one of the major control components yet today IT is crucial to internal control because organizations use it for authorization, recording and processing of transactions. The inability of COSO to recognize information technology as a control component led to the design and development of other frameworks such as Control Objectives for Information and Related Technology (COBIT) that identifies IT as a source of information needed by organization processes. Such web based

applications enable authorized users to view only data and execute transactions, update the assets assigned to them hence easy monitoring (Thompson, 2010).

As earlier mentioned, asset management is a critical component for an organization's management. Czaplicki, (2008) examined further the terotechnology model which involves planning, designing, maintenance and recycling of physical assets. Meanwhile Belak, (2005) concurs that terotechnology approach is necessary in management of physical assets. However physical asset management models such as the Asset Life Cycle Management (ALCM) model have primarily focused on maintenance (Amadi-Echendu, 2004). The ALCM model comprises of preventive maintenance, deferred maintenance reduction, a maintenance plan and procedures, maintenance information, operational systems and maintenance operations as the key elements.

Whereas the ALCM model predominately deals with maintenance whereas another model, the terotechnology model, combines management, financial, engineering and other practices applied to physical assets in pursuit of economic Life Cycle Costs (Amadi-Echendu, 2004). This study aims at finding out how physical assets can be managed economically and safeguarded through applying the concept of tertechnology that focuses on the economic management of assets with an objective of obtaining maximum economic benefit from physical assets.

2.4 Conceptual Framework

A Conceptual framework showing the Relationship between Internal Controls and Asset Management.

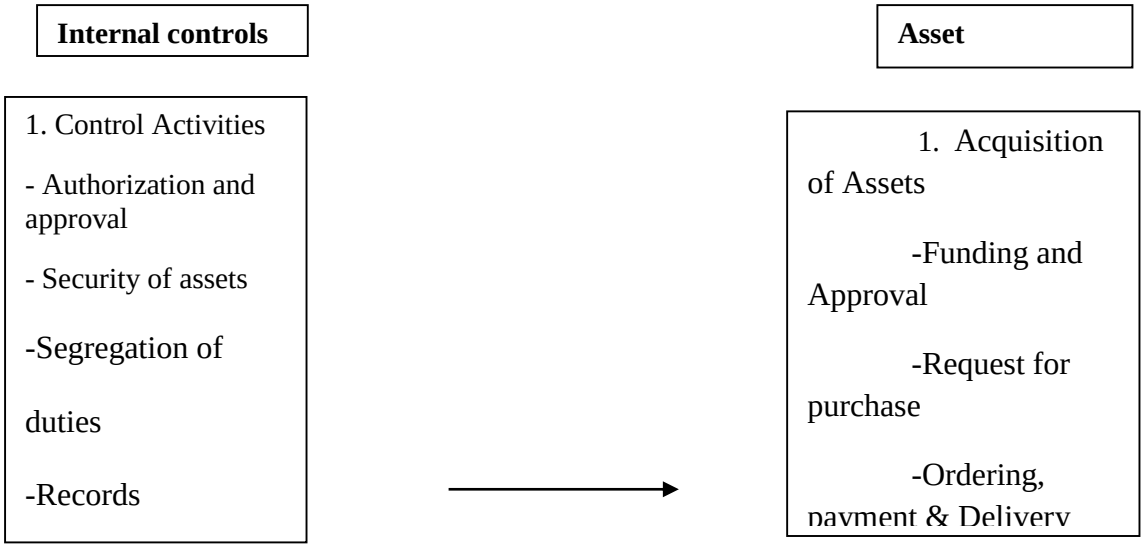

Figure 1: The operationalisation of all the variables.

Source: International Journal of Finance and Economics and modified by the researcher.

The objectives of effective internal control in Fig.1 include efficient and effective asset acquisition processes, maintenance and disposal. Internal control is the dependent variable whereas asset management is the dependent variable. The presence and proper functioning of all the components of the independent variable ensures effectiveness of internal control systems hence achieving effective asset management processes that involve acquisition, maintenance, and disposal. The independent variable was limited to Control activities, monitoring and information technology this was because the process of asset management can be advanced in those dimensions. All the

independent variables are interdependent but each has an impact on the effectiveness of internal control systems. The study uses the model in Fig.1 to evaluate the effectiveness of available internal controls in IITA for asset management.

2.5 Control Activities

According to Hevesi (2005) control activities are policies and procedures designed to enforce management's directives. Also, Steinbart and Tanki (2004) defined it as policies and procedures put in place to ensure that management directives are carried out. Hamed (2010) further stated that they are necessary actions taken to help ensure that risks and achievement of the entity's objectives are addressed. These control activities include approvals and authorization, security of assets, records management and segregation of duties which will be the major drives of this study.

2.5.1 Approval and Authorization

According to Manasseh (2004), authorization and approval is a control aimed at ensuring that all organizational transactions are approved and authorized by responsible officers whose limits of authority are defined. Authorization includes granting permission to perform activities or transactions (Simmons, 2005). Management authorizes employees to perform certain activities and to execute certain transactions within limited parameters. In addition, management specifies those activities or transactions that need supervisory approval before they are performed or executed by employees. On the other hand, approval, manual or electronic, implies that the supervisor has verified and validated that the activity or transaction conforms to established policies and procedures. Therefore, authorization should be clearly documented and communicated to employees carrying out their assigned duties (Hamed 2010).

2.5.2 Security of Assets

The basic concept behind restricting access to physical assets is to reduce the risk of unauthorized use or loss, and to help achieve effective asset management (Hamed & Babak 2010). There is need for a custodian to account for and maintain these physical assets; however, management should carry out periodic comparison of the assets with the records to determine whether the two are similar.

2.5.3 Segregation of Duties

Segregation of duties, according to Manasseh (2004), should be written down in a manual to minimize risk of intentional manipulation and boost the element of inter-checking. Separation of duties is viewed as a critical component of an organization's internal control structure aimed primarily at reducing opportunities for fraudulent activities (Adam & Best, 2003). Duties and responsibilities are assigned to different individuals to ensure that effective checks and balances exist (Hamed & Babak 2010). For example, authorizing, approving, issuing and receiving assets should be assigned to different individuals for effective management of physical assets. When the person performs both functions of custody of assets and recording, there's a risk that the person may dispose off some assets and adjust the records. On the other hand, Manasseh (2004) observed that if authorization and execution are segregated, asset loss/theft will be minimized. It is therefore important that the principle of segregation of duties should be adhered to in order to avoid loss/theft of assets and safeguard them properly.

2.5.4 Records Management

The existing and written down accounting controls that require all transactions to be recorded at the correct value and classified properly will facilitate accountability for assets (Gupta & Arora, 2004). Also, documents and records should be prepared at the time a transaction takes place to

avoid possible errors (Arens & Loebbecke, 1997). Arens and Loebbecke continued to assert that where there's a longer time interval between occurrence of a transaction and recording, records are less credible and chance for misstatements is increased which could lead to asset loss.

2.6 Monitoring

Internal control systems need to be monitored through a process that assesses the quality of the systems performance. Elder et al (2010) defines monitoring controls as activities dealing with ongoing or periodic assessment of the quality of the internal control by management to ensure that controls are operating as intended and that they are modified as appropriate for changes in conditions. Simmons (2005) asserts that monitoring encompasses supervising, observing and testing activities and appropriately reporting to responsible people. It is commonly acceptable that internal control systems are monitored in order to assess the quality of the system's performance over time. To verify that the controls in place are performing as intended, monitoring has to take place during normal operations and separate evaluations (Steinberg & Tanki, 2005). Strong monitoring will ensure that all the other control components are working concurrently to safeguard the assets (Manasseh, 2004). Hence by monitoring, it is ensured that the findings of audits and other reviews are promptly resolved (Rezaee et al, 2001).

2.6.1 Internal Auditing

Internal auditing is a critical component of monitoring and a foundation for safe and sound operations (Drogala et al, 2005, Karagiorgos et al, 2010). Elder et al, (2010) further noted that it is the duty of the internal audit staff to monitor the controls and information. Assessment comes from a variety of sources which include; studies from existing internal controls, internal audit reports, exemption reports on control activities and reports by regulators.

2.7 Information Technology

Information technology is one of the major control components that is crucial to an internal control framework (Amudo & Inanga 2009). Today organizations use information technology for control activities such as authorization, approvals, recording and processing (Thompson, 2010). Information Technology ensures effectiveness of internal controls. The Control Objectives for Information and Related Technology (COBIT 2007) identifies IT resources as a source of information needed by organization's processes. Information Technology resources are people, application systems, technology, facilities, and data (COBIT 2007). In order for organizations to have complete visibility over all their assets regardless of division or geographic location, having a web-based solution is essential (Thompson, 2010). Application security enables authorized users to view data regarding asset description, acquisition cost, purchase order number and asset allocation. Information technology involves application controls that help ensure that transactions occurred, are authorized, and are completely and accurately recorded and processed (Hamed 2010).

2.8 Acquisition of Assets

Acquisition involves replacement of existing assets at the end of their economic life, refurbishment of existing assets to extend their service life and acquisition of existing assets from another organization (Thompson, 2010). Before acquiring an asset, the lowest cycle cost must be taken into account to secure value for money during the maintenance and disposal process (Makaranga, Parsa, Manase, 2012). Asset acquisition must be done in an efficient and effective manner; procedures should be followed on how asset acquisition is done with appropriate approval and authorization.

2.9 Maintenance of Assets

Maintenance comes with an increasing pressure to reduce operational expenditures on assets. The overall objective of maintenance is to ensure that the assets remain safe and operational to meet their service duty and performance requirements (Parsa & Manase, 2012) . Management should be in position to reduce maintenance requirements/costs by daily routine check-ups on the assets. Asset maintenance schedules are prepared, updated and monitored by management, asset maintenance activities must be reviewed periodically by management.

2.10 Disposal of Assets

Disposal drives include changes of standards rendering the asset unsuitable for the latest requirements (Windley, 2002). When assets are beyond the useful life span and are uneconomical to repair, become obsolete or unsupportable, environmental impacts and risk assessment hence disposition. Where fixed asset is no longer in use, the person in charge must fill scrap/obsolete assets form and get it approved by supervisor in preparation for its eventual disposal.

2.11 Summary of Literature Review

The literature above shows that an internal control system is directly related to the management of assets in an organization but this is not always true in reality for some organization especially in not for profit making organization. Organizations may put in place good internal controls in anticipation of increased efficiency in management of assets but these controls' proper functionality will depend on the internal auditors, management, and employees who will see to it that they follow internal controls put in place to ensure efficiency in asset management.

As pointed out earlier, the above interrelated components of the internal control system are necessary in managing company's physical assets and should exist in a written form to enable consistent application. Gupta & Arora (2004) observed that a written representation is more reliable than oral statements. They provide more information and can be referred to incase of communication gaps. This therefore implies that an organization which does not have internal control system written down will find it difficult to remain consistent in the application of internal controls.

Roles of internal controls in managing company physical assets assessment are achieved upon writing down and communication of internal controls. However, the necessary internal controls that play a major role in asset management may exist in a written form in the operational manual but the board members, audit committee or employees may not know them. These controls must be communicated and implemented as laid down in the policy manuals.

According to the Scottish Public Finance Manual (2004), asset loss/theft is due to failure to comply with the existing control systems. Kern, De wenter & Viere (2005) concurred with this statement and assert that mere presence of good accounting controls does not guarantee air-tight security. However they agreed that establishing adequate internal control procedures could reduce loss and theft of assets. Contrally, if existing internal controls are implemented but not as laid down, effective asset management process may not be achieved.

Research Gaps

In the literature, the previous works endeavored to capture the relationship between Internal Controls and Asset Management. The components of ICS including Control activities, Control Environment, Monitoring and risk management were part of the system of IC whereas the three concepts of Asset Management i.e. Acquisition, Maintenance and Disposal. However, there were attempts by the scholars of the previous studies to establish the intensity of the relationship between Information Technology and Asset Management. The ICS was limited to six components and information technology was left out. Therefore the current study endeavored to bridge this gap by establishing the degree of relationship between Asset Management and Information Technology with its implication in the ICS.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter covered the research design, area and population of the study, sample selection, size, data collection, reliability and validity of instruments and analysis. Collection of data was done at IITA-Uganda station and consisted of closed-ended structured questionnaires that targeted staff in administration (support), scientists and field staff.

3.2 Research design

A research design is a stated structure and process of conducting research detailing the plan and method for systematically and scientifically obtaining data for analysis (Amin 2005).

The study used a case study research design which involved both quantitative and qualitative data. According to Sekaran (2003) case studies involve in depth contextual analysis of matters relating to similar situations in an organization for instance assessing the role of internal controls in management of company's physical assets. Qualitative data was collected through interviews with staff, board members and internal auditors. This helped gather information about internal control culture and asset management process in IITA.

The qualitative methods enabled the researcher develop, analyze, interpret and generalize data and information from the sample population regarding major themes and issues under investigation (Amin, 2004:26). The qualitative methods were supplemented by quantitative data which was collected using questionnaires. The qualitative data helped to provide numeric description to the trends, attitude, opinions and experience of the population regarding the roles of internal control in management of assets. Amin (2004) supports the use of two approaches and argues that although a particular research may be predominately of one type, a mixture of the two types of designs is

preferable. Salomon (1991) also states that the issue is not quantitative or qualitative at all, but whether we are taking an analytic approach to understanding a few controlled variables or a systematic approach to understanding the interaction of variables in a complex environment.

3.3 Population study

Population refers to a group of people, events or things of interest that the researcher wishes to investigate (Sekaran, 2003). The total population was fifty two (52) based on the staff list of September 2012 and was stratified according to different departments because many have different perspectives on the variable of interest. It's from this population that the representative sample was selected using the Krejcie Robert & Morgan Daryle table for determining sample size.

3.4 Table for Sample size and selection

Department	**Number Of Staff**	**Sample Size**	**Sampling Techniques.**	
Administration	10	10	Simple Random	
Audit	2	2	Purposive Sampling	
Project	15	14	Simple Random	
Consultants	20	19	Simple Random	
Board Members	5	5	Purposive Sampling	
Total	**52**	**50**		

***Source**: Human resource manager IITA-Uganda and Krejcie Robert & Morgan Daryle table for Determining sample size.*

Sample size is a sub set of the population (Sekaran, 2003). The targeted sample size was 50 consisting of 10 employees, 19 consultants, 14 project staff, 5 board members and 2 internal auditors. The Krejcie Robert & Morgan Daryle table was used to determine the sample size out of the study elements (Amin 2003, Pg.454).

3.5 Sampling techniques and procedures

Sampling is the process of selecting the right individuals, objects or events for a study (Sekaran Uma, 2003). Mugenda and Mugenda (1999) define sampling as a formulation of a procedure of selecting the subjects or cases to be included in the sample. This study used both probability and non probability sampling techniques. The non probability techniques were used on purposive sampling for the selection of key informants like board members and auditors. Mugenda and Mugenda (1999) advocates for purposive sampling as it allows a researcher to use cases that will have the required information with respect to the objective of the study. These key informants were interviewed to seek views on internal control systems and management of assets. This also allowed the researcher to use her judgment regarding the participant from whom information was collected.

3.6 Data collection methods

The study used both primary and secondary data sources. Primary data was collected using general interviews and questionnaires while secondary data was got through analysis of documents. Information regarding internal controls was mainly gathered from the auditors while information regarding Asset Management was mainly gathered from the support staff. The data collected was adequate enough to make conclusions regarding Asset Management and Internal Controls. The instruments and methods of data collection are briefly explained below:

3.6.1 Questionnaire Survey

Two separate self administered questionnaires (SAQ) were designed. One questionnaire was specifically designed for employees and board members while the second one designed for auditors. Questions were both structured and unstructured. Self administered questionnaire cover more respondents in a relatively short time (Amin, 2005). The SAQ started with the main title then

an introduction stating the purpose and intention of data collection, followed by section A which composed of questions about background characteristics of respondents while section.B contained questions investigating the relationship between the study variables.

3.6.2 Interview Guide

An interview is defined as an oral administration of a questionnaire, which involves face to face encounters and requires maximum cooperation from respondent in order for the researcher to obtain accurate and reliable data (Mugenda and Mugenda 1999). Personal interviews with the help of an interview guide were administered to auditors and a few board members. This population was appropriate for interview because it's small and immediate feedback of data regarding the roles of Internal Control System in management of physical assets were obtained.

3.6.3 Documentary reviews

Documents relevant to the study were accessed and reviewed to enable the researcher find out how internal controls in IITA have been effected and what has been reviewed on asset management in regard to control activities. These documents involved audit reports, articles and presentation notes from board members on controls in IITA.

3.7 Data collection Instruments

3.7.1 Questionnaire

Questionnaires were used to collect data from the selected respondents using structured questions. The questionnaire was developed on a five point Likert scales measuring from Strongly Disagree

as response 1 to Strongly Agree as response 5 (Sekaran, 2003). All questions were arranged in one direction and all the constructs were operationally defined.

3.8 Validity

Validity is the ability to produce findings that are in agreement with the theoretical or conceptual values (Sekaran, 2003). It should be able to produce results that reflect the true situation in conditions of the environment it's supposed to measure. Content validity was applied to check the extent to which the measuring instrument provided was an adequate coverage of the topic under study. The result was the inter-judge coefficient of validity for them. The researcher computed the content validity index (CVI) using the following formula:

The formula that was used to compute the Content Validity Index (CVI) is

$$CVI = \frac{\text{Number of Questions Declared Valid in the Questionnaires}}{\text{Total Numbers of Questions}}$$

Where CVI is Content Validity Index If the CVI obtained is 0.7, then the study is valid.

3.8.1 Reliability

Reliability is a measure of the degree to which the research instrument yields consistent results or data after repeated trials (Mugenda and Mugenda, 2003). A respondent pre-testing was done by field testing the questionnaire on individuals with characteristics and background similar to the desired respondents (Donald, 2002). This enabled the researcher view the questions that are not relevant to the respondents and appropriate questions designed. Data was entered into SPSS and results were found to be equal to 0.7 ssuggesting that the items have relatively internal consistency which is considered acceptable.

The formula is;

$$\alpha = \frac{K1}{K-1} \left[\frac{1-\sum \sigma 2\, K}{\sigma 2} \right]$$

Where α = Alpha Coefficient

Ϭ = Variable of the total test

$\sum \sigma K$ = Sum of variance of the questions in the instrument]

K=No. of questions in research instrument

According to Amin (2005), as long as the coefficient Alpha is above 0.7, then it is reliable.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.756	0.787	50

From table above all the reliability statistics measured well above the threshold 0.6 as recommended by Sekaran (2003).

3.9 Procedure for Data Collection

After initializing the proposal and approval by the supervisor, the researcher defended it. When approved by the panel, an introduction letter was got from the institute before proceeding to the field. After data collection, the researcher coded, edited and analyzed the data before preparing the final data for submission.

3.10 Qualitative Data Analysis

The researcher analyzed both the qualitative and quantitative data collected. Qualitative data analysis from the interviews was utilized to make narrative statements on relationship between

categories or themes of data. Once themes, categories and patterns were established, data was evaluated and analyzed to determine the adequacy, credibility, usefulness and consistency of information, validation of the hypothesis and report finally written.

3.10.1 Quantitative Data Analysis

Quantitatively obtained data was edited, coded and verified. The data was entered into Epidata and later exported to the Statistical Package for Social Scientists (SPSS). A code representing a particular phenomenon was established and summarized using the descriptive statistics. Regression analysis was utilized to find out whether the independent variable predicts the dependent variable, whereas the correlation coefficient was established to measure the magnitude of the relationship between the variables (Mugenda and Mugenda, 2003).

3.11 Measurement of Variables

3.11.1 Descriptive Statistics and the Likert Scale

The researcher measured the variables by using the Likert Scale continuum considering the average the descriptive statistics under each variable. A standardized rating scale of 1-5 (1-Strongly Disagree, 2- DisAgree, 3-Not Sure, 4-Agree, 5 Strongly Agree) was used for evaluation. According to Amin (2005), the above scale is very flexible and easy to construct and interprete. From a likert scale of 5, means more than 2.5 show agreement and those below 2.5 show disagreement. On the other hand, high standard deviations show that there was a lot of variation in the respondents' view; hence disagreement while low standard deviations mean that most responses cluster around the mean hence agreement. This interpretation applies for all the interpretations of mean and standard deviations.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents findings of the study, which are presented and interpreted in context with the objectives. The purpose of the study was to assess the role of internal controls in management of company physical assets. Forty six (46) respondents from IITA participated in the study. The data collected was coded and summarized using SPSS and excel to get descriptive and inferential statistics such as frequencies, tables, percentages and correlation tests. However background characteristics of the respondents are represented to give a clear picture of the type of respondents that participated in the study.

Table 4.1 Response Rate of the respondents from IITA Uganda

	Frequency	Percent
Staff	33	71.7
Scientist	13	28.3
Total	46	100.0

The response rate shows the staff and scientists who were involved in the study. Results show that 72% (33) of the respondents were national staffs in Uganda serving in administration, purchasing, and IITA field station offices whereas 28% (13) were scientists both at national and international level (Table 4.1). There was a good response rate on the subject matter, since 80% of the 50 questionnaires distributed were returned.

4.2 Background Information

The study established demographic characteristics such as gender and nationality which provided enough information on the respondents to determine a complete picture of the characteristics of the members in the population. The demographics may influence the knowledge on internal controls and asset management.

4.2.1 Gender distribution of respondents.

Table 4.2.1 Sex of respondents

	Frequency	**Percent**
Male	30	65.2
Female	16	34.8
Total	46	100.0

Source: Primary Data

Fig. 4.2.1 Responses from male were 65% (30) with 35% (16) from female (Table 4.2.1). This shows that views of the respondents were equally distributed from both genders of IITA.

Table 4.2.2 Length of stay in IITA

Period	**Frequency**	**Percent**
0-5years	13	28.3
6-10years	20	43.5
Above 10years	13	28.3
Total	46	100.0

Forty four (44%) of the respondents had been in employment with IITA for more than 6years and 28% constituted those who had worked for more than 10years. This shows that views of the results of this study are represented by staff with long experience and knowledge on IITA operations. Thus were in good position to assess the role of internal controls in management of company physical assets in the organization.

4.3 Examining the effect of control activities on asset management

Descriptive statistics were used to examine how control activities affect asset management in IITA. Control activities, a core component of the five elements of internal control, includes policies and procedures that help ensure management directives are carried out to achieve goals and objectives of the organization. Control activities occur throughout the organization and these include authorization and approval, security of assets, segregation of duties and records management.

Table 4.3.1 Responses on Authorization and Approval of Assets

	Min	Max	Mean	Std. Deviation
The process of asset acquisition is clear and transparent.	1	5	4.02	0.745
Asset requisition is approved by responsible officials of the department.	1	5	4.37	0.488
Before acquiring an asset there's appropriate authorization.	1	5	4.41	0.617
The accounting department receives a copy of each authorization for asset transaction.	1	5	4.52	0.505

***Source**: Primary data*

Table 4.3.1 depicts the respondent's knowledge on control activities. Descriptive analysis revealed that the respondents perceived the authorization and approval of Assets have strong positive effect on the management of assets at IITA.

According to the table above, the mean 4.02 (high) and standard deviation of 0.745 (low) indicates that the process of asset acquisition is clear and transparent to the respondents. Majority of the respondents were in agreement theta asset requisition is approved by responsible officials of the

department with mean of (4.37). There is appropriate authorization before acquiring an asset since the mean response is (4.41) and standard deviation is (0.617).

When authorization and approval is done, the accounting department receives a copy of each authorized transaction because the average response (4.52) shows agreement to the statement thus achieving effective asset management.

4.3.2 Security of Assets

Security of physical assets is necessary because it helps reduce the risk of unauthorized use/loss hence achieving effective asset management.

Table: 4.3.2 Responses on Security of Physical Assets

	Min	Max	Mean	Std. Deviation
Physical checks are taken periodically or at least annually.	1	5	4.39	0.577
There is proper safeguard of assets in specific locations.	1	5	4.39	0.714
Adequate insurance coverage is provided for physical assets.	1	5	4.22	0.867
Adequate physical safeguards over physical assets are employed.	1	5	4.24	0.705
There are identification tags permanently affixed to fixed assets upon acquisition.	1	5	4.30	0.628
Management has taken appropriate steps to safeguard assets against loss/theft.	1	5	4.37	0.488

Source: *Primary Data*

Table 4.2.3 above shows that the respondents agreed that; Physical checks are taken periodically or at least annually, there is proper safeguard of assets in specific locations, adequate insurance

coverage is provided for physical assets, adequate insurance coverage is provided for physical assets, there are identification tags permanently affixed to fixed assets upon acquisition and management has taken appropriate steps to safeguard assets against loss/theft as indicated by the high average response and the low standard deviations.

4.4.3 Segregation of duties

Separation of duties is viewed as a critical component of an organization's internal control structure aimed at ensuring effective management of company physical assets, segregation of duties should be adhered to in order to avoid loss/theft of assets and safeguard them properly.

Table 4.3.3 Responses on Segregation of duties in Asset Management

	Min	Max	Mean	Std. Deviation
Procedures exist for identifying and disposing off assets.	1	5	4.33	0.845
There is proper separation of duties between persons who purchase and handle assets.	1	5	4.63	0.610
There are different persons responsible for receiving, issuing and storing of assets.	1	5	4.67	0.474
Purchases are made by requisition or by purchase order.	1	5	4.65	0.482
There is proper segregation of duties regarding physical checks, counts and inventory tags.	1	5	4.50	0.506
Duties are separated between initiating purchases, asset custody and record keeping.	1	5	3.24	1.158

Source: *Primary Data*

According to the findings in the table above the respondents agreed that procedures exist for identifying and disposing off represented by the mean of 4.33 (high) and standard deviation of 0.845 (low). The findings further show that there is proper separation of duties between persons

who purchase and handle assets, there are different persons responsible for receiving, issuing and storing of assets, purchases are made by requisition or by purchase order and there is proper segregation of duties regarding physical checks, counts and inventory tags all of which have shown high average responses and low standard deviations that all signify agreement to the segregation of duties at IITA. However, much as the respondents agreed that duties are separated between initiating purchases, asset custody and record keeping shown by a relatively high mean (3.24), the standard deviation of 1.158 is rather high and shows that the agreement levels were not very high.

4.3. Records Management of Physical Assets

Table 4.4.4 Responses on Management of records to achieve effective Asset management

	Min	Max	Mean	Std. Deviation
Recording of assets takes place immediately after acquisition.	1	5	4.54	0.862
Identification information like tags is promptly placed on the assets.	1	5	3.43	1.167
There is proper records management of assets.	1	5	4.11	0.795
Records of Assets are reconciled with physical counts.	1	5	4.24	0.947
Asset records are adjusted promptly when asset is disposed off or acquired.	1	5	4.07	0.712
The organization has written policies to enforce restrictions of custody under control.	1	5	4.20	1.067
Asset records are maintained under custody.	1	5	4.48	0.658
A written policy/procedure manual exists for maintenance of these assets.	1	5	4.26	0.575
Written procedures exist for safeguarding assets against unauthorized use.	1	5	3.85	1.264

Source: *Primary Data*

Table 4.4.4 results revealed that majority of the respondents agreed that recording of assets takes place immediately after acquisition, there is proper records management of assets, records of assets are reconciled with physical counts, asset records are adjusted promptly when asset is disposed off or acquired, asset records are maintained under custody and a written policy/procedure manual exists for maintenance of these assets all representing a strong positive effect on asset management since they are represented with high average responses (4.54, 4.11, 4.24, 4.07, 4.48 and 4.26 respectively) and low standard deviations. Conversely, the respondents agreed that identification information like tags is promptly placed on the assets; the organization has written policies to enforce restrictions of custody under control and written procedures exist for safeguarding assets against unauthorized use since they are represented by high mean responses although the standard deviations are relatively high which lowers the level of the respondents' agreement.

4.4 Assessing effects of information technology on asset management

It should be noted that information technology is one of the major control components that is crucial to an internal control framework. Therefore, achieving effective asset management needs to use information technology applications to enhance asset data management.

Table 4.4.1 Responses on Information Technology in management of Physical Assets

	Min	Max	Mean	Std. Deviation
There are computerized asset recording systems and management.	1	5	4.24	0.673
Policies and procedures are clearly stated and systematically communicated.	1	5	4.46	0.585

Source: *Primary Data*

From the table above it can be observed that the respondents agreed that IITA has computerized asset recording system and management as well as policies and procedures are clearly stated and systematically communicated because of their high average responses of 4.24 and 4.46 respectively and low standard deviations of 0.673 and 0.585 respectively.

4.5 Monitoring in Asset Management

To establish the role of monitoring in asset management, the focus was put on the existing and implementation of supervision and internal audits as controls that help in asset management. Monitoring as a control helps in effective asset management once policies and procedures exist in written form and are implemented as laid down.

Table 4.5.1 Responses on Monitoring Controls in managing company Physical Assets

	Min	Max	Mean	Std. Deviation
Assets are periodically reviewed for the purpose of determining adequate insurance coverage.	1	5	4.09	0.962
IITA policies and procedures support internal controls.	1	5	3.93	1.063
Management monitors and approves disposition of obsolete and inactive assets.	1	5	3.87	1.166
Counting of assets and access to tags is done by an official responsible for custody of assets.	1	5	4.11	0.737
The organization carries out internal audits.	1	5	4.24	0.822
Internal audit team is independent of the employee who implements transaction.	1	5	4.09	0.839
Management reacts to internal audit queries given.	1	5	4.20	0.778

Source: *Primary Source*

The data collected on whether audits are in existence and playing any role in the management of assets are presented in table 4.5.1. The mean 4.09 (high) and standard deviation 0.962 (low)

indicate that the respondents agreed that assets are periodically reviewed for the purpose of determining adequate insurance coverage.

The findings further show that the respondents also agreed that counting of assets and access to tags is done by an official responsible for custody of assets, the organization carries out internal audits, internal audit team is independent of the employee who implements transaction and the management reacts to internal audit queries given since they all have high average responses and low standard deviations.

However, although respondents agreed that IITA policies and procedures support internal controls and management monitors and approves disposition of obsolete and inactive assets due to their relatively high average responses (3.93 and 3.87 respectively), the standard deviations of 1.063 and 1.66 respectively were rather high and show that there were relatively high variations in the agreement levels.

4.6 Asset Acquisition

Asset acquisition calls for purchasing key assets that are needed by the company. This may involve buying new assets or replacing old ones, acquiring assets should be prioritized or based on the importance of the asset to the organization.

Table 4.6.1 Responses on Asset Acquisition

	Min	Max	Mean	Std. Deviation
Procurement of assets is done according to IITA policies and procedures	1	5	3.67	1.076
Authorization and approval are done when acquiring an asset.	1	5	3.72	1.026
Assets are recorded in the asset register book at acquisition.	1	5	4.39	0.577

***Source**: Primary data*

Most respondents agreed that procurement of assets is done according to IITA policies and procedures as well as authorization and approval are done when acquiring an asset as shown by the mean 3.67 and 3.72 although the standard deviations were rather high which shows that the agreement levels were not very high.

4.7 Maintenance of Assets

Table 4.7.1Responses on Maintenance of Assets

	Min	Max	Mean	Std. Deviation
Maintenance and repairs of assets are monitored.	1	5	4.24	0.673
Assets are recorded in the asset register book at acquisition	1	5	4.39	0.577
Assets are periodically checked to ensure that they are maintained	1	5	3.87	0.718
Assets are insured to mitigate risks	1	5	4.04	0.788

Source: *Primary data*

From the table above, Maintenance and repairs of assets are monitored Assets are recorded in the asset register book at acquisition, assets are periodically checked to ensure that they are maintained, assets are insured to mitigate risks, assets are insured to mitigate risks represented agreement of the most of the respondents signified with high average responses and low standard deviation.

However, some of the respondents further said that some assets are repaired at a high cost which becomes uneconomical yet they need to be disposed off to reduce on the maintenance costs.

4.8 Disposal of Assets

Asset disposal occurs when assets are beyond their useful life span and are uneconomical to repair, obsolete or unsupportable hence disposition.

Table 4.8.1 Responses on Disposition of company Physical Assets

	Min	Max	Mean	Std. Deviation
Management plans for asset disposal and outlines procedures to identify obsolete/surplus assets	1	5	4.41	0.580
IITA disposes off assets that are no longer in use or whose standards have changed	1	5	4.48	0.658
When transferring assets, records are updated accordingly	1	5	3.80	1.147
Asset disposal is done through bidding upon approval from management	1	5	3.91	1.132

Source: Primary Data

The study shows that the respondents agreed that IITA through its management plans for asset disposal and outlines procedures to identify obsolete/surplus assets and also that IITA disposes off assets that are no longer in use or whose standards have changed which are represented high average responses of 4.41 and 4.48respectively as well as low standard deviations of 0.58 and 0.658 respectively.

Furthermore, the respondents also agreed that when transferring assets, records are updated accordingly and asset disposal is done through bidding upon approval from management although the levels of agreement were relatively low due to the rather high standard deviations.

4.9 Hypothesis testing

The researcher set out to establish the effect between the independent variable and dependent variable. In order to test the hypothesis, the researcher generated indices to obtain mean responses and standard deviation to show the level of agreement. Therefore the strength and direction between the independent and dependent variables was determined using regression analysis since it is suitable to measure the effect of such relations.

4.9.1 Effect of Control activities on Asset Management.

From the beginning, the researcher set out to explore the effect of the control activities on the asset management at IITA. To verify this, a null hypothesis was derived as: "Control activities have no significant effect on the management of assets". To test the hypothesis, the researcher the response of strongly agree, agree, either agree or disagree, disagree and strongly disagree as 5 to 1. The table below (table 4.9.1) shows the regression of control activities on asset management.

Table 4.9.1 *Regression of control activities and asset management*

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.956	0.914	0.896	0.21500	0.914	52.858	1	5	0.001

According to the findings in table 4.9.1 above, factors of the control activities were regressed on the factors on asset management.

There was a significant effect on the management of assets because the p value (0.001) was lower than the level of significance. The factors studied under the control activities explain 91.4% of the management of asset. There was a strong positive effect of control activities on the management of assets indicated by a correlation coefficient of 0.956. Thus we reject the null hypothesis and conclude that control activities have a significant effect on the management of assets at IITA. This seems to agree with Ray and Pany (2001)'s belief that "control activities are policies and procedures that help ensure that management directives are carried out".

4.9.2 Effect of Information technology on asset Management

The researcher also set out to examine the effect of information technology on asset management at IITA In order to determine this effect, a null hypothesis was determined as: "Information technology has no significant effect on the management of assets at IITA." Therefore a hypothesis test was done establish the effect of technology on the management of assets as shown below.

Table 4.9.2 Regression of Information technology and asset Management

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
						R Square Change	F Change	df1	df2	Sig. F Change
	1	0.464	0.215	-0.046	0.32790	0.215	.824	1	3	0.431

Source: Primary Data

Apparently no significant effect exists between information technology and the management of assets at IITA since the p value, 0.431 is greater than the level of significance. The factors under information technology explain only 21.5% of the asset management and the correlation coefficient 0.464 is considered to be very weak. Therefore we reject the alternative hypothesis and conclude that information technology has no significant effect on the management of assets at IITA. There are other factors that account for asset management that should be examined.

4.9.3 Effect of Monitoring on Asset Management

In order to investigate the effect of monitoring on the management of assets at IITA, the researcher formulated a null hypothesis: "Monitoring has no significant effect on asset management at IITA"

Therefore the magnitude and direction of the effect of the monitoring on asset management at IITA was established using regression analysis as presented in the table below.

Table 4.9.3 Regression of Monitoring and Asset Management

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
						R Square Change	F Change	df1	df2	Sig. F Change
	1	0.325	0.105	-0.074	0.27403	0.105	0.589	1	5	0.478

Source: Primary Data

Table 4.9.3 indicates the regression of the factors of monitoring on asset management. The findings show no significant effect of monitoring on asset management since the p value (0.478) is higher than the significance level. The correlation coefficient (0.1325) further shows a very weak effect of monitoring on asset management. Therefore we reject the alternative hypothesis and conclude that monitoring has no significant effect on the management of assets at IITA hence there are other factors that affect the quality of teaching and learning that need to be explored. However, the results show a positive relationship between monitoring and asset management implying that monitoring controls play a role in asset acquisition, maintenance and disposal. These results seem to agree with Sebbowa (2009) who notes that "Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of asset management control and governance processes". This is also in line with Whittington and Pany (2001) assertion that "internal auditing is performed as part of the monitoring activity of an organization"

4.10 Qualitative Data Analysis

Interview Guide Results:

When assessing the role of internal control system on management of company physical assets, the researcher conducted a number of interviews with key informants of the institution. These included internal auditors, regional finance officers and a purchasing officer. Results of the interview are summarized below under the various questions interviewed.

4.10.1 The position of officers interviewed

This study conducted face-to-face interviews so as to strengthen the quantitative data collected from questionnaires. Focus was put on the following positions; Internal auditors, Regional Finance Officer and Purchasing officers. The management team constitutes both top level and middle level managers who are directly involved in implementation of the institution's policies.

4.10.2 Control Activities and Asset management

The research examined and interviewed a number of key informants as to ascertain whether IITA has responsible people concerned with authorization and approval of assets. The respondents seemed to agree that control activities are in place and they also concur that the internal auditor advises management. There's further assurance to management that the systems of internal control put in place are functioning. Similarly, IITA operates a system of internal control, ensuring policies and procedures are followed, safeguarding assets through the maintenance of a fixed asset register and updating it regularly. It was further observed that Internal Audit staff carries out regular reviews of assets, verifications and coding to ascertain whether there is effective asset management process, in line with the findings of Thuy, (2007); INTOSAI, (2004); and Laura, (2002).

However, one respondent was quoted saying “there were a number of assets that were physically available but not recorded in the asset management system and vice versa” this shows a weakness in the control system especially with records management.

4.10.3 Monitoring in management of Assets

The results further revealed that there is monitoring of assets which includes physical verification of assets against the asset management system and accounting records and audits are carried out annually or upon management request. The study further revealed that good monitoring systems contribute to effective asset acquisition, maintenance and disposal. Supervision is carried out on a daily basis by allocated supervisors however copies of the audit reports are not shared with some staff members hence they are unaware of the control weaknesses and areas that might need improvements as far as risk management, control and governance is concerned.

Also the reports contain audit recommendations and actions that they (the management and staff) need to implement so as to mitigate the risks identified thus improving the effectiveness of the risk management, control and governance process. The internal audit function makes continuous follow up to ensure the recommendations/agreed action plans are implemented in time hence effective asset management process.

4.10.4 Information Technology and Asset Management

The respondents believe that the recent introduction of auto bar-coding system IITA is vital in the process of operating, maintaining, upgrading and disposing of assets cost effectively. The auto bar-coding system is reliable and accurate software in identifying and tracking assets. Each asset is tagged with a security label with a bar code in which the information about the asset is encoded and a record of the item is created in the data base. Therefore a strategic approach to asset

management will be achieved in order to meet goals and objectives of the organization and ease accountability to donors when needed.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The overriding purpose of this study was to determine the role of internal controls in management of company physical assets. This chapter presents the summary of findings, the conclusions drawn and the recommendations developed so as to address the existing gaps from the study.

5.2 Summary of findings

Questionnaires and interviews were administered to find out the role of internal control in managing company physical assets. The sample size was 46 and this included all staff at IITA-Uganda station. The all obtained data was thoroughly analyzed and interpreted on the basic of objective and hypothesis of the study. The major study findings are discussed in this chapter.

5.2.1 Findings on Control Activities and Asset Management

The study discovered that control activities which involve authorization and approval, segregation of duties, records management and security of assets are all carried out by management to ensure that IITA safeguards its assets therefore management is committed to the controls of asset acquisition, maintenance and disposal. Majority respondents (63%) strongly agreed regarding authorization and approval before an Asset is acquired, regular maintenance and during disposition. Thus there are effective controls in management of IITA physical assets.

The study also revealed that all the activities of the organization are initiated by the top level management. Just as the study by Kaplan (2008) reveals that reducing risks in asset management requires approval and authorization based on the organization's purchasing policies and procedures undertaken. According to Thuy, (2007) and Sarbanes-Oxley Act (SOX, 2002), Control activities are comprised of policies and procedures, and systems relating to the reliability of

financial reporting. They include authorizations and approvals, verifications, reconciliations, reviews of performance, security of assets, segregation of duties, and controls over information systems which is supported by the findings of Laura (2002). It was further revealed that the purchasing officer confirms that the quotations are from reliable suppliers to ensure that the assets acquired are durable and have a guarantee. Authorization and approval processes are clearly segregated; 59% of the respondents agreed that all staff in charge of the asset management program perform their responsibilities as per the regulations and guidelines. However it is understandable where 2% of the respondents were not sure that there is proper segregation of duties in IITA. The asset register is updated accordingly incase an asset is transferred to another station and management approves it by signing the asset transfer forms. However, the study also found out that there is limited information sharing in IITA where some staff members are unable to access some of the reports hence no improvements and motivation to staff and also no security measures are put in place to safeguard some of the assets of the organization.

5.2.2 Findings on Monitoring and Asset Management

Monitoring involves supervision and internal audits, the study found out that the internal audit department is efficient and conducts regular audit activities and also produces regular audit reports. Respondents further agreed that involvement of the Internal Audit staff during asset management implementation reduces the risk of loss of assets and enhances compliance to asset management guidelines leading to reliable financial reporting in IITA. However, the study also found out that the internal audit department is understaffed and this could be one of the reasons for not producing reports as expected. Regarding asset management, the study found out that, there is clear supervision of activities by senior staff; weaknesses that are realized are addressed, though most

of the staff especially the supervisors have not received any training program in regards to internal controls or asset management in the organization.

5.2.3 Information Technology and Asset Management

The study revealed that information technology is crucial to an internal control framework and important in asset management. In order for IITA to have complete visibility over all their assets regardless of the geographic location, having a web-based solution is essential however the organization has not had computerized system of managing its asset in the previous years of the study though this has been addressed and the system installed. This has helped with the monitoring of the assets especially those that are transferred and disposed off hence creating an effective asset management process.

5.3 Discussion of findings

5.3.1 Control Activities and Asset Management

The study revealed that the reporting structure is clearly stipulated in the organization and it was further revealed that control activities are a construct of internal control systems. This is in line with the findings of INTOSAL, 2004. It was further revealed that asset management and control activities are similar to applying principles to the management of physical assets and provide a strategic approach for maintaining assets in a state of good repair. An Asset management policy outlines an organizational asset management objectives, targets and plans.

5.3.2 Monitoring controls and Asset Management

It was revealed that there is supervision exercise done when staff is exiting the organization to ensure that all assets still exist and incase for shortfall identification, punishment/payment for the missing asset is required.

5.3.3 Information Technology and Asset management

Upgrading of the asset management process using the auto bar-coding system has commenced in the organization which is an indicator of use of IT, operating and maintaining of all tangible and intangible property of an entity/organization using the above system. However asset management is dynamic, management override, high labor turnover have all limited the attainment of strategic goals and strategic planning in asset acquisition, maintenance and disposal hence decayed infrastructions, lack of trust and theft.

5.4 Conclusions

Generally, the study examined the role of internal controls in management of company physical assets and the key findings from this research, which is comparable to findings in other studies, is that Internal Control Systems have a significant positive effect in achieving effective asset management in the organization. This means that when Internal Control Systems improve, there will be proper asset management process which involves acquisition, maintenance and disposal.

The study further revealed that there's a significant positive relationship between control activities and asset management this implies that once control activities are in place asset management will be achieved.

5.4.1 Monitoring and asset management

Effective monitoring helps the organization to understand the asset management guidelines and carry out their responsibilities as well. Respondents further agreed that involvement of the internal audit in management of assets with periodic reviews against records would help prevent/deter the losses.

5.4.2 Information Technology and asset management

Information technology is one of the major control components that is crucial to an internal control framework and organizations use information technology for control activities such as authorization, approvals, recording and processing. It ensures effective control systems and asset management. The Control Objectives for Information and Related Technology (COBIT 2007) identifies IT resources as a source of information needed by organization's processes. Information Technology resources are people, application systems, technology, facilities, and data (COBIT 2007). In order for organizations to have complete visibility over all their assets regardless of division or geographic location, having a web-based solution is essential (Thompson, 2010). Application security enables authorized users to view data regarding asset description, acquisition cost, purchase order number and asset allocation. Information technology involves application controls that help ensure that transactions occurred, are authorized, and are completely and accurately recorded.

5.5 Recommendations

The following recommendations have been made based on the findings and conclusions drawn from the study.

5.5.1 Internal Controls and Asset management

Having known the significance of internal controls, management needs to ensure that they continuously review these internal control systems and ensure that they are operational. There's need for IITA to ensure that all transactions are approved before being processed and authorized by officers in charge. Though this has been done, there's still need to strengthen the control systems in the organization to meet objectives and goals set, this can be done by ensuring all activities and tasks are being completed according to standards. Emphasizing the importance of organization

assets to all stake holders in the organization and proper monitoring of assets during staff exit so that everything is left in good condition, this can be achieved by using physical checks which is very vital to an organization.

Ensuring compliance with organization's policies, procedures and directives and also government laws and regulations that affect the organization is recommended to improve systems. Duties need to be segregated so that controls are effected, errors minimized especially in the coding systems and segregation of duties between the asset requester and approver should be specified.

All assets should be recorded in the asset management system with details such as acquisition date, quantity, value, owner and location. All assets should be coded for accounting purposes and tagged with a code number, this is to ensure that the codes can be used for various categories of the assets and can be traced and matched against the details in the asset management system.

Periodic reviews of the assets by both the asset owners and internal audit function should be carried out so that asset records are kept up to date and also prevent loss. Continuous reminders on the importance of internal controls and follow up to ensure compliance should be done and recommendations from auditors put in to action.

Staff training should also be considered in regards to internal control systems since most of them are not aware of what/when to do something and how assets can be managed as a responsibility of everyone and not only supervisors or management.

The study also recommends that the organization establishes a strategy for improving controls on asset records were by records detail all the asset information like inventory, historical, financial condition and technical information about the asset registered.

Finally, the study recommends that there should be a deliberate attempt to conduct a study which establishes the relationship of management's commitment based on factors that are external to

the organization such as behavioral issues of the staff that is the control environment and risk management.

5.6 Limitations of the study

Staff awareness and accountability has been a major limitation to the study were by most of the staff in the organization are not aware of some controls especially those that are applicable to assets. There is a lot of staff carelessness and lack of knowledge which leads to taking short-cuts instead of following procedures (non-compliance).

Information from management differed from some of the information which was got from junior staff which showed that there's a communication gap between management and staff hence causing a challenge in data analysis for the different respondents.

5.7 Areas recommended for future research

The results from the study point out a number of opportunities for further research into control environment and asset management, staff motivation and asset management. Future research should attempt to collect data from other Local Governments in Uganda to find out the effectiveness of Internal Control Systems in achieving asset management since the study concentrated on non for profit organization.

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APPENDICES

Appendix 1

Dear Respondent,

I am a student pursuing a Master's degree in Management Studies (Finance) at Uganda Management Institute, as part of my course; I am conducting a study on roles of internal controls in management of physical assets. I kindly request for your response in the questions below as part of fulfilling the requirements of the research, answers provided will be used for educational purposes and will be kept with utmost confidentiality.

Thank You for your Cooperation

Yours Faithfully,

MARIA NANYANZI

REG NO: 12/MMSFM/27/156

Research Student

QUESTIONNAIRE

ROLES OF INTERNAL CONTROLS IN MANAGEMENT OF COMPANY PHYSICAL ASSETS: A case study of International Institute of Tropical Agriculture (IITA-Uganda).

INTRODUCTION.

Internal control is a process that guides an organization towards achieving its objectives. These objectives include operational efficiency and effectiveness, reliability of financial reporting, and compliance with relevant laws and regulations.

Asset Management are the policies and procedures that provide reasonable assurance regarding prevention or detection of un authorized acquisition, use or disposition of the company's assets. Therefore asset management is a process that involves asset acquisition, maintenance and disposal. Company Physical assets may include computer equipments, laboratory equipments, office furniture, motor vehicles etc.

SECTION A. Bio Data

(Please fill or tick the most appropriate option below).

1. Sex Male Female

2. Nationality: Ugandan ☐ Non Ugandan ☐

3. Category of respondent: Staff ☐ Scientist ☐

4. For how long have you been an employee of this organization?

0-5yrs ☐ 6-10yrs ☐ above 10yrs ☐

SECTION B.

KEY

5	**4**	**3**	**2**	**1**
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

Please tick the most appropriate response in respect to each question in the columns on the right hand side of each item using the scale above.

INTERNAL CONTROL SYSTEMS AND ASSET MANAGEMENT						
		5	**4**	**3**	**2**	**1**
		S.A	**A**	**N**	**D**	**S.D**
B.1	**CONTROL ACTIVITIES**					
1.1	**Authorization & Approval**					
1.1.1	The process of asset acquisition is clear and transparent.					
1.1.2	Asset requisition is approved by responsible officials of the department.					
1.1.3	Before acquiring an asset there's appropriate authorization.					
1.1.4	The accounting department receives a copy of each authorization for asset transaction.					
1.2	**Security of Assets**					
1.2.1	Physical checks are taken periodically or at least annually.					
1.2.2	There is proper safeguard of assets in specific locations.					
1.2.3	Adequate insurance coverage is provided for physical assets.					
1.2.4	Adequate physical safeguards over physical assets are employed.					
1.2.5	There are identification tags permanently affixed to fixed assets upon acquisition.					
1.2.6	Management has taken appropriate steps to safeguard assets against loss/theft.					
1.3	**Segregation of duties**					
1.3.1	Procedures exist for identifying and disposing off assets.					
1.3.2	There is proper separation of duties between persons who purchase and handle assets.					
1.3.3	There are different persons responsible for receiving, issuing and storing of assets.					

1.3.4	Purchases are made by requisition or by purchase order.					
1.3.5	There is proper segregation of duties regarding physical checks, counts and inventory tags.					
1.3.6	Duties are separated between initiating purchases, asset custody and record keeping.					
1.4	**Records Management**					
1.4.1	Recording of assets takes place immediately after acquisition.					
1.4.2	Identification information like tags is promptly placed on the assets.					
1.4.3	There is proper records management of assets.					
1.4.4	Records of Assets are reconciled with physical counts.					
1.4.5	Asset records are adjusted promptly when asset is disposed off or acquired.					
1.4.6	The organization has written policies to enforce restrictions of custody under control.					
1.4.7	Asset records are maintained under custody.					
1.4.8	A written policy/procedure manual exists for maintenance of these assets.					
1.4.9	Written procedures exist for safeguarding assets against unauthorized use.					
1.4.10	Records dispositions or transfer require appropriate supporting documents and approvals.					
B.2	**MONITORING**					
2.1	**Auditing**					
2.1.1	Assets are periodically reviewed for the purpose of determining adequate insurance coverage.					
2.1.2	IITA policies and procedures support internal controls.					
2.1.3	Management monitors and approves disposition of obsolete and inactive assets.					
2.1.4	Counting of assets and access to tags is done by an official responsible for custody of assets.					
2.1.5	The organization carries out internal audits.					
2.1.6	Internal audit team is independent of the employee who implements transaction.					
2.1.7	Management reacts to internal audit queries given.					
B.3	**INFORMATION TECHNOLOGY**					
3.1	There are computerized asset recording systems and management.					
3.2	Policies and procedures are clearly stated and systematically communicated.					
SECTION. C						

ASSET MANAGEMENT						
		5	**4**	**3**	**2**	**1**
		SA	**A**	**N**	**D**	**SD**
C	**ASSET ACQUISITION**					
C.1	Procurement of assets is done according to IITA policies and procedures					
C.2	Authorization and approval are done when acquiring an asset					
C.3	Assets are recorded in the asset register book at acquisition					
2	**MAINTENANCE OF ASSETS**					
2.1	Maintenance and repairs of assets are monitored.					
2.2	Assets are periodically checked to ensure that they are maintained					
2.3	Assets are insured to mitigate risks					
2.4	IITA monitors operational expenditures on physical assets					
1.3	**DISPOSAL OF ASSETS**					
3.1	Management plans for asset disposal and outlines procedures to identify obsolete/surplus assets					
3.2	IITA disposes off assets that are no longer in use or whose standards have changed					
3.3	When transferring assets, records are updated accordingly					
3.4	Asset disposal is done through bidding upon approval from management					

Appendix 2:

Interview Guide for Key Informants

1.0 Background

1.1 Position……

2.0 Control activities and management of physical assets

2.1 Is there any written policy and procedure concerning approval and authorization of;

a. Asset acquisition……

b. Asset maintenance…….

C . Asset disposal……..

2.2 Does the organization have responsible people concerned with authorization/approval of asset

acquisition/disposal?.....

.....

2.3 Different people are allocated different

responsibilities?.....

2.4 What measures are in place to safeguard physical assets from

theft/vandalization?.....

3.0 Monitoring in management of assets.

3.1 Does the organization carry out auditing of assets?

3.2 Ho often is it carried out?

3.3 Do the management and staff of IITA get copies of the audit reports?

3.4 If yes, what do they do with the

reports?.....

3.5 Does management take any action on the recommendations from monitoring

reports?.....

.....

4.0 Asset Management.

4.1 What do you understand by the term Asset

Management?.....

.....

4.2 Was there any mismanagement of assets in IITA within the period of 2007-

2011?.....

4.3 If yes, how were they

mismanaged?.....

4.4 Did the organization face any challenges as a result of the

mismanagement?.....

4.5 Has there been any loss/theft of assets in the organization?.....

4.6 If yes, was it reported or recorded any where?.....

4.7 How has the organization overcome the challenge of asset

loss/theft?.....

4.8 If asset loss/theft was not committed what do you think was done to prevent / deter

the occurrence of the loss?.....

5.0 Implementation of Internal Control System as laid down to manage physical assets.

5.1 What are the main objectives of having an ICS in the organization?.....

5.2 Do the objectives include Asset Management?.....

5.3 In your view, have the above mentioned objectives been achieved?.....

5.4 What are the limitations of these controls in Asset Management?.....

5.5 In your view, what measures should be put in place to overcome the limitations/make the system more efficient?.....

5.6 What other challenges do you face in implementing the Internal Control System to manage assets?.....

5.7 What are your recommendations?