

**INTERNAL CONTROL SYSTEMS AND PERFORMANCE OF GOVERNMENT
ENTITIES: A CASE OF UGANDA NATIONAL ROADS AUTHORITY (UNRA)**

BY

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J21M15 – 211

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DECLARATION

I **Solomon Ajuna**, declare that this dissertation entitled "*The internal control systems and performance of Uganda National Roads Authority*" is my own original work. It has not been presented to any other institution for any academic award. Where other people's work has been used, this has been duly acknowledged.

Signature:



Date.....

26/09/2023

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APPROVAL

This is to certify that this Dissertation entitled "*The internal control systems and performance of Uganda National Roads Authority*" by **Solomon Ajuna** was done under my supervision and I hereby approve of it for submission.

Signature:.....

Date:.....

Dr. Muganga Christopher (PhD.)

DEDICATION

I dedicate this dissertation first to God who has blessed my life with many blessings; life and education being some of those.

Secondly, I dedicate it to my very supportive wife – Samalie Kwagala Ajuna, our children; Queen Esther Ajuna and those yet to come.

Last but not least, I dedicate this dissertation to my wider circle of family and friends; my Parents, Siblings, in - laws and friends. Please receive my heartiest appreciation for your individual positive impact upon my life. May the good Lord bless each one of you individually.

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LIST OF ACRONYMS/ABBREVIATIONS

CVI	Content Validity Index
DCS	Directorate of Corporate Services
DHR	Directorate of Human Resource
DIA	Directorate of Internal Audit
DLS	Directorate of Legal Services
DNPE	Directorate of Network Planning and Engineering
DPDU	Directorate of Procurement and Disposal Unit
DRBD	Directorate of Roads and Bridges Development
DRIP	Directorate of Road Infrastructure Protection
DRM	Directorate of Road Maintenance
OED	Office of the Executive Director
SPSS	Statistical Package for Social Science
UNRA	Uganda National Roads Authority

ABSTRACT

This study investigated the effect of the internal control systems on performance of Uganda National Roads Authority (UNRA). The study was anchored on three objectives which included; examining the relationship between physical audits and performance of UNRA, assessing the relationship between separation of duties and performance of UNRA and thirdly, investigating the relationship between asset usage guidelines and performance of UNRA. The study considered a descriptive research design considering quantitative research approach. Data was collected from 211 participants using questionnaires. The findings revealed that all constructs of internal control system (physical audits, separation of duties, and asset usage guidelines) combined, influence the performance of UNRA by 58.6%. Separation of duties was the highest predictor of UNRA at Beta = .560 and with a positive significant relationship at $r = .622^{**}$, Physical audits was also significant predictor of UNRA performance at Beta = .338 and with a relationship at $r = .602^{**}$ while asset usage guidelines was an insignificant predictor of performance of UNRA at Beta = -.061 despite showing a positive relationship at $r = .602^{**}$. The study recommended that UNRA needs to implement a systematic and regular inspection process, it also necessitates that UNRA has to establish a comprehensive framework for conducting periodic reviews and validation audits. UNRA needs to implement a system of checks and balances within the organization to ensure effective oversight over those individuals who review the work of their co-workers and also, it requires introduction of periodic rotations to prevent any single individual from having prolonged control over a specific process. It was also recommended that UNRA needs to prioritize the regular inspection and maintenance of assets and needs to establish a clear and effective tracking system to monitor asset usage and promptly identify any instances of misuse or unauthorized utilization.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter presents background to the study with reference to internal control systems and organization performance. It also captures the problem statement, objectives of the study, research questions, hypothesis, scope, significance and the study conceptual framework.

1.1 Background to the study

Internal controls have gained prominence over the years because of a number of undeniable corporate scandals that have cost organizations huge chunks of their finances leading to the collapse of some (Meintjes, 2013). Internal control includes a number of methods and measures, which are exercised by the management to ensure smooth and economic functioning of business entity and management in the performance of various functions (Shanmugam, Haat & Ali, 2012; Olwol el at., 2022). A system of internal control is put in place to keep the organization on course toward achievement of goals, mission and to minimize surprises along the way (Olwol el at., 2022).

Internal control is traced back in United States in the early in the twentieth century in 1940s and gradually become a more important function of management in most of the enterprises (Hayes *et al.*, 2012). The United States was the first country to introduce professional guidance on internal control. Internal control started to become significant to auditors in the US and its importance was associated with American audit procedures beginning to develop independently from those used by the British profession (Spira & Gowthorpe, 2018). In particular, they became oriented to

financial reporting rather than fraud and were used as a tool to boost organizations' performance (Feyisayo & Odunayo; 2019).

Organization performance encompasses accumulated end results of all the organization's work processes and activities with evaluating the relationship between component parts of a financial statement to obtain a better understanding of organization's position (Njue, 2018). The most effective way to improve organization performance is by reducing the level of irregularity and fraud through improvements in the firm's systems of internal control. Shareholders need to be assured that their resources are being used efficiently and effectively in providing the right service at the right cost (Cherono, 2017).

Internal control systems are systems made up of procedures and policies that help safeguard an organization's assets, provide trustworthy financial reporting, enhance compliance with rules and regulations, and achieve efficient and effective operations (Mugo, 2013). Therefore, internal controls are procedures put in place by firms' owners, executives, managers and staff to ensure efficient and effective operations of activities so as to meet the firms' objectives. Internal controls also help the auditors and evaluators to assess the business risks, minimize loss and maximize wealth. Internal control system has aspects of control environment, control activities, risk assessment, information & communication and monitoring. However, the major aspects of internal control include risk assessment, control activities and monitoring (Theofanis, et al, 2011; Nyakundi, Nyamita &Tinega, 2014).

Internal control has a much broader purpose in the organization level. Internal control systems provide an independent appraisal of the quality of managerial performance in carrying out assigned responsibilities for better revenue generation (Donald & Delno, 2009). Effective

internal control system prevents waste and inefficiency in the production line and processes of goods and services. Effective internal control systems assist in the formulation and implementation of quality procurement procedures that helps to factor justification for requisition at proper lead-time, quantity and at lowest prices (Ngechu 2014). This boost profitability than blind ordering which result to loss and waste. It is very important for every section and department of an organization to have an effective internal control system which is involved in blocking the organization's income leakages and loop holes thereby supporting a sustained growth and other general corporate goals and objectives (Olwol el at., 2022).

This study focused on the Uganda National Roads Authority (UNRA), an institution which was put in place in 2006 by enactment of parliament through the UNRA Act. This is a government entity that was established with the main role of developing all national roads and carrying out regular maintenance of those developed roads. Uganda National Roads Authority also carries out supervision of roads and designing work plans for maintaining the roads (UNRA, 2015). It is also mandated to offer advice to the government on the policies related to roads, issues concerning national transport among other functions (Rwanyekiro, 2014). Like many other government entities, UNRA developed different internal control system as a way of enhancing their performance (Kasakya, 2021). Internal control systems were developed aiming at identifying and minimising the risks and their effects to the organisation's strategic plan, by reviewing and providing assurance to other systems, processes (technical and financial) operations of the organization (Kasakya, 2021). However, the performance of UNRA has remained challenged, most of the road projects experience time over runs, cost over runs, questionable quality of roads and poor accountability on most road projects (Ministry of Work and Transport Report, 2018; Auditor General Report, 2021). That said, there were continued

reports of a wide range of financial fraud practices inside the organization, mismanagement, error of the transactions, thefts, waste of organization's assets (Auditor General Report, 2021). This prompted the researcher to examine the relationship between internal control systems and performance of Uganda National Roads Authority.

1.2 Statement of the Problem

Like many other government entities, UNRA developed different internal control system in order to take comfort in the governance, decisions and what is done within the organization (Kasakya, 2021). The system in form of risk assessment, control activities and monitoring aims at identifying and minimizing the risks and their effects on the organisation's strategic plan, by reviewing and providing assurance to other systems, processes (technical and financial) operations of the organization (Kasakya, 2021). Despite having internal control systems in place, UNRA's performance was still low, most of the road projects experience time over runs, cost over runs, questionable quality of roads and poor usage of organization assets on most road projects (Ministry of Work and Transport Report, 2018; Auditor General Report, 2021). There are continued reports of a wide range of financial fraud practices inside the organization, mismanagement, error of the transactions, thefts, waste of organization's assets (Auditor General Report, 2021) Therefore, this prompted the researcher to examine the relationship of internal control systems and performance of Uganda National Roads Authority.

1.3 General Objective

The general objective of this study is to examine the internal control systems and performance of Uganda National Roads Authority (UNRA).

1.4 Specific Objectives

- i. To examine the relationship between physical audits and performance of UNRA
- ii. To assess the relationship between separation of duties and performance of UNRA
- iii. To investigate the relationship between asset usage guidelines and performance of UNRA

1.5 Research Questions

- i. What is the relationship between physical audits and performance of UNRA?
- ii. What is the relationship between separation of duties and performance of UNRA?
- iii. What is the relationship between asset usage guidelines and performance of UNRA?

1.6 Scope of the study

1.6.1 Content Scope

The study focused on internal control system and performance but more emphasis was put on the relationship between physical audits and performance of UNRA, the relationship between separation of duties and performance of UNRA and thirdly, the relationship between asset usage guidelines and performance of UNRA. These three constructs were selected because most of the internal control irregularities in UNRA originated from weaknesses in physical audits, separation of duties and how institution assets were used. The study further ran the correlation and regression analysis on the study variables.

1.6.2 Geographical Scope

The study was conducted at Uganda National Roads Authority headquarters located at Nakawa along New Port Bell Road, Plot 3-5 Kampala district. The UNRA headquarter was chosen because it was where policies for internal control systems are enacted and implemented. Its also

where all UNRA employees report, therefore, much data was collected regarding internal control systems.

1.6.2 Time Scope

The study covered literature from 2015 to 2022 because the researcher intended to come up with reliable conclusions and significant findings. This period was relevant to provide a detailed and up-date scope of information about internal control system and performance. Besides that, it was when UNRA heavily experienced challenges regarding different road projects across the country.

1.7 Significance of the Study

The results will guide decision making for management of UNRA in particular looking out for bottle necks in internal controls. This will help in improving smooth running of UNRA operation. As a result, there will be successful performance regarding organization set objectives.

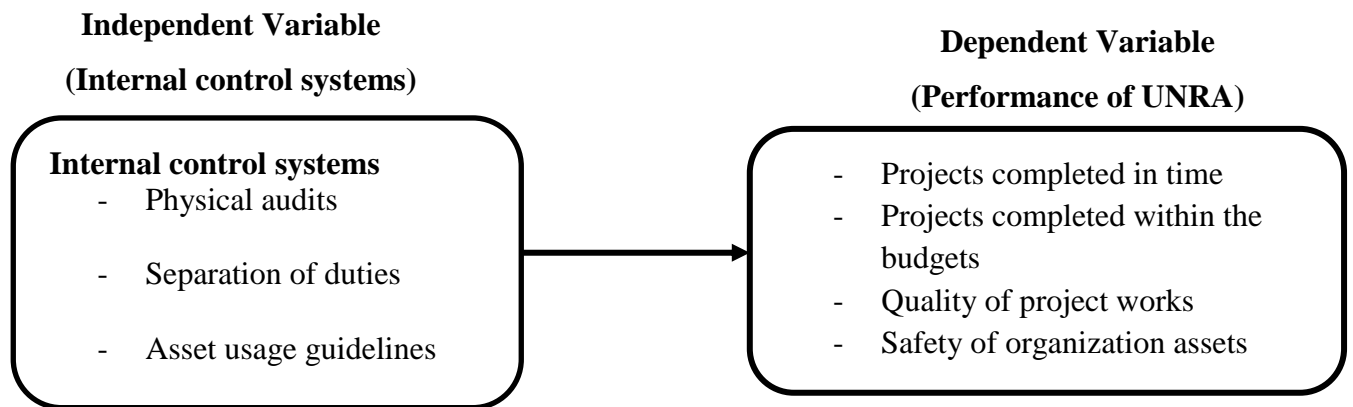
The study will also help government regulatory agencies especially the parliament and line ministry to develop stronger internal control mechanisms and enforce them to make sure those set/developed internal control systems are followed and implemented in the organizations.

The study will act as a useful tool to other organizations both public and private in enhancing the performance through having strong internal control systems that detect and handle any issue that may impair performance of the organization.

The findings in study will be helpful to future researchers and scholars since it will serve as a source of secondary data while conducting studies on similar or related topics to this. It will act as a source of literature.

1.8 Conceptual Framework

This study followed a conceptual framework developed by the researcher in regard to the concepts of internal control systems and performance.



Source: Adapted with Modification from COSO (1997) and Wanjohi (2013)

Fig. 1.1: Conceptual Framework.

The conceptual framework was composed of the independent variable internal control systems with three constructs and that was physical audits, separation of duties, and asset usage guidelines that are hypothesized to predict and/or influence the dependent variable which was performance of UNRA (COSO 1997; Wanjohi, 2013). The implication was that with internal control systems functioning well, leads to the projects completed in time, projects completed within the set budgets, quality of project works, and safety of organization assets to be achieved.

1.9 Chapter conclusion

In this chapter, the research study is introduced with a comprehensive overview, including background information. It introduced the problem statement, research objectives, study

questions, hypothesis, and scope of the study, the significance of the study and conceptual framework. This section established a robust foundation for the approach taken in the literature review in Chapter Two.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section presents literature on what other authors have found out in regard to internal control systems on Performance of institutions. Both local and international data sources were considered.

2.1 Theoretical framework

The study was guided by the Agency Theory developed by Alchian and Demsetz in 1972. The theory shows the relationship in which the employer (the principal) engages another person (the agent) to perform some service on his/ her behalf. It involves delegating some decision making authority to the agent by the principal (Goel and Vashishtha, 2014). From the theory, the principal wants the agent to act in the principal's interest yet the agent is expected to have his own interest and consequently, s/he may not act in the principal's best interests. Both the principal and agent are confronted with uncertainty. This uncertainty may appear in various ways. First, the principal is uncertain about actions undertaken by the agent and/or information held by the agent. There is a state of asymmetric information because the agent holds information that the principal does not. Second, uncertainty bears on the outcomes of the agent's actions. An agent is uncertain about the outcomes of his actions. For the principal, this latter phenomenon manifests itself more precisely in the fact that the principal is uncertain about the causality between agent's actions and the outcomes. This state of uncertainty and the resulting state of asymmetric information that exists between the principal and his agent impose certain constraints which complicate the forming of the contract. These constraints create two kinds of problems: a moral hazard and/or an adverse selection problem (Padilla, 2012).

Furthermore, Padilla (2012) revealed that the moral hazard problem arises when the principal cannot observe agent's actions because there is a positive cost of monitoring agent's actions and he is not even able to perfectly infer agent's actions by observing the outcome because the agent's actions do not completely determine the outcome. On the other hand, an adverse-selection problem appears when the agent possesses information that may prove useful to his decision-making and the principal does not know it. Therefore, the principal cannot know if the agent has made the most appropriate decision in light of the information possessed by the agent precisely because the principal does not have this information. The principal faces up, strictly speaking, to an asymmetric-information problem.

Musalem and Palacios (2004) revealed that the goal of oversight mechanisms in an agency relationship is to constrain the agent from acting improperly and provide it with incentives to act appropriately. The theory reveals that the company (the firm) is a “nexus of contracts” between shareholders (principal) and management (agents for the principal). Management are contractually bound to work for shareholders' best interests but if management know that they will not be monitored and potentially punished, management may exert less effort and take advantage of company's resources for their own personal benefit. As a result of information asymmetries and self-interest, principals lack reasons to trust their agents and will seek to resolve these concerns by putting in place mechanisms to align the interests of agents with principals and to reduce the scope for information asymmetries and opportunistic behaviour. Various mechanisms may be used to try to align the interests of the agent with those of the principal, such as piece rates/ commissions, profit sharing, efficiency wages, the agent posting a bond, or fear of firing (Musalem and Palacios, 2004). This theory pointed out that managers' of organisations may not act in the interests of other shareholders. This therefore called for mechanisms like

internal control systems that would reduce fraudulent intentions of agents.

Nevertheless, the Agency Theory was highly relevant to the study examining the internal control systems and performance of the Uganda National Roads Authority (UNRA). The application of Agency Theory provided a comprehensive framework for understanding the dynamics between the principal (UNRA) and its agents (management and employees). As the theory highlights, the principal-agent relationship was characterized by the delegation of decision-making authority to agents, which introduces a potential conflict of interest. This theory explained how UNRA, as the principal, seeks to align the interests of its agents with its organizational goals and ensure that they act in the organization's best interests. It recognized the challenges posed by information asymmetry and the need for oversight mechanisms to prevent opportunistic behavior by agents. In the context of UNRA, understanding and applying Agency Theory shed light on the effectiveness of internal control systems in mitigating agency problems, enhancing accountability, and ultimately improving the performance of the organization, particularly in the context of infrastructure development and management.

2.3 Physical audits and performance of an organization

In a study conducted by Sarmiento et al. (2021), the effect of physical audits on the performance of road construction projects in Southeast Asia was evaluated. The authors found that physical audits helped to improve the quality and efficiency of road construction projects, by identifying areas of improvement and potential cost savings. Similarly, Kuo et al. (2019) in their study on the effect of physical audits on the performance of road construction projects in Taiwan found that physical audits were an effective tool for improving quality management and ensuring compliance with project specifications. The authors recommended that physical audits should be

incorporated into the quality control process of road construction projects to improve project outcomes. In another study by Chou et al. (2018) it was revealed that physical audits have a positive impact on the quality of workmanship, project safety, and cost management. They further revealed that physical audits should be used as a tool to ensure compliance with project specifications, improve safety, and manage project costs.

According to Baffour-Awuah et al. (2018) in Ghana, physical audits were found to improve the performance of road construction organizations in terms of time and cost management. The study revealed that physical audits improved the accuracy of measurements and helped to identify and rectify errors early in the construction process, leading to reduced rework and cost overruns. Similarly, in a study conducted by Ogunsemi and Ogunsemi (2019) in Nigeria, physical audits helped to identify defects and deficiencies in construction projects, leading to improved quality and reduced maintenance costs. Furthermore, physical audits were found to enhance transparency and accountability in road construction projects in Africa. In a study conducted by Kasande and Bukenya (2020) in Uganda, physical audits were found to increase the accountability of road construction organizations and reduce cases of corruption. The study revealed that physical audits helped to identify irregularities in the procurement and implementation of road construction projects, leading to improved transparency and reduced opportunities for corruption.

Ondari et al. (2018) in their study in Kenya revealed that physical audits had a significant positive effect on the performance of these organizations. It was noted that physical audits helped to identify areas where improvements could be made, such as in project planning, resource allocation, and procurement processes. Another study by Kipruto et al. (2019) found

that physical audits helped to identify areas where financial leaks and inefficiencies could be addressed, leading to cost savings and improved financial performance. A more recent study by Mwita et al. (2022) examined the effect of physical audits on the quality of road construction in Kenya and found out that physical audits help to identify areas where quality could be improved, such as in the selection of materials, adherence to design specifications, and construction practices.

Nakimuli and Ntambi (2021) evaluated the effect of physical audits on the performance of road construction projects in Uganda and found that physical audits had a positive impact on the quality and timely delivery of road construction projects. The authors recommended that physical audits should be made mandatory in road construction projects to ensure quality and timely delivery. In another study by Kabagambe and Kisekka (2019), it was found that physical audits had a positive impact on cost management and quality assurance. It was revealed that physical audits are used as a tool for enhancing quality assurance and cost management in road construction projects in Uganda.

2.4 Separation of duties and performance of an organization

A study by Hu et al. (2018) on the impact of internal control practices, including separation of duties, on the financial performance of Chinese construction firms found that the implementation of effective internal controls, including separation of duties, was positively associated with financial performance. This was related to Abir et al. (2019) on their study on internal controls in Bangladesh's construction industry and found that the implementation of separation of duties was positively associated with the effectiveness of internal controls and helped to reduce the risk of fraud and errors in the construction process. Another study by Li et al. (2020) in China found

that the implementation of separation of duties was positively associated with project success, as it helped to improve project coordination, reduce conflicts of interest, and enhance the accuracy and reliability of project information.

Ndumbaro et al. (2018) investigated the impact of internal control practices on the performance of construction projects in Tanzania and found that the implementation of separation of duties as an internal control practice helped to reduce the risk of fraud and errors in the construction process. Similarly, Hambira and Uzarski (2019) in their study on internal controls in the South African construction industry revealed that the implementation of separation of duties improved project management because it reduced the risk of fraud. However, it is important to note that the implementation of separation of duties may also have some negative effects on the performance of road construction organizations. For example, a study by Mutisya et al. (2022) found that the implementation of separation of duties in the Kenyan construction industry may lead to increased bureaucracy and inefficiencies in project management.

Furthermore, separating duties related to financial management, such as budgeting, procurement, and payment authorization, can help prevent corruption and financial mismanagement. It ensures that multiple individuals are involved in the decision-making process, reducing the risk of fraud and embezzlement. Mihret and Yismaw (2018) in their study in the Ethiopian public sector found that the separation of duties positively influenced financial management performance. The study showed that the implementation of segregation of duties enhanced accountability, transparency, and the effectiveness of financial controls.

A study by Okoth et al. (2021) on the impact of separation of duties on infrastructure projects in Kenya revealed that highlighted that by separating roles and responsibilities, organizations were

able to mitigate conflicts of interest, enhance coordination, and ensure quality control throughout the project lifecycle. Separating duties in project planning and execution can lead to improved performance. When different individuals or departments are responsible for project design, procurement, construction supervision, and quality control, it promotes a more comprehensive approach to project management (Okoth et al., 2021).

Nsubuga et al. (2020) on internal controls in Ugandan public organizations, including those involved in infrastructure development, it was found that the separation of duties positively impacted compliance performance. The separation of duties helps road construction organizations comply with regulatory requirements and industry standards. By assigning distinct responsibilities for compliance monitoring, reporting, and adherence to safety guidelines, organizations can ensure that legal and ethical obligations are met (Nsubuga et al. 2020). Therefore, the study revealed that the segregation of duties increase the efficiency and effectiveness which reduces the likelihood of non-compliance and associated penalties.

2.5 Asset usage guidelines and performance of an organization

According to a study conducted by Wang and Shang (2019) on the impact of asset management on the performance of Chinese construction firms, firms that implemented proper asset management practices experienced significant improvements in equipment maintenance and performance. One of the key benefits of asset usage guidelines is improved equipment maintenance, which can lead to increased performance and productivity of road construction organizations (Wang & Shang, 2019). In addition, the study found that effective asset management practices led to a reduction in equipment downtime, which ultimately improved the overall performance of the organization. This is attributed to the fact that asset usage lines

standardize the process. According to Ahiaga-Dagbui and Smith (2018), asset usage guidelines often incorporate standardized processes and quality control measures. These guidelines help ensure consistency in construction practices, adherence to design specifications, and the delivery of high-quality infrastructure. Furthermore, Ahiaga-Dagbui and Smith (2018), standardized processes contribute to improved project management, reduced errors, and enhanced overall performance.

A study by Salam et al. (2018) on the effect of asset utilization on the performance of Malaysian construction firms found that organizations that effectively utilized their assets, including equipment and human resources, were able to achieve higher levels of performance. Asset usage guidelines can also help road construction organizations to efficiently utilize their resources (Salam et al., 2018). Further the study highlighted the importance of optimizing resource utilization and recommended that organizations adopt best practices to maximize their resource utilization. Donyaee and Shaghaghi (2020) revealed that asset usage guidelines can also help road construction organizations to improve their procurement and disposal practices. The study found out effective procurement and disposal practices were found to be critical in improving the performance of organizations. The study recommended that organizations implement proper procurement and disposal policies guidelines to ensure that they acquire and dispose of assets in a cost-effective and efficient manner.

According to Qazi et al. (2020), asset usage guidelines help road construction organizations to control their costs effectively. On the impact of asset management on the performance of Pakistani construction firms, Qazi et al. (2020) revealed effective cost control was found to be critical in improving the performance of organizations. The study highlighted the importance of

implementing cost control guidelines to ensure that organizations operate within their budgetary constraints and minimize wastage. In addition, Mzenda et al. (2019) asset usage guidelines help road construction organizations in Africa allocate their resources effectively. By specifying how and when assets should be utilized, organizations can optimize resource allocation, ensuring that equipment, materials, and manpower are utilized efficiently (Mzenda et al., 2019). This can lead to better project planning, reduced downtime, and increased productivity.

According to a study by Kamya et al. (2018) who analyzed the impact of asset usage guidelines on equipment maintenance in road construction projects in Uganda, asset usage guidelines provide instructions for the proper maintenance and servicing of construction equipment. By adhering to these guidelines, road construction organizations can minimize equipment breakdowns, improve operational reliability, and extend the lifespan of their assets (Kamya et al., 2018). This, in turn, reduces maintenance costs and downtime, leading to improved project performance. Relatedly, according to World Bank (2019) asset usage guidelines often include safety protocols and compliance requirements to ensure the well-being of workers and compliance with regulatory standards. By adhering to these guidelines, road construction organizations can create a safer working environment, mitigate accidents, and avoid penalties or legal consequences (World Bank, 2019). Improved safety measures can positively impact project performance by reducing the likelihood of delays, injuries, and associated costs.

2.6 Literature gap

The literature above has explored the conceptual and scholarly studies on the concepts of internal control system and performance. More so, several studies have focused on internal control systems and performance of different organization though they do not show in statistical terms

the extent to which performance is affected by internal control systems. Besides that, most of the studies were done outside Ugandan context and not necessarily constructions organizations. This leaves a context and information gap in Uganda, government institutions and construction organizations. Therefore, this study sought to close up by conducting a study on internal control systems and performance UNRA.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the methodology that was used in carrying out this study. It captures the research design, area of study, study population, determining sample size, sampling techniques, sources of data, data collection methods, data quality control, procedures of data collection, data processing, analyzing and presentation and ethical consideration.

3.2 Research Design

The study used descriptive research design. This research design employs a scientific method to explore the connection between multiple variables (Creswell, 2018). The relevance of this research design lies in its focus on testing rather than constructing theories, which aligns with the goals of the study. It captures the information that facilitates the running of correlations and regressions. The study considered a quantitative research approach. Since the study aimed at examining the relationship that exists between the study variables, the researcher used quantitative research approach to collect numerical or measurable or quantifiable data (Mugenda & Mugenda, 2013). Therefore, the study used a correlation analysis to examine the extent to which two variables are related. Furthermore, a quantitative method was used because the method provides empirical support to the study.

3.3 Study Population

Kombo and Tromp (2016) define a population as a group of individuals, objects or items from which samples are taken for measurement. UNRA's operated nine directorates and the Office of the Executive Director and these are presented with their staffing levels as of June 2020 in the

table below. The study population was 1,393 staff (UNRA Corporate Strategic Plan 2020/21-2024/25).

Table 3.1: Population of the Study

Category	Target Population
Office of the Executive Director (OED)	31
Directorate of Corporate Services (DCS)	165
Directorate of Human Resource (DHR)	19
Directorate of Internal Audit (DIA)	19
Directorate of Legal Services (DLS)	24
Directorate of Network Planning and Engineering (DNPE)	96
Directorate of Procurement and Disposal Unit (DPDU)	32
Directorate of Road Maintenance (DRM)	628
Directorate of Roads and Bridges Development (DRBD)	157
Directorate of Road Infrastructure Protection (DRIP)	188
TOTAL	1393

Source: UNRA Corporate Strategic Plan, 2020/21- 2024/25

3.4 Sample Size Determination

According to Mbabazi (2011), sample size is a group of subjects/items that are selected from the general population and are considered as a representative of the real population for that specific study. The study considered 297 respondents as determined using the table of Krejcie and Morgan (1970) as presented in the table 3.1 below.

Table 3.2: Sampling frame and Sample Size

Category	Population	Selected sample	Sampling technique
Office of the Executive Director (OED)	31	08	Simple random
Directorate of Corporate Services (DCS)	165	35	Simple random
Directorate of Human Resource (DHR)	19	05	Simple random
Directorate of Internal Audit (DIA)	19	05	Simple random
Directorate of Legal Services (DLS)	24	06	Simple random
Directorate of Network Planning and Engineering (DNPE)	96	22	Simple random
Directorate of Procurement and Disposal Unit (DPDU)	32	08	Simple random
Directorate of Road Maintenance (DRM)	628	134	Simple random
Directorate of Roads and Bridges Development (DRBD)	157	34	Simple random
Directorate of Road Infrastructure Protection (DRIP)	188	40	Simple random
TOTAL	1393	297	

However, (211) 71.1% of the respondents responded back while only (86) 28.9% didn't respond back. This showed that the response rate was well above the 70% as recommended by the Guttmacher Institute, (2006) who assert that for a study to be considered satisfactory, the response rate must be 70% and above.

3.5 Sampling Techniques and Procedure

The study employed simple random sampling in selecting respondents. Using simple random sampling the respondents had an equal chance of being part of the study (Kombo & Tromp, 2016). This technique was used to select respondents from the population. Since all the respondents had the needed information and they selected basing on their willingness to take in

the study and convenience of the researcher. This technique reduced the sampling bias. Simple random sampling technique was used to collect quantitative data.

3.6 Data Collection Methods

The study used a survey questionnaire as a method of data collection. This survey questionnaire method was specifically used when collecting quantitative data. According to Amin (2005), a questionnaire survey involves a series of brief questions, including both open and closed ended ones in order to elicit swift responses from participants. However, for purposes of this study, only closed ended questions were utilized to facilitate the correlation and regression of respondents' attitudes toward the independent and dependent variables (Amin, 2005). Multiple copies questionnaires were meticulously distributed in the field during the data collection phase. Prior to engaging in the questionnaire completion process, participants were provided with a comprehensive briefing to ensure a clear comprehension of the study's objectives and the purpose behind this questionnaire method.

3.7 Data Collection Instruments

The study used the questionnaire as the main instrument of data collection. The questionnaire is a tool for data collection; it refers to a compilation of questions, which helps the researcher gather necessary research data for the study. It can either be open-ended, closed-ended or both (Mugenda & Mugenda, 2013). The research instrument that was used for this study was researcher-administered. This study's questionnaire had close-ended questions. Questionnaires were sent to the respondents to read and fill. This method of data collection was preferred because it gave a great degree of assurance to the anonymity and confidence of the research respondent.

3.8 Data collection procedure

With the approved proposal and data collection instruments from the supervisor, the researcher proceeded to have an introductory letter from UCU. The introductory letter introduced the researcher to the respondents. The letter was also presented to the Management of UNRA requesting for permission to conduct the study in UNRA. After getting the permission and the consent from respondents, the researcher embarked on data collection and by distributing questionnaires that were collected after 2 days for data analysis.

3.9 Data Quality Control

The quality of the study was very important for every research. This was through ensuring validity and reliability of study of instruments (Yin, 2014).

3.9.1 Validity

Validity of a data collection instrument is its appropriateness to measure a variable or construct and yield intended results (Amin, 2005). For this study, content validity index was used to test the instruments. The research carried out in a pilot study involving five research experts about the themes of the study but not to be included in the sample of the study. The research they were asked to assess the ability of each item of each instrument to measure the variables of the study. They were asked to judge the items by rating them as Relevant (R) or Irrelevant (IR). From their judgments, Content Validity Index (CVI) was computed using the following formula: $CVI = R/(R+IR)$. All the CVIs were greater than 0.7 hence making the instrument regarded as valid (Mugenda & Mugenda, 2013).

3.9.2 Reliability

Reliability refers to the degree to which a set of variables are consistent with what they are intended to measure (Amin, 2005). In order to establish the reliability, the tool was pre-tested on 10 people who were not part of the main study. The results of the pre-testing exercise were entered into SPSS Ver. 20, and tested for their reliability basing on the Cronbach reliability test scores (alpha values). The tool was considered reliable because the alpha values were above 0.7 as recommended (Mugenda & Mugenda, 2013).

3.10 Measurement of study variables

Mugenda & Mugenda (2013) support the use of nominal, ordinal, and Likert type rating scales during questionnaire design and measurement of variables. The nominal scale was used to measure variables such as gender and level of education. The ordinal scale was used to measure aspects such as age and length in service at UNRA. For this study, four key variables which were physical audits, separation of duties, asset usage guidelines and predicted the performance of UNRA were measured basing on a five (5)-point Likert scale anchored: “5-strongly agree, 4-agree, 3-neutral, 2-disagree and 1-strongly disagree”.

3.11 Data Analysis and Presentation

The process of analyzing quantitative data involved several stages namely; data clean up, editing and coding. Descriptive statistics (frequencies, percentages, means and standard deviation) and correlation analysis were used to analyze the data. Data was coded and checked for any errors and omissions (Kothari, 2014). Responses in the questionnaires were tabulated, coded and processed using computer Statistical Package for Social Science (SPSS) program. Percentages, correlations and regression were run. Pearson correlations were employed to assess the direction

and strength of relationships among the variables. This methodology was chosen for its efficiency and straightforwardness in yielding results. Significance testing for the Pearson correlations was set at ($p = 0.01$). Additionally, a multiple regression analysis was conducted to ascertain the predictive effect of each independent variable construct on the dependent variable. The study's multiple regression yielded an adjusted R-square value, providing insights into the collective predictive power of all independent variable constructs on the dependent variable. Significance for the regression analysis was established at ($p = 0.05$), and the ANOVA table was utilized to assess the model's goodness of fit. Following data analysis, the study's findings were presented using tables for effective communication of the results.

3.12 Ethical consideration

According to Creswell (2014), ethical consideration in any research is very critical. To an ethical researcher, confidentiality, consent of respondents, plagiarism and respondents' privacy were upheld.

Confidentiality: For confidentiality reasons, all the responses that were provided by the respondents in the questionnaire were only used for academics and only parties that were directly linked to this study were given access to data collected

Informed consent: For one to take part in this study, he or she had to voluntarily consent. The researcher fully explained to the respondents their role and rights in the study. Only people consented voluntarily were considered while those who hesitated were dropped.

Plagiarism: During the review of literature of different researchers, scholars and academicians, the researcher rephrased and paraphrased their statements to avoid cases of plagiarism.

Privacy: Only the supervisor and other academic authorities that were directly connected to this study had access the filled tools. Furthermore, names of the respondents and any other information that could lead to tracing and identifying the respondent(s) were not indicated anywhere on the data collection tools.

3.13 Chapter conclusion

Chapter Three detailed the data collection procedures applied in the field. This chapter extensively described the methods employed for data collection, followed by the subsequent processes of data analysis and interpretation. Following approval of the research proposal and data collection tools, the researcher conducted fieldwork to acquire data that aligned with the study's objectives. Upon concluding the data collection phase, Chapter Four was dedicated to presenting the research results and findings, organized in line with both the demographic characteristics of the respondents and the study's objectives.

CHAPTER FOUR

ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the study findings and the analysis. It presents the descriptive statistics on the respondents' bio-data, descriptive statistics in form of frequencies and percentages. The study findings are presented and analyzed following the order specific research objectives which included examining the relationship between physical audits and performance of UNRA, assess the relationship between separation of duties and performance of UNRA and investigate the relationship between asset use guidelines and performance of UNRA.

4.2 Bio-data information of respondents

The bio-data information of respondents that participated in the study was established to ascertain the nature of the respondents in relation to their; gender, age, education, and period taken working with UNRA. The findings are presented in form of frequencies and percentages as shown in the tables below.

Table 4.1 Gender of respondents

Category	Frequency	Percent
Male	129	61.1
Female	82	38.9
Total	211	100.0

Source: Primary data 2023

The Table 4.1 above shows that 61.1% of the respondents were male while 38.9% were female. This implies that majority of the respondents were male. Although male respondents were more than female respondents, the results showed that the views of both men and women were

captured in the study. Furthermore, the study required objectivity; therefore, gender differences didn't affect the validity and accuracy of the study results.

Table 4.2: Age bracket of Respondents

Category	Frequency	Percent
18-30 years	65	30.8
31-40 years	113	53.6
41-50 years	33	15.6
Total	211	100.0

Source: Primary data 2023

Results from table 4.2 above indicated that majority of the respondents 84.4% were below the age of 40 years as compared to 15.6% who were above 40 years. The results implied that majority of the respondents were still energetic and in their youthfully age and still flexible that allows them to effectively perform the demand duties at UNRA.

Table 4.3: Highest education level attained

Category	Frequency	Percent
Degree	146	69.2
Masters	65	30.8
Total	211	100.0

Source: Primary data 2023

Results above in table 4.3 showed that majority 69.2% of the respondents had attained a university bachelor's degree while the remaining 30.8% had master's degree. This implied the nature of work at UNRA require people with high qualifications hence making UNRA to employ those with Bachelor's Degree and Masters.

Table 4.4: Number of years spent working with UNRA

Category	Frequency	Percent
1-2 years	16	7.6
3-5 years	65	30.8
6 years and above	130	61.6
Total	211	100.0

Source: Primary data 2023

As presented in table 4.4 above indicated that majority of the respondents 61.6% had spent between 6 years and above working with UNRA, it was followed by 30.8% who had spent between 3-5 years while only 7.6% were relatively new and had spent 1-2 years working with UNRA. This signifies that majority of the respondents had been working with UNRA for a good time. Therefore, they knew much about internal controls and performance of UNRA and they were in good position to give reliable information regard the study objectives.

4.3 Physical audits and performance of UNRA

The first study objectives examined the relationship between physical audits and performance of UNRA. The descriptive statistics showing the mean and standard deviation were used to present study findings as presented in table 4.5 below. The extracted descriptive statistics (mean) were compared to the grand mean to ascertain the level of agreement or disagreement towards the statement.

Table 4.5: Responses on physical audits at UNRA

Statement	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>S.Dev.</i>
UNRA carries out audits on implantation safety measures and adherence	2	4	3.2	.582
UNRA carries out quality evaluation audits on completed work or work in progress to ensure it meets its project expectations	1	4	3.2	.863
There is verification of accuracy of material inventory records by physically counting and reconciling them with documented inventory	2	4	3.2	.664
Inspection construction equipment and machinery are carried out to ensure they are in good working condition	2	4	3.1	.537
There are reviews and validate audits to check compliance with permits, licenses and regulatory requirements	2	4	3.1	.832
UNRA carries out contract and documentation audits to ensure accuracy and adherence to contractual obligations	2	4	3.2	.702
UNRA carries out audit on financial records related to construction projects to check their correctness	3	4	3.4	.486
GRAND MEAN	3.2			

Source: Primary data, 2023

From table 4.5 above, it was revealed that UNRA carries out audits on implantation safety measures and adherence. This was supported by a moderate mean value of (Mean= 3.2) since it was same as the grand mean of (3.2). There was consistency in responses because of the standard deviation was below one (.582). This is because for every organization adherence to safety measure is key for their performance. Therefore, to achieve the required level of performance, UNRA has to make sure that physical audits are made on all established safety measures to ensure that they are effectively followed.

On the issue of UNRA carrying out quality evaluation audits on completed work or work in progress to ensure it meets its project expectations, majority of the respondents were in agreement with it. This was supported by a moderate mean value of (Mean=3.2) which was same as the grand mean of (3.2) with little variance in responses because of the standard deviation being below one (.863). This meant that at UNRA, completed work or work in progress are under go quality evaluation audits to check if they meet the project expectation.

Still from table 4.5 above, scoring a moderate mean value of (Mean=3.2) which was the same as the grand mean of (3.2) with consistency in responses because of the standard deviation being above one (.664) revealed that majority of the respondents concurred that at UNRA there is verification of accuracy of material inventory records by physically counting and reconciling them with documented inventory. This means the records are physically audited to ensure that there are not errors or forgery in material inventory records.

Furthermore, with a mean value of (Mean = 3.1) which was below the grand mean of (3.2) despite scoring the standard deviation was below one (Std. Dev =.537), it meant that majority of the respondents opposed the statement that inspection of construction equipment and machinery are carried out to ensure they are in good working condition. This meant that at UNRA inspection of construction equipment and machinery are usually carried out to ensure they are in good working condition. It's upon the equipment or machinery to report the breakdown of the equipment or machinery in order to be given the new one or a better one.

Still from table 4.5 above, it was revealed that usually there are no reviews and validate audits to check compliance with permits, licenses and regulatory requirements. With consistency in responses because of the standard deviation being below one (.832), the findings were supported

by a low mean value of (Mean=3.1) which was below the grand mean of (3.2) which was the threshold.

Furthermore, on the issue of UNRA carrying out contract and documentation audits to ensure accuracy and adherence to contractual obligations, it scored a moderate mean value of (Mean = 3.2), which was same the grand mean of (3.2). With the consistency in the responses because of the standard deviation being below one (Std. Dev =.702), the findings implied that contract and documentation audits are usually carried out at UNRA to ensure accuracy and adherence to contractual obligations between UNRA and other entities.

Lastly, from table 4.5 above, it was revealed that UNRA carries out audit on financial records related to construction projects to check their correctness. This was supported by a high mean value of (Mean= 3.4) which was above the grand mean of (3.2) on top of showing little variance in response because of the standard deviation was below one (SD=.486). This is because UNRA is mandated every year to submitted audit financial books to government to ensure proper of use of public funds.

4.4 Separation of duties and performance of UNRA

The second study objectives examined the relationship between separation of duties and performance of UNRA. Like objective one, the descriptive statistics showing the mean and standard deviation were used to present study findings as presented in table 4.6 below. The extracted descriptive statistics (mean) were also compared to the grand mean to ascertain the level of agreement or disagreement towards the statement.

Table 4.6: Responses on separation of duties at UNRA

Statement	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
Different roles and responsibilities are assigned to specific people	2	4	3.6	.624
Two or more individuals to authorize review works of their co-workers	1	4	2.9	.738
There is periodic rotation to prevent single individual from having prolonged control over a specific process	1	4	2.3	.996
Supervisors and managers review and monitor the work of their subordinates	3	4	3.5	.498
There is separation of the duties of recording transactions from the physical custody of assets	2	4	3.2	.534
There are controls to restrict access to sensitive information, system and process	2	4	3.3	.720
GRAND MEAN	3.1			

Source: Primary data, 2023

From table 4.6 above, it was revealed that different roles and responsibilities are assigned to specific people in UNRA. These findings were supported by a higher mean value of (Mean = 3.6) since it was above the grand mean of (3.1) with low variance in responses since the standard deviation was below one (SD=.624). This is because the all roles and responsibilities cannot be done by one person but also it is done reduce on the level of fraud if one person executes all the roles and responsibilities.

On the issue of whether two or more individuals are authorized review works of their co-workers, it scored a low mean value of (Mean=2.9) which was below the grand mean of (3.1) with little variance in responses since the standard deviation was below one (SD=.738). This meant that UNRA does not have mechanisms in place that encourage peer reviews of works done.

Still from table 4.6 above, it was revealed that there is no periodic rotation to prevent single individual from having prolonged control over a specific process. This was supported by a low mean value of (Mean= 2.3) which was less than the grand mean of (3.1) with consistency in responses since the standard deviation was below one (SD=.996). Therefore, it meant that at UNRA, one person can have a prolonged control over a specific process as long as that person delivers the desired results.

Furthermore, it was revealed that supervisors and managers review and monitor the work of their subordinates. This was supported by a high mean value of (Mean= 3.5) which was above the grand mean of (3.1) with little variations in responses because of the standard deviation being below one (SD=.498). This is because the performance of supervisors and managers is also based on the performance of their subordinates, therefore, the supervisors and managers have to make sure that they review and monitor the work of their subordinates to make sure that work done meets the required standards.

It was further revealed that there is separation of the duties of recording transactions from the physical custody of assets. This was supported by a higher mean value of (Mean=3.2) which was above the grand mean of (3.1) with the consistency in responses because of the standard deviation being below one (SD=.534). This is because separation of the duties ensures that powers of one person are reduced and are monitored in order not to misuse or steal the assets in his or her custody.

Lastly, it was revealed that there were controls to restrict access to sensitive information, system and process. This was supported by a high mean value of (Mean= 3.3), which was above the grand mean of (3.1). There was consistency in responses because of the standard deviation being

below one (SD=.720). This is because sensitive information, system and process can be easily misused by people for their own benefit hence being put under tight control.

4.5 Asset usage guidelines and performance of UNRA

The third study objectives examined the relationship between asset usage guidelines and performance of UNRA. Like objective one and two, the descriptive statistics showing the mean and standard deviation were used to present study findings as presented in table 4.7 below. The extracted descriptive statistics (mean) were compared to the grand mean to ascertain the level of agreement or disagreement towards the statement.

Table 4.7: Responses one asset usage guidelines at UNRA

Statement	Min	Max	Mean	SD
There are defined authorized users for each asset	1	4	3.0	.787
Asset are regularly inspected and maintained to keep them in good working condition	1	4	2.3	.876
Employees who operate specific assets have necessary training and skills	1	4	3.0	.784
UNRA has a system for allocating assets based on project requirement and priorities	1	4	2.8	.888
UNRA has a tracking system to monitor asset usage & identify any misuse	1	4	2.5	.745
All employees are encouraged to report any damages on assess promptly	2	4	3.3	.723
There are clear guidelines for retiring or disposing of assets that are no longer useful or cost effective	2	4	3.3	.743
GRAND MEAN	2.9			

Source: Primary data, 2023

From table 4.7 above, whether there were defined authorized users for each asset, it received high attention because it scored mean value of (Mean = 3.0) which was above the grand mean of

(2.9) with despite consistency in responding to the statement with standard deviation was below one (Std. Dev =.787). This is because at UNRA each asset is assigned to a specific personal that is responsible for whatever happens to that asset.

On whether the assets are regularly inspected and maintained to keep them in good working condition, majority of the respondents opposed with it. It was supported by a lower mean value of (Mean = 2.3) which was below the grand mean of (2.9) and showed little variances because of the standard deviation being below one (SD=.876). This meant the assets at UNRA are not regularly inspected and maintained which has increased breakdown hence delays in works.

Still from table 4.7 above, it was revealed that employees who operate specific assets have necessary training and skills. It was supported by a higher mean value of (Mean = 3.0) which was above the grand mean of (2.9) with little variations in responses because of the standard deviation being below one (SD=.784). This will because UNRA has a strong recruitment system that ensures recruitment of only employees that have required skills and are further take to more training to ensure that they meet the required standards to operate specific assets like vehicles.

Furthermore, on whether UNRA has a system for allocating assets based on project requirement and priorities. It was supported by a lower mean value of (Mean = 2.8) which was below the grand mean of (2.9) despite showing little variations in responses because of the standard deviation being below one (SD=.888). This could be attributed to the fact that most of the projects are contracted by the private construction companies who use their machinery. Therefore, it's these private companies that allocate the assets especially the machinery but not UNRA.

On whether UNRA has a tracking system to monitor asset usage & identify any misuse, majority of the respondents opposed the statement. This was supported by a lower mean value of (Mean = 2.5) which was below the grand mean of (2.9) with little variations in responses because of the standard deviation being below one (SD=.745). This is because UNRA does not have digital tracking system; the assets are monitored physically by assigned supervisors.

Furthermore, whether all employees are encouraged to report any damages on assets promptly, it received much attention. It was supported by a high mean value of (Mean = 3.3) which was above the grand mean of (2.9) while scoring less variance in the responses (SD=.723). This could be attributed to the fact that employees promptly report any damages on assets in order to be given new one or to be repaired immediately to allow continuous of work.

Lastly from table 4.7, it was revealed that there were clear guidelines for retiring or disposing of assets that were no longer useful or cost effective. It was supported by a higher mean value of (Mean = 3.3) which was higher the grand mean of (2.9). The standard deviation was also below one (Std. Dev =.743) which means that respondents were consistent in responding to the statement presented to them. This is because UNRA is public entity; therefore, it can dispose any asset without following the PDDA Act. Therefore, guidelines have to be established to ensure that it operates under the requirements of PDDA Act.

4.6 The performance of UNRA

Like the study objectives above, the descriptive statistics showing the mean and standard deviation were used to present study findings on the responses on the performance of UNRA as presented in table 4.8 below. The extracted descriptive statistics (mean) were compared to the grand mean to ascertain the level of agreement or disagreement towards the statement.

Table 4.8: Responses on the performance of UNRA

Statement	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
UNRA projects are always finished in scheduled time	1	4	2.1	.869
UNRA projects are always completed in set budgets	1	4	2.2	.772
UNRA meets all its short and long term financial obligations whenever they fall due	1	4	2.3	.912
There are no cases of fraud and embezzlement of funds	1	3	1.9	.733
There are no cases of property misuse	1	3	2.2	.539
There has been reduction in the operating costs	2	4	2.8	.661
All the operations of UNRA meet quality standards	2	4	3.1	.868
UNRA operations don't cause environment degradation	2	4	2.9	.729
The public is satisfied with operations of UNRA	2	4	3.1	.663
GRAND MEAN	2.5			

Source: Primary data, 2023

From table 4.8 above, it was revealed that UNRA projects are not always finished in scheduled time. These findings were supported by a lower mean value of (Mean = 2.1) since it was below the grand mean of (2.5) with low variance in responses since the standard deviation was below one (SD=.869). This is because most of road construction projects experience time overruns as it has been seen on different road projects where contractors request to project time extension.

On whether UNRA projects are not always completed in set budgets, it scored a lower mean value of (Mean=2.2) which was lower than the grand mean of (2.5) with little variance in responses since the standard deviation was below one (SD=.772). This is attributed to the fact that the public has witnessed the UNRA leadership requesting for addition funds for some projects from the parliament. This clearly shows that, UNRA projects are not usually completed in planned budgets.

Still from table 4.8 above, it was revealed that UNRA doesn't meet all its short and long term financial obligations whenever they fall due. This was supported by a low mean value of (Mean=2.3) which was less than the grand mean of (2.5) with consistency in responses since the standard deviation was below one (SD=.912). Therefore, with complaint from UNRA management about limited funding and small budget, it's should be behind the reason for not meeting all its short and long term financial obligations whenever they fall due and in some case contractors have taken UNRA to courts for not fulfilling their financial obligations.

Furthermore, on the statement there are no cases of fraud and embezzlement of funds. Majority of the respondents opposed the statement. This was supported by a low mean value of (Mean=1.9) which was below the grand mean of (2.5) with little variations in responses because of the standard deviation being below one (SD=.733). This shows that there are cases of fraud and embezzlement of funds and UNRA. This is because UNRA officials have been implicated in the corruption scandals on different road projects such as Katosi road in Mukono district.

It was also revealed that majority of the respondents opposed the statement that there are no cases of property misuse. This was supported by a low mean value of (Mean=2.2) which was below the grand mean of (2.5) with consistency in responses because of the standard deviation being below one (SD=.539). This is because the parliament of Uganda has always been questioning the UNRA management about the miss use of property such as construction equipment.

Still from table 4.8, it was revealed that there has been reduction in the operating costs. It was supported by a high mean value of (Mean = 2.8) which was above the grand mean of (2.5) with little variations in responses because of the standard deviation being below one (SD=.661). This

will because UNRA has a strengthened its internal control and adoption of IT systems hence leading to reduction in the operating costs.

On whether all the operations of UNRA meet quality standards, majority of the respondents concerned the statement. This was supported by a high mean value of (Mean = 3.1) which was above the grand mean of (2.5) with little variations in responses because of the standard deviation being below one (SD=.868). This is because UNRA does carries quality audits before the project is launched to make sure that it meets the set quality standards.

Furthermore, whether UNRA operations don't cause environment degradation, it received much attention. It was supported by a high mean value of (Mean = 2.9) which was above the grand mean of (2.5) while scoring less variance in the responses (SD=.729). This could be attributed to the fact that before the project is launched; environment impact assessment has to be done to make sure that project doesn't have negative impact on the environment.

Lastly, it was revealed that the public is satisfied with operations of UNRA. This was supported by a high mean value of (Mean= 3.1), which was above the grand mean of (2.5) with consistency in responses because of the standard deviation being below one (SD=.663). This is because the road network in Uganda has increased and all parts of Uganda from east to west, north to south are all connected with tarmacked road network.

4.7 Inferential statistics

The inferential statistics were significant in obtaining the relationship between the study objectives and predictive potential of independent variables to the dependent variables. The study utilized correlation analysis and linear regression analysis for this purpose. Correlation

analysis was utilized to ascertain the nature of the relationship between the study variables, while linear regression analysis was employed to determine the predictive potential of the internal control system on the performance of UNRA.

4.7.1 Correlation analysis

Pearson correlation was using SPSS was used to investigate the relationship between the internal control system and UNRA performance and results are presented in tables below.

Table 4.9: The relationship between physical audits and performance of UNRA

		Physical Audits	UNRA Performance
Physical Audits	Pearson Correlation	1	.602**
	Sig. (2-tailed)		.000
	N	211	211
UNRA Performance	Pearson Correlation	.602**	1
	Sig. (2-tailed)	.000	
	N	211	211
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Researcher (2023)

The results from table 4.9 showed a high positive and significant relationship exist between physical audits and performance of UNRA at ($r = .602^{**}$, $P < 0.01$). The correlation coefficient (r) value of 0.602 indicates that there is a strong positive association between physical audits and UNRA's performance. When one variable (physical audits) increases, the other variable (performance of UNRA) tends to increase as well. In this case, it suggests that as the frequency or quality of physical audits conducted by UNRA increases, the overall performance of the organization tends to improve. The " $P < 0.01$ " means that the correlation observed between physical audits and UNRA's performance is statistically significant at the 0.01 level of significance. In simpler terms, it indicates that the probability of obtaining such a strong

correlation by chance is less than 1%, making it very unlikely that the relationship observed is due to random variation in the data. The results suggest that there is a robust positive association between physical audits conducted by UNRA and the organization's overall performance. The higher the frequency or effectiveness of the physical audits, the better UNRA tends to perform. Therefore, for a continuous positive performance of UNRA, the management of UNRA has to make sure the physical audits of assets is effectively done to the dot in form of frequency and quality to improve the UNRA performance.

Table 4.10: The relationship between separation of duties and performance of UNRA

		Separation of duties	UNRA Performance
Separation of duties	Pearson Correlation	1	.708**
	Sig. (2-tailed)		.000
	N	211	211
UNRA Performance	Pearson Correlation	.708**	1
	Sig. (2-tailed)	.000	
	N	211	211
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Researcher (2023)

The results from table 4.10 revealed that there was a high, positive and significant relationship between Separation of duties and performance of UNRA at ($r = .708^{**}$, $P < 0.01$). The correlation coefficient (r) value of 0.708 suggests a strong positive association between Separation of duties and UNRA's performance. This means that there is a notable tendency for the two variables to move in the same direction. When Separation of duties is effectively implemented, it is associated with higher performance levels for UNRA. The " $P < 0.01$ " indicates that the observed correlation between Separation of duties and UNRA's performance is statistically significant at the 0.01 level of significance. In other words, the probability of obtaining such a strong

correlation by chance is less than 1%, making it highly unlikely that the relationship is purely coincidental. This provides strong evidence that the relationship between the variables is real and not due to random chance. The results of the study suggest that there is a robust and positive relationship between the implementation of "Separation of duties" and the performance of UNRA. When the principle of Separation of duties is effectively applied within the organization, it is associated with improved performance outcomes. This finding implies that having clear divisions of responsibilities and ensuring that no single individual has complete control over critical processes can lead to enhanced efficiency, transparency, and overall effectiveness within the UNRA.

Table 4.11: The relationship between asset usage guidelines and performance of UNRA

		Asset Usage guidelines	UNRA Performance
Asset Usage guidelines	Pearson Correlation	1	.622**
	Sig. (2-tailed)		.000
	N	211	211
UNRA Performance	Pearson Correlation	.622**	1
	Sig. (2-tailed)	.000	
	N	211	211
Correlation is significant at the 0.01 level (2-tailed).			

Source: Researcher (2023)

From table 4.11 above, results revealed that asset usage guidelines is positively and significantly related to the performance of UNRA at ($r = .622^{**}$, $P < 0.01$). The correlation coefficient (r) value of 0.622 suggests a positive association between asset usage guidelines and UNRA's performance. This means that when the organization follows asset usage guidelines, there is a tendency for UNRA's performance to improve. As adherence to the asset usage guidelines increases, the overall performance of UNRA tends to increase as well. The " $P < 0.01$ " indicates

that the observed correlation between asset usage guidelines and UNRA's performance is statistically significant at the 0.01 level of significance. In simple terms, the probability of obtaining such a strong correlation by chance is less than 1%, making it highly improbable that the relationship is a result of random chance. This provides strong evidence that the relationship between asset usage guidelines and UNRA's performance is genuine and not spurious. The study's findings suggest that there is a significant and positive relationship between adhering to "asset usage guidelines" and the performance of UNRA. When UNRA follows proper asset usage guidelines, it is associated with improved performance outcomes. This finding implies that having clear guidelines and procedures for the utilization and management of assets within the organization can lead to enhanced efficiency, better resource allocation, and overall improved performance for the UNRA.

4.7.2 Regression analysis

A multiple regression analysis was used to assess the extent to which internal control system with its constructs of (physical audits, separation of duties and asset usage guidelines) predicted the performance of UNRA. The regression helps researchers understand the relative importance of these constructs in predicting UNRA's performance while controlling for other potential factors that could influence the organization's overall performance.

Table 4.12: Regression analysis

Regression Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.532	.192		-2.773	.006
Physical Audits	.403	.095	.388	4.239	.000
Separation of duties	.617	.063	.560	9.840	.000
Asset usage guidelines	-.054	.089	-.061	-.600	.549
Model Summary					
R Square	.592				
Adjusted R Square	.586				
ANOVA^b					
F	100.260				
Sig. (P)	.000^a				

Source: Researcher (2023)

The results in table 4.12 above, it showed that internal control system with its constructs physical audits, separation of duties and asset usage guidelines combined influenced 59.2% of performance of UNRA (Adjusted R Square = .592). The remaining 40.8% is due to other factors outside this study. According to the results, it is clear that the regression model predicts the dependent variable significantly well (F= 100.260, P<0.05) thus, the model is a goodness of fit.

The results also revealed that physical audits positively and significantly predicts performance of UNRA at (Beta = **.388**, $p < 0.05$). This means that any unit increase in physical audits leads to .388 increase in the performance of UNRA and any unit decrease in the physical audits leads to .388 decrease in the performance of UNRA.

It was also revealed that separation of duties positively and significantly predicted the performance of UNRA at (Beta = **.560**, $p < 0.05$). This means that any unit increase in the separation of duties leads to .560 increase in the performance of UNRA and any unit decrease in separation of duties leads to .560 decrease in performance of UNRA.

Lastly, for asset usage guidelines, it negatively predicted the performance of UNRA at (Beta = **-.061**, $p > 0.05$), and the predictability level was insignificant at Sig. level of **.549** which is greater than **0.05**. This implies that any unit increase in asset usage guidelines leads to -.061 decrease in the performance of UNRA, and any unit decrease in the asset usage guidelines leads to .061 increase in the performance of UNRA.

4.8 Chapter conclusion

This chapter provided the analysis and interpretation of the study findings regarding the relationship between internal control system (physical audits, separation of duties and asset usage guidelines) and predicted the performance of UNRA. All the independent constructs were positively related to the dependent variable. The next chapter presents the results summary, discussion, conclusion and recommendations of the study.

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter presents discussion of study findings, conclusion and recommendations of the study based on the research objectives. The presentation of information followed the order of objective which included examining the relationship between physical audits and performance of UNRA, assess the relationship between separation of duties and performance of UNRA and investigate the relationship between asset usage guidelines and performance of UNRA. This chapter also provides areas that require further studies or investigation.

5.2 Discussion of the study findings

The discussion of the study findings followed the order of the study objectives.

5.2.1 The relationship between physical audits and performance of UNRA

The study findings showed that physical audits were a significant predictor of performance of UNRA and it also had high positive and significant relationship with UNRA's performance. Notably, the findings revealed a robust and positive relationship between the two variables, emphasizing the pivotal role that physical audits play in influencing UNRA's overall performance. This substantial relationship and the high predictability levels associated with physical audits can be attributed to UNRA's diligent implementation of safety measures and its commitment to assessing and ensuring the quality of work, both in progress and upon completion. By conducting audits that scrutinize adherence to project specifications and compliance with safety standards, UNRA effectively leverages audits as a powerful tool for enhancing quality management, promoting safety protocols, and upholding strict adherence to established parameters. These factors, in turn, contribute significantly to the organization's

overall performance. The study's findings underscore the importance of incorporating physical audits into the quality control processes of road construction projects. Such integration not only fosters improvements in project outcomes but also aligns with the findings of Chou et al. (2018), who similarly demonstrated the positive impact of physical audits on workmanship quality, project safety, and cost management. Thus, physical audits should be regarded as a multifaceted tool that not only ensures project compliance but also enhances safety and cost-effectiveness in project management.

Furthermore, the study delved into a comprehensive spectrum of physical audit components, including the meticulous verification of material inventory records through physical counting and reconciliation. Contract and documentation audits were also conducted with precision to ensure the utmost accuracy and adherence to contractual obligations, complemented by financial record audits pertaining to construction projects, all aimed at scrutinizing correctness. These multifaceted elements of physical audits collectively served as a robust mechanism for uncovering irregularities, with a predominant focus on accounting practices and the procurement and execution phases of road construction projects. By doing so, these audits significantly enhanced transparency within UNRA's operations while concurrently reducing opportunities for corruption. The rigorous nature of physical audits ensures the precision and fidelity of the figures and information reported, effectively fortifying the integrity of accounting records. These findings strongly align with the research of Baffour-Awuah et al. (2018), who highlighted the substantial performance improvements in road construction organizations concerning time and cost management resulting from physical audits. These audits emerged as instrumental in enhancing the accuracy of measurements and proactively identifying and rectifying errors during the construction process, thereby curtailing rework and cost overruns. Moreover, the insights

resonate with the work of Ogunsemi and Ogunsemi (2019), who emphasized that physical audits serve as indispensable tools for pinpointing defects and deficiencies in construction projects, thereby elevating project quality and concurrently lowering maintenance costs. The dual impact of enhancing transparency and fostering accountability within road construction projects ultimately acts as a potent deterrent to corruption, underlining the multifaceted advantages that physical audits offer in the realm of construction project management.

5.2.2 The relationship between separation of duties and performance of UNRA

The study findings revealed that separation of duties was the highest predictor of UNRA's performance and it had positive and significant relationship with UNRA's performance. Notably, separation of duties emerged as the strongest predictor, demonstrating a robust, positive, and statistically significant relationship with UNRA's overall performance. This implies that any increase in the level of separation of duties is likely to lead to a corresponding improvement in UNRA's performance, primarily by mitigating the risks of fraud and embezzlement. The study's results underscore the importance of this relationship, which can be attributed to the clear allocation of distinct roles and responsibilities to specific individuals within the organization. In line with the findings of Abir et al. (2019) and Li et al. (2020), the internal controls, including separation of duties, in the construction industry have a demonstrably positive association with organizational effectiveness. These controls play a critical role in reducing the inherent risks of fraud and errors in the construction process. Moreover, separation of duties has broader implications for project success, as it facilitates enhanced project coordination, reduces conflicts of interest, and elevates the accuracy and reliability of project-related information. This dynamic encourages supervisors and managers to consistently review and monitor the work of their

subordinates, promoting a culture of accountability and diligence that further contributes to UNRA's overall performance and operational integrity.

Furthermore, the meticulous separation of duties extends beyond the mere allocation of roles; it involves delineating the responsibilities for recording transactions from those responsible for the physical safeguarding of assets, and concurrently implementing stringent controls to restrict access to sensitive information, systems, and processes. This multifaceted approach fundamentally enhances organizational efficiency and effectiveness, thereby substantially reducing the likelihood of non-compliance and the associated penalties. This resonates with the findings of Nsubuga et al. (2020), which underscore the pivotal role of internal controls, particularly in the context of infrastructure development, in facilitating compliance with regulatory mandates and industry standards within road construction organizations. By distinctly assigning responsibilities for compliance monitoring, reporting, and adherence to safety guidelines and restrictions, organizations can systematically and comprehensively ensure that legal and ethical obligations are consistently met. In essence, the practice of separating duties not only streamlines operational processes but also bolsters the organization's capacity to adhere to regulatory frameworks, thereby safeguarding its reputation and minimizing potential liabilities.

5.2.3 The relationship between asset usage guidelines and performance of UNRA

The study findings presented a nuanced perspective on the relationship between asset usage guidelines and the performance of the Uganda National Roads Authority. While a positive relationship was observed, it is essential to note that asset usage guidelines were identified as a negative predictor of UNRA's performance. This seemingly contradictory outcome can be attributed to several critical factors within UNRA's operational framework. The organization

lacks a clearly defined system for asset allocation based on project requirements and priorities. Moreover, there is an absence of a digital tracking system to monitor asset usage comprehensively, identify any potential misuse, and ensure accountability. Additionally, the regular inspection and maintenance of assets to preserve their optimal working condition appear to be lacking. These limitations collectively hinder UNRA's ability to efficiently utilize its resources and adopt best practices for maximizing resource utilization, as indicated by Salam et al. (2018). The study's results also contrast with the findings of Donyaee and Shaghghi (2020), who highlighted the potential of asset usage guidelines to enhance procurement and disposal practices within road construction organizations. The study suggests that UNRA's adherence to asset usage guidelines might be time-consuming, leading to operational delays that could negatively impact the organization's overall performance. Thus, the findings underscore the importance of refining asset allocation processes, implementing digital monitoring systems, prioritizing asset maintenance, and balancing guideline adherence with operational efficiency to optimize UNRA's performance and align with industry best practices.

5.3 Conclusions

The study made the following conclusions

The study concluded that physical audits was significant predictor of performance of UNRA at Beta =.388 and with a high positive and significant relationship at $r = .602^{**}$. The high relationship value and high predictability levels of physical audits to UNRA performance were as a result of UNRA carrying out audits on implantation safety measures and adherence, quality evaluate audits on completed work or work in progress, verification of accuracy of material inventory records by physically counting and reconciling, contract and documentation audits to

ensure accuracy and adherence to contractual obligations and audit on financial records related to construction projects to check their correctness.

Furthermore, it was concluded that the separation of duties was the highest significant predictor of performance of UNRA at $\text{Beta}=.560$, with a positive and significant relationship at $r=.708^{**}$. It was concluded that significant predictability levels and relationship of separation of duties and performance of UNRA were as a result of different roles and responsibilities are assigned to specific people, supervisors and managers regularly reviewing and monitoring the work of their subordinates, separation of the duties of recording transactions from the physical custody of assets and having controls in place to restrict access to sensitive information, system and process.

Lastly, it was concluded that that asset usage guidelines were had a negative and an insignificant predictor of the performance of UNRA at $\text{Beta}=-.061$ despite showing a positive relationship of $r=.622^{**}$. The study concluded that insignificant predictability levels of asset usage guidelines ro performance of UNRA were due to the fact that UNRA does not have a clear system for allocating assets based on project requirement and priorities, not digital tracking system to monitor asset usage & identify any misuse and asset being not regularly inspected and maintained to keep them in good working condition. Besides, that following the asset use guidelines may be time consuming hence delaying operations of UNRA that eventually negatively affects the organization performance.

5.4 Recommendations

The report made the following recommendations;

Basing on the study findings, the study recommends that UNRA need to implement a systematic and regular inspection process for construction equipment and machinery to ensure their proper

functioning and maintenance. Additionally, it is crucial for UNRA to establish a comprehensive framework for conducting periodic reviews and validation audits to ensure compliance with permits, licenses, and regulatory requirements. By prioritizing these measures, UNRA can enhance the efficiency and safety of construction projects while ensuring adherence to legal and regulatory standards.

The study recommends that UNRA need to implement a system of checks and balances within the organization to ensure effective oversight those individuals to review the work of their co-workers. It is essential to establish a clear and transparent process where multiple authorized individuals are involved in reviewing and validating the work of their colleagues. Additionally, UNRA should introduce periodic rotations to prevent any single individual from having prolonged control over a specific process, thus promoting accountability and reducing the risk of errors or misconduct. These measures will enhance transparency, accountability, and quality assurance within UNRA's operations.

It was also recommended that UNRA needs to prioritize the regular inspection and maintenance of assets to ensure they remain in good working condition. It is crucial for UNRA to develop a robust system for allocating assets based on project requirements and priorities, taking into consideration the specific needs of each project. Additionally, UNRA should establish a clear and effective tracking system to monitor asset usage and promptly identify any instances of misuse or unauthorized utilization. By implementing these recommendations, UNRA can optimize asset management, enhance operational efficiency, and minimize the risk of asset deterioration or misuse, ultimately improving overall project outcomes.

5.5 Limitations of the Study

The researcher encountered some limitations as presented below;

- i) During the compilation and processing of data for this study, there were certain challenges encountered. One such challenge was the presence of inaccuracies in the provided information, which led to the inclusion of erroneous data. However, the researcher successfully dealt with this limitation by implementing data cleaning techniques.
- ii) Another limitation arose while collecting information from the participants, as some individuals expressed resistance. A few individuals stated that the requested information was highly confidential. To overcome this constraint, the researcher took extensive measures to clearly explain the study's purpose to the respondents and assured them that their information would be handled with utmost confidentiality
- iii) The researcher encountered difficulties with collecting data because majority of the people were busy with work. Although it delayed the data collection process, the respondents were given questionnaires to fill in their free time and they were collected back for data analysis after two days.

5.6 Areas for further research

As a result of limited resources and time constraints, certain areas were not covered by the researcher, leading to a recommendation for further research studies in those specific areas;

- (i) A similar study examining the effect internal control systems and performance can be done in other organizations/companies to check if similar results can be obtained.

(ii) A study on internal control systems and performance of UNRA can be carried out while considering the five components of control environment, assessment of risk, control activities, information & communication and monitoring that make internal control system complete.

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APPENDICES

Appendix I: Questionnaire

Dear Sir/Madam

I am **Solomon Ajuna** a student of Uganda Christian University pursuing a Masters of Business Administration. As part of the requirements for this award, I am undertaking a study examining ***“The internal control systems and performance of government entities while using Uganda National Roads Authority (UNRA) as a case study”***. In relation to this study, I am contacting you for relevant information about the topic. Your responses/information will be treated with great confidentiality and used for this study purposes.

SECTION A: Bio-data information about the respondents

1. Gender:

- (i) Male
- (ii) Female

2. Level of Education

- (i) Certificate
- (ii) Diploma
- (iii) Degree
- (iv) Maters
- (v) Other (Specify).....

3. Age bracket

- (i) 18-30 Years
- (ii) 31-40 Years
- (iii) 41-50 years
- (iv) 51 Years and Above

4. Number of Years in working with UNRA

- (i) Less than a Year
- (ii) 1-2 Years
- (iii) 3-5 Years
- (iv) 6 Years and above

Instructions: For Section B-E, please choose by ticking the option you consider the most appropriate

Rating scale. *1= Strongly Disagree, 2= Disagree, 3= Agree, 4= Strongly Agree*

Section B: Physical audits

Code	Statements	1	2	3	4
B1	UNRA carries out audits on implementation of safety measures and adherence to safety protocols				
B2	UNRA carries out quality evaluation audits on completed work or work in progress to ensure it meets its project expectations				
B3	There is verification the accuracy of material inventory records by physically counting and reconciling them with the documented inventory				
B4	Inspection construction equipment and machinery are carries to ensure they are in good working condition well maintained				
B5	There are review and validate audits to check compliance with permits, licenses, and regulatory requirements				
B6	UNRA carries out contract and documentation audits to ensure accuracy & adherence to contractual obligations				
B7	UNRA carries out audit on financial records related to construction projects to check their correctness				

Section C: Separation of duties

Code	Statements				
		1	2	3	4
C1	Different roles and responsibilities are assigned to specific people				
C2	Two or more individuals to authorize review works of their co-workers				
C3	There is periodic job rotation to prevent any single individual from having prolonged control over a specific process				
C4	Supervisors and managers review & monitor the work of their subordinates				
C5	There is separation of the duties of recording transactions from the physical custody of assets				
C6	There are controls to restrict access to sensitive information, systems, and processes				

Section D: Asset usage guidelines

Code	Statements				
		1	2	3	4
D1	Assets are regularly inspected & maintained to keep them in good working condition				
D2	There are defined authorized users for each asset				
D3	Employees who operate specific assets have the necessary training & skills				
D4	UNRA a system for allocating assets based on project requirements & priorities				
D5	UNTA has a tracking system to monitor asset usage & identify any misuse				
D6	All employees are encouraged to report any damages on the asset promptly				
D7	There are clear guidelines for retiring or disposing of assets that are no longer useful or cost-effective				

SECTION C: The performance of UNRA

N/S	Item	1	2	3	4
C1	UNRA projects are always finished in scheduled time				
C2	UNRA projects are always completed in set budgets				
C3	UNRA meets all its short and long term financial obligations whenever they fall due				
C4	There are no cases of fraud and embezzlement of funds				
C5	There are no cases of property misuse				
C6	There has been reduction in the operating costs				
C7	All the operations of UNRA meet the quality standards				
C8	UNRA operations don't cause environmental degradation				
C9	The public is satisfied with operations of UNRA				

End
Thank you for your time.

Appendix II: Table for determining sample size from a given population

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size.

S is sample size.

Krejcie, R. V. and Morgan D. W. (1970). Determining sample size for Research Activities: Educational and Psychological Measurement.