IMPACT OF INTERNAL CONTROLS ON THE FINANCIAL PERFORMANCE OF PUBLIC SECTOR UNIVERSITIES IN UGANDA: A CASE STUDY OF MAKERERE UNIVERSITY

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UGANDA CHRISTIAN UNIVERSITY
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DECLARATION

I, WALUSIMBI DIVINE HOPE, declare that this dissertation titled "Impact of Internal Controls on the Financial Performance of Public Sector Universities in Uganda: A Case Study of Makerere University" is my original work, produced as a result of my own research effort, and has not been submitted in whole or in part to any other university or institution for the award of any academic qualification. All sources of information used in this dissertation have been duly acknowledged in the text and in the list of references.

Signature: .... Date: ....

WALUSIMBI DIVINE HOPE

APPROVAL

This dissertation titled "Impact of Internal Controls on the Financial Performance of Public Sector Universities in Uganda: A Case Study of Makerere University" has been submitted for examination with my approval as the University Supervisor.

Signature: .... Date: ....

JENNIFER ABIYAR N. (MRS)

University Supervisor

DEDICATION

I dedicate this dissertation to Almighty God, the source of my strength, wisdom, and understanding throughout this academic journey. To my beloved parents, whose unwavering love, prayers, encouragement and sacrifices laid the foundation for my education, I remain forever grateful. To my dear brothers and sisters, whose constant support and belief in my abilities sustained me during the most demanding moments of this study, I say thank you. Finally, to my friends and classmates at Uganda Christian University, with whom I shared countless hours of learning, discussion, and mutual encouragement, may this work serve as a reminder that persistence and faith can turn every dream into reality.

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ABSTRACT

In this study, the effects of internal controls on the financial performance of public sector universities in Uganda were evaluated, considering Makerere University as the case institution. The rationale behind conducting this study was driven by the repeated complaints that have emerged in the recent Auditor General's reports concerning unauthorised spending, procurement anomalies, delays in payment to suppliers and employees, and non-follow-ups on auditor general's recommendations in the public sector universities in Uganda. Based on Agency Theory, Systems Theory, and Stewardship Theory, the study was informed by four specific objectives, which include: evaluating the effects of risk assessment procedures; determining the effects of control activities; examining the effects of monitoring and evaluation techniques; and evaluating the effects of the control environment on the financial performance of Makerere University.

The research methodology used in this study involved the use of a descriptive case study research design, and it was quantitative in nature. The data collection tool used in this research was a structured questionnaire that was designed on a five-point Likert scale. It was distributed to a sample size of 73 respondents selected using proportional stratified sampling technique from the Finance, Internal Audit, Procurement, and Administration departments of the University. Out of the total number of 73 respondents who received the questionnaires, 65 responded to the questionnaires representing an overall response rate of 89.04%.

Descriptive statistics revealed that most of the participants agreed that all four components of internal controls existed (RA: 3.928; CA: 3.848; ME: 3.798; CE: 3.858), with financial performance averaging at 3.732. On correlation, there existed a statistically significant positive correlation between financial performance and risk assessment ($r = 0.510$, $p < 0.01$), monitoring and evaluation ($r = 0.494$, $p < 0.01$), and control activities ($r = 0.366$, $p < 0.01$). There existed a positive but non-statistically significant relationship between financial performance and control environment ($r = 0.233$, $p = 0.062$).

The regression analysis results show that the model is statistically significant ($F(4, 60) = 18.739$, $p < 0.001$), with all four components collectively accounting for 55.5% of the variance in financial performance ($R^2 = 0.555$). The four independent variables each have significant unique effects on financial performance, namely: monitoring and evaluation ($\beta = 0.451$, $p < 0.001$), risk assessment ($\beta = 0.383$, $p < 0.001$), control activities ($\beta = 0.259$, $p = 0.005$), and control environment ($\beta =$

0.182, p = 0.043). This means that all four null hypotheses were rejected. It is important to note that while control environment is not significantly associated with financial performance when considered alone, it does contribute significantly to the regression model.

The findings revealed that internal controls significantly improve financial performance in Makerere University when applied in an all-inclusive manner, with the greatest influence being monitoring and evaluation. The study recommends the creation of an enterprise risk management system, enhancing the Internal Audit Department, follow-up of audit recommendations, use of integrated financial information systems, and maintenance of a good ethical tone at the top.

Keywords: Internal Controls, Risk Assessment, Control Activities, Monitoring and Evaluation, Control Environment, Financial Performance, Public Universities, Makerere University, Uganda, COSO Framework.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

Abbreviation	Meaning
ANOVA	Analysis of Variance
CA	Control Activities
CE	Control Environment
COSO	Committee of Sponsoring Organizations of the Treadway Commission
CVI	Content Validity Index
df	Degrees of Freedom
ERM	Enterprise Risk Management
FP	Financial Performance
ICT	Information and Communication Technology
IV	Independent Variable
DV	Dependent Variable
ME	Monitoring and Evaluation
NCHE	National Council for Higher Education
OAG	Office of the Auditor General
PFM Act	Public Finance Management Act, 2015
RA	Risk Assessment
R^2	Coefficient of Determination
SD	Standard Deviation
Sig.	Statistical Significance
SPSS	Statistical Package for the Social Sciences
UCU	Uganda Christian University
β	Standardized Regression Coefficient (Beta)

CHAPTER ONE:INTRODUCTION

1.0 **INTRODUCTION**

This chapter consists of the background of the study, statement of the problem, purpose of the study, research objectives, research questions, scope of the study, justification, significance, and conceptual framework.

1.1 Background to Study

The Ugandan public universities are functioning in a complex and more demanding environment, typified by an increasing number of students enrolling, increasing costs of operation, decreasing government subsidies on them, and an increase in the level of scrutiny on how the public funds are used. Since institutions are a requirement to create knowledge, skilled human capital, and serve the national development, their economic sustainability is necessary. It is thus important to ensure that the financial resources provided to them are used well in order to provide quality teaching, research and community engagement. Nevertheless, the ongoing complaints about financial drainage, lack of accountability mechanisms, procurement anomalies and misplaced funds have kept the public universities in the crossfire to ensure they have better governance and financial management mechanisms.

One of the fundamental ways in which the public sector institutions can improve financial accountability and resource protection have become the internal controls. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) defined internal controls as policies, procedures and processes that are used to give reasonable assurance of the attainment of organizational goals, reliability of financial reporting, adherence to laws and regulations, efficiency and effectiveness of operations. Internal controls in the context of public universities are a critical factor in ensuring that financial resources are well planned, duly recorded, used wisely and adequately guarded against misuse or loss. They are also used to make institutions to adhere to national law like the Public Finance Management Act (2015), the Universities and Other Tertiary Institutions Act (2001), and the guidelines provided by the Auditor General.

Even with the knowledge of the existence of well-designed regulatory frameworks, reports by the Office of the Auditor General as well as Parliamentary oversight committees often identify weaknesses in the internal control systems in the public universities. They comprise shortcomings in budgetary tracking, ineffective separation of roles, incomplete records, inconsistency in procurement procedures and ineffective cash-management processes. These shortcomings leave universities vulnerable to deceit, waste, and inefficiency, which directly impact financial outcomes. The current poor financial performance is reflected in the slow implementation of projects, arrears, failure to fulfill statutory duties, inadequate funding of research and innovations and poor infrastructure. With the increased competitiveness of the higher-education sector and the increase in accountability expectations, the strength of internal control systems is progressively becoming central to enhance institutional operating and keep the public trust.

Moreover, the internal controls are not operated in a vacuum. Their success is determined by the control environment, commitment of the leadership, competence of their staff, information systems, and constant monitoring. The presence of a high control culture in the state universities promotes ethical conduct, transparency and policy compliance. On the other hand, poor governance systems, lack of capacity among finance personnel and poor supervision can make even the well-designed controls to be useless. Modern financial management systems including the Integrated Financial Management System (IFMS) have opened the potential of increased financial monitoring and reporting, but the problem of implementing the systems, employee training, and real-time monitoring continues to plague in most institutions.

With the growing investment in higher education by the populace and the rising demand of accountability, it is essential and timely to examine the effect of internal controls on financial performance of the public universities in Uganda. The role of control activities, risk assessment practices, monitoring mechanisms, and information systems in contributing or inhibiting financial performance can be useful to policy makers, university councils, development partners and management teams. This kind of evidence is critical to building the institutional capacity, better stewardship of resources, and confirmation that the public universities play out their role in long-term social and economic transformation agenda in Uganda.

1.2 Statement of the problem

Uganda Public universities like Makerere University have to cope with big amounts of state funds in the form of government subventions, tuition fees, and research grants. These institutions are thus supposed to have good internal control mechanisms to promote accountability, transparency, and efficient utilization of financial resources. Nonetheless, with the internal control structures in place, a number of audit reports by the Office of the Auditor General (OAG) and the Ministry of

Education and Sports have still reported the recurrence of financial mismanagement, lack of control systems, and breach of financial regulations in the state universities.

In Makerere University, the financial reporting was not done promptly, funds were not properly accounted, there was a lack of adequate segregation of duties and poor monitoring systems have all been noted in previous financial audits. All these weaknesses indicate that internal controls can be poorly designed and implemented, which may negatively affect financial performance and decrease the trust of the population in the financial management of the institution.

The research was therefore aimed at analyzing the impact of internal controls on financial performance of the public universities with a case study of Makerere University.

1.3 Purpose of the Study

The purpose of this study was to examine the effect of internal auditing on the financial performance of public universities using Makerere university as a case study. Specifically, the study sought to assess how internal audit practices affect financial accountability, resource utilization, budget performance and overall financial stability.

1.4 Research Objectives

1.4.1 General Objective

To assess the impact of internal auditing on the financial performance of public sector institutions in Uganda.

1.4.2 Specific Objectives

To examine the effect of risk assessment practices on the financial performance of Makerere university.

To analyze how control activities influence the financial performance of Makerere university.

To assess the impact of monitoring activities on financial performance of Makerere university.

To assess the effectiveness of the control environment on financial performance of Makerere university.

1.5 Research Questions

What is the effect of risk assessment practices on the financial performance of Makerere university?

How do control activities influence the financial performance of Makerere university?

What role do monitoring activities play in improving financial performance at Makerere University?

How effective is the control environment on financial performance of Makerere university?

1.6 Research Hypothesis

H_1: There is a positive relationship between internal controls and financial performance

1.7 Significance of the Study

This study was significant because it provided valuable insights into how internal auditing influences the financial performance of public universities in Uganda using Makerere university as a case study.

The findings were helpful in university management to strengthen internal audit systems to promote accountability, transparency and effective use of public funds.

The findings were helpful for policy makers and government agencies in formulating and enforcing audit standards and policies that enhance financial management and performance across higher education institutions

The study contributed to existing academic literature by bridging the knowledge gap on the relationship between internal auditing and financial performance in public universities. Future researchers and students could use the study as a reference for related studies.

1.8 Scope of the Study

1.8.1 Content Scope:

The study focused on examining the impact of internal auditing on the financial performance of public universities, with specific emphasis on Makerere University. It assessed key internal audit components such as audit planning, audit execution, reporting, and follow-up, and how these influenced financial performance indicators such as financial accountability, budget performance, resource utilization, and financial sustainability.

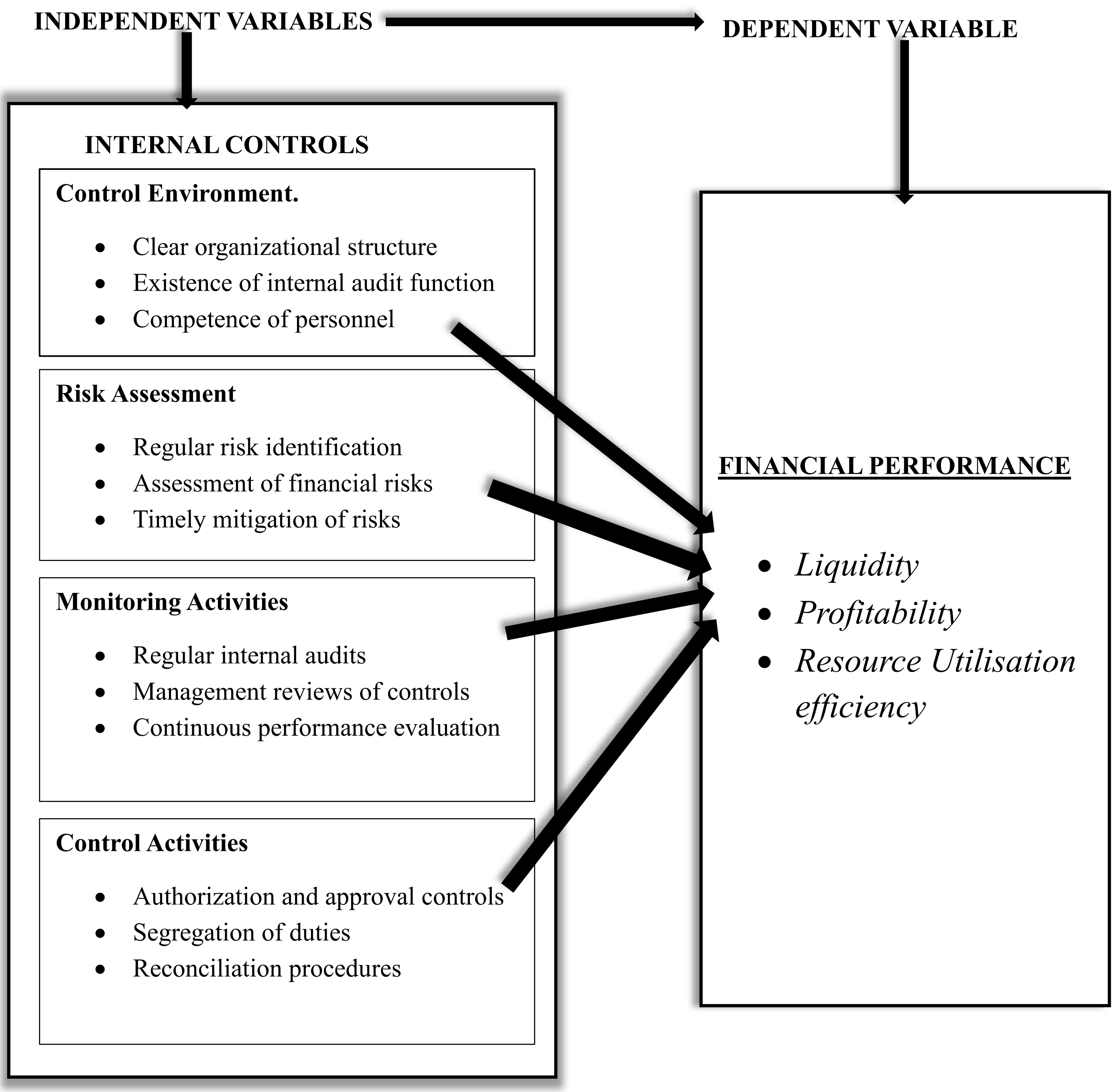
1.8.2 Geographical Scope:

The study was conducted at Makerere University, located in Kampala District, Uganda. Makerere University is chosen because it is the largest and oldest public university in the country, handling significant financial resources from both government and private sources, which made it a suitable case for examining the effectiveness of internal auditing on financial performance.

1.8.3 Time Scope:

The study examined the period 2020/2021-2024/2025, aligning with the Auditor General reports.

1.9 CONCEPTUAL FRAMEWORK



CHAPTER TWO:LITERATURE REVIEW

2.0 Introduction

The chapter has examined the theoretical, conceptual, and empirical literature on internal controls and financial performance in Uganda public universities. The chapter was divided into six broad parts: definitions of important terms, theoretical review, conceptual framework, literature presented as per the objectives of the study, literature gaps identified and finally a conclusion. This framework offered a holistic basis of the impact of the internal control elements towards financial performance results in the Ugandan public universities.

Internal controls were an essential aspect of financial management in the governance of public universities, and this aspect is especially acute in the context of Uganda where the work of the public institutions is complicated by a variety of issues such as insufficient funding, the growth of the costs of operation, the increase in the number of students, and the rise in the accountability requirements of the government and development partners (Ministry of Education and Sports, 2022). The Committee of Sponsoring Organizations of the Treadway Commission framework (COSO, 2013; 2023) specifies that a strong internal control system increases the trustworthiness of financial reporting, improves accountability measures, minimizes fraudulent incidents, and facilitates efficiency in the functioning. This attitude is consistent with the Public Finance Management Act (2015) in Uganda that requires the rational utilization of the public funds as well as adherence to financial laws within all the government organizations.

The reviewed literature presented in this paper gave an academic framework of how the core internal control components control environment, risk assessment, control activities, information and communication and monitoring activities combine to influence the financial performance outcomes in Ugandan public universities. With a comprehensive discussion of both theoretical and empirical approaches, this chapter forms the scholarly groundwork upon which the relationship between internal controls and financial performance is investigated.

2.1 Key Terms Definitions.

2.1.1 Internal Controls

Internal controls were defined as a systematic arrangement of policies, procedures, and organizational actions that were established by the management to offer a reasonable assurance of accomplishment of organizational goals (COSO, 2023). The controls included procedures that are aimed at efficient operations, appropriate and dependable financial reporting, protection of the organization assets, and adherence to the relevant laws and regulatory frameworks (Kaggwa & Tumwebaze, 2023).

COSO framework (2023) divides internal controls into five interdependent components; control environment, risk assessment, control activities, information and communication, and monitoring activities. All the components have their own unique but related part to play in the formation of comprehensive internal control systems. Internal controls in the context of public universities overcome long-term problems with the misallocation of funds, irregularities in procurement, inadequate documentation, poor audit mechanisms, and poor accountability systems (Auditor General of Uganda, 2023). Good internal controls can thus be regarded as the building blocks towards financial integrity and operational effectiveness in institutions of higher learning.

2.1.2 Financial Performance

Financial performance implied the extent to which an institution is able to efficiently and effectively employ its financial resources to meet strategic and operational goals (Kaggwa & Tumwebaze, 2023). It was a multidimensional measure that is typically assessed through a variety of indicators such as liquidity ratios, budget absorption rates, revenue utilization efficiency, audit outcomes, compliance scores, and cost-effectiveness measures (Mulindwa, 2021; Eton et al., 2022).

In the case of public universities, financial performance had a number of important dimensions, including prompt payment and use of money allocated, a limited number of audit questions and financial anomalies, effective and open procurement procedures, equitable distribution of resources among faculties and departments, compliance with budgetary regulation, and practices of sustainable financial management that guarantee long-term institutional sustainability (Nambalirwa, 2022; Nalugo, High financial performance of public universities is not only an indicator of effective management of the resources but also shows that the institution is able to meet its educational mandate and at the same time be fiscally responsible and accountable to its stakeholders.

2.1.3 Control Environment

The control environment was the basis on which the overall internal control system of an institution is built (COSO, 2013). It includes the organizational tone established by the top management, the ethical values and standards of behaviour, organizational structure and reporting lines, human resource policies and practices, delegation of authority and responsibility, integrity and competence of leadership (COSO, 2023).

Governance bodies such as University Councils, Senate, Finance and Management Committees, and executive leadership play a crucial role in the control environment in the context of a public university (Okello and Luwaga, 2021). A robust control environment is one that exhibits visible ethical leadership, articulated values and expectations, qualified staff with relevant qualifications, good governance structures with roles and responsibilities and a compliance and accountability culture (Mwesigwa, 2020). The control environment determines the organizational culture and shapes the perception and the implementation of control procedures across the institution.

2.1.4 Risk Assessment

Risk assessment was the process of identifying, analysing, evaluating and prioritising risks that could impede the attainment of financial and operational goals in a systematic manner (COSO, 2013). It involves the identification of risks (identifying possible threats), risk analysis (assessing probability and impact), risk evaluation (comparing risks with pre-established standards), and the creation of suitable mitigation measures (Odoch, 2022).

In the case of universities, the following financial risks were relevant: the insufficient funding by the government, the late or irregular payment of budget funds, procurement fraud and irregularities, misappropriation of student fees and research grants, academic malpractices with financial consequences, information and communication technology risks, risks of fluctuations in exchange rates affecting donor-funded projects, and non-compliance risks with regulations (Kaggwa & Tumweb Risk assessment is effective in that it helps institutions to mitigate the potential risks before they translate into actual financial losses or disruption of operations.

2.1.5 Control Activities

Control activities were used to refer to the particular policies, procedures and practices that make sure that management directives are implemented, and organizational goals are met (COSO, 2023). Such activities run across all levels of the organization and involve a number of procedures, including authorization and approval processes, segregation of duties to eliminate control concentration, independent verifications and reconciliations, physical controls over assets and records, documentation requirements and record-keeping standards, procurement controls and competitive bidding processes, performance reviews and evaluations (Eton et al., 2022).

The control activities in the university setting included the hierarchies of budget approval, limits of expenditure authorization, bank reconciliation processes, verification of assets and stocktaking, procurement committee reviews, financial reporting requirements, and recording of all financial transactions (Mulindwa, 2021). Properly designed and regularly enforced control activities decrease the number of irregular expenditures, decrease the number of errors and fraud, and increase the general compliance with financial regulations and institutional policies.

2.1.6 Monitoring Activities

Monitoring was defined as the continual control and regular assessment of the effectiveness of internal control systems (COSO, 2023). It entails continuous monitoring processes that are part of normal operations, independent reviews that are conducted periodically, internal audit functions that evaluate the effectiveness of controls independently, management reviews of financial reports and performance indicators, audit committee oversight and governance, and systematic follow-up mechanisms that ensure that recommendations are implemented (Nambalirwa, 2022).

Monitoring in universities is used to make sure that the financial policies and procedures are always implemented in all faculties, departments, and administrative units (Kawesa & Eton, 2023). Proper monitoring systems are regular internal audits with sufficient resources and independence, quarterly financial reviews by management, audit committee meetings to discuss findings and recommendations, implementation tracking systems to take corrective action and coordination and response procedures of external audits. Effective monitoring activities make it possible to identify and rectify deficiencies in controls in time, improving the overall financial performance.

2.2 Theoretical Review

This section discussed three theoretical backgrounds that justify the need, design, and execution of internal controls in organizational settings, especially in the context of the public universities. These theories Agency Theory, Systems Theory and Stewardship Theory offered complementary views on the role of internal controls in financial performance.

2.2.1 Agency Theory

Agency Theory is a theory that was formulated by Jensen and Meckling (1976), which looks into the principal-agent relationship in organizations whereby one party (the principal) delegates authority to another party (the agent) to deliver services on his behalf. The delegation is bound to create a potential conflict of interest where the goals of the agent and the principal are not the same (Eisenhardt, 1989). The government is the key player in the public university where it funds and gives powers to the university management (agents) to govern the public resources and to provide educational services.

Nevertheless, information asymmetry in which the agents have more information regarding operations than the principals make the agents act in their self-interest instead of acting in the interest of the principal (Jensen and Meckling, 1976). This opportunistic behaviour can be in the form of financial report manipulation, unauthorized spending, procurement anomalies, misappropriation of institutional funds, and intentional non-observation of financial policies (Eton, 2022).

This principal-agent issue is inherent and requires internal controls as monitoring mechanisms to balance the interests of the university management with the interests of government and public stakeholders (Nalugo, 2024). Independent audit, authorization structure, segregation of responsibilities, stringent procurement policies and performance surveillance systems are some of the control mechanisms that can be used to minimize agency costs which is the total of monitoring costs, bonding costs and residual losses brought about by the principal-agent relationship (Jensen and Meckling, 1976).

Empirical studies in Uganda confirm the Agency Theory hypothesis that high internal controls play a crucial role in lowering agency costs by enhancing accountability, transparency, and sound financial decision-making in government universities (Eton, 2022). Research shows that institutions that have weak governance frameworks and lack internal controls have significantly higher volumes of audit questions, high rates of financial misconduct, and lower rates of adherence to financial regulations (Nalugo, 2024). On the other hand, organizations that have strong control mechanisms have better financial performance in terms of less fraud, increased accountability, and effective use of resources (Okello and Luwaga, 2021).

The Agency Theory, therefore, offers a strong explanation to adopt elaborate systems of internal controls in the public universities as critical measures to protect the resources of the people and to maintain a consistency between the management of the institutions and the interests of the stakeholders.

2.2.2 Systems Theory

The Systems Theory is based on the work of Bertalanffy (1968) and it views organizations as complex, interconnected systems that have several interrelated subsystems that work together to accomplish organizational goals. One of the main assumptions of this theory is that organizations are open systems, which constantly engage in interaction with their environment and that the components of the organization are interdependent so that the dysfunction or failure of one subsystem will always impact the performance of the whole system (Kast & Rosenzweig, 1972).

When applied to internal controls, Systems Theory implies that the five elements of internal control, such as control environment, risk assessment, control activities, information and communication, and monitoring, need to operate in a cohesive and synergistic manner and not independently (COSO, 2013). The combination of these components by interaction, coordination, and feedback mechanisms forms the overall effectiveness of control systems (Kawesa & Eton, 2023). As an example, having a well-established control environment is the basis of successful risk assessment; risks are identified and used to design the right control activities; monitoring is used to provide feedback on the effectiveness of control; and information and communication are used to coordinate all the elements.

Systems Theory in the context of Ugandan public universities is the reason behind financial leakages and inefficiencies in operations due to fragmented or poorly integrated internal control systems. Kawesa and Eton (2023) reported the lack of effective coordination between the finance departments, the procurement units, and the internal audit functions that creates loopholes in control that are exploited by the opportunistic actors. Equally, poor information flows between the faculties and the central administration lead to budgetary discrepancies and inefficiencies in resource allocation (Mwesigwa, 2020).

Systems Theory highlights various vital principles of successful implementation of internal controls: holistic integration of all control elements, flow of information throughout organization, feedback loops to facilitate learning and adaptation, interdependence and necessitated coordinated functioning, and synergistic effects in which integrated systems yield more than the sum of its parts (Bertalanffy, 1968; Kast and Rosenzweig, 1972).

This theoretical approach emphasizes that the effectiveness of internal controls does not only lie in the availability of the individual components of control but its combination, coordination, and overall working as a single system. Systemic approaches to internal control design and implementation should therefore be embraced by public universities, so that all the elements are in tandem to improve financial performance.

2.2.3 Stewardship Theory

Stewardship Theory is an alternative theory to Agency Theory that is put forward by Donaldson and Davis (1991) and holds the view that managers are trustworthy stewards whose interests are naturally aligned with organizational objectives. This theory states that achievement, recognition, and fulfillment of responsibility are the main intrinsic motivators of managers as opposed to opportunistic self-interest (Davis, Schoorman and Donaldson, 1997). Stewards also find satisfaction in the success of the organization and thus they can serve the best interests of principals without the need to have a complex monitoring system.

When applied to the case of a public university, Stewardship Theory implies that most administrators are indeed interested in carrying out their fiduciary duties, prudent management of resources, and promotion of institutional mission and goals (Donaldson and Davis, 1991). This view recognizes professional commitment, ethical orientation and service to the people that are typical of most university leaders and financial managers.

Nonetheless, the empirical findings of the Uganda general universities show that there are still challenges that are not in line with the assumption of pure stewardship. In the reports by the Auditor General (2023), there are continuously reported unauthorized expenditures, violation of procurement regulations, non-implementation of audit recommendations, misappropriation of funds, and poor financial documentation in many institutions. Such trends indicate that although certain university leaders might be good examples of stewardship, intrinsic motivation and trust alone cannot be used to promote financial integrity and accountability.

In turn, researchers believe that the principles of stewardship should be supplemented with effective control systems to establish a balanced system of governance (Nalugo, 2024). This complementary strategy acknowledges the good intentions of most administrators and at the same time, putting in place controls that prevent, detect and rectify cases of mismanagement or misconduct. This type of integrated framework is a blend of trust and verification, professional autonomy and accountability, and intrinsic motivation and structural safeguards (Eton, 2022).

The applicability of Stewardship Theory to internal controls in state universities is that it reminds that control systems must not be so tight as to impair professional judgment, discourage innovation, or convey a lack of trust in the ability of competent administrators. Instead, effective controls ought to equip stewards with the ability to discharge their duties effectively and offer confidence to stakeholders that institutional resources are being used in the right way (Davis et al., 1997).

2.2.4 Theoretical Perspectives.

The three theories presented complementary but not contradictory information on internal controls in public universities. The Agency Theory describes why we need controls in the face of possible conflict of interest; the Systems Theory describes how the elements of controls should work together; and the Stewardship Theory reminds us that controls should enable and not thwart the efforts of dedicated professionals. These theoretical views collectively support the need to have comprehensive, integrated, and well-designed internal control systems that would help improve financial performance in public universities.

2.3 The effectiveness of risk assessment practices on the financial performance of public universities in Uganda.

Risk assessment was a forward-thinking strategy that allowed organizations to foresee, assess, and counter any dangers well in advance of their occurrence, thereby averting losses and poor performance. COSO (2013) asserts that proper risk assessment involves routine risk identification, thorough risk analysis accounting for likelihood and consequences, determination of acceptable risk levels, and creation of adequate risk responses.

The body of literature on risk management shows that effective risk assessment positively impacts organizational performance in multiple ways: increasing awareness and predicting risks, efficient deployment of resources to handle critical risks, developing contingency strategies that lessen interference due to risks, and improving stakeholder trust in risk preparedness (Hopkin, 2018). These outcomes are especially important for public universities functioning in resource-limited and highly unpredictable environments.

Research conducted in advanced economies has clearly shown the advantages associated with the systematic application of risk assessments. Woods (2009) studied public universities in the United Kingdom and discovered that those using advanced enterprise risk management systems faced fewer financial troubles, maintained better liquidity management practices, and had higher rates of project accomplishment. Likewise, Christopher (2014) found that Australian public universities with strong risk assessment capabilities were more adept at handling financial risks and regulatory shifts.

However, research pertaining specifically to Uganda presents varied views regarding risk assessment and its financial implications. For instance, Odoch (2022) carried out an in-depth analysis of seven public universities in Uganda and found out that lack of proper risk management led to many financial issues ranging from overspending the budget by average of 23%, halting of projects because of rising costs, loss of donor support owing to non-compliance with terms, and increased payables leading to liquidity issues. In her analysis, Odoch noted that the majority of the universities approached risk assessment as mere compliance exercise as opposed to strategic management; hence they had poor risk registers and weak risk mitigation measures.

On the other hand, Kaggwa and Tumwebaze (2023) were able to present optimistic findings about financial impact of risk assessment. Their analysis shows that universities performing quarterly risk assessments made significant progress in terms of financial performance as they recorded improved liquidity management, better budgeting compliance, fewer financial surprises, and ability to cope with changes in funding. According to the researchers, this was because risk assessment ensured proactive as opposed to reactive financial management.

The study conducted by Lwanga (2021) was based on the impact of technology on risk assessment. In his work, he analyzed how the introduction of the IFMS positively impacted the process of risk assessment due to the provision of real-time financial data, automated checking and auditing capabilities. At the same time, the researcher noticed that there was an insufficient level of capability among university employees concerning the application of IFMS features for risk assessment. This happened because of poor training.

Nevertheless, despite some positive results, a number of scientific works emphasize certain issues faced by institutions when trying to effectively introduce risk assessment measures in Ugandan public universities:

Inadequate staffing: As was reported by Nambalirwa (2022), there were only a small number of university employees who were trained in risk management and had necessary qualifications for its implementation.

Underinvestment in training: According to Odoch (2022), universities did not invest enough money in training and improving risk management skills as it was regarded as a secondary function.

Manual risk management processes: The use of spreadsheets instead of risk management software was typical of many universities (Lwanga, 2021).

Deficient risk culture: According to Kaggwa and Tumwebaze (2023), university cultures tend to focus on finger-pointing instead of lessons learned from risk incidents, thus hindering risk reporting.

A number of significant research gaps can be identified in existing literature concerning risk assessment in public universities:

Compliance vs. strategic perspective: Few works discuss reasons why universities regard risk management as a mere compliance issue and how to adopt a different organizational mindset.

Faculty financial risks: There is an apparent bias toward institutional risks in current risk research, overlooking faculty-level risks related to improper management of grants, student fees, and budget overruns.

University vulnerabilities associated with financial technology: In view of the growing use of financial technological solutions, there is a dearth of research regarding information security threats in universities.

Maturity models in risk assessment: The existing literature lacks frameworks for evaluating organizational risk assessment maturity levels.

These research gaps have been bridged through investigating both institutional-level and faculty-level risk assessment practices, exploring the part that technology plays in risk management, and formulating context-based risk assessment effectiveness measures for public universities of Uganda.

2.4 Control activities influence on the financial performance of public universities in Uganda

Control activities were the operationalization of management directives by the use of certain policies and procedures aimed at preventing, identifying and correcting errors and irregularities in financial processes. These were the most noticeable and physical components of internal control systems (COSO, 2023).

The internal control literature confirms the idea that properly designed control activities have a financial performance impact in several ways: prevention of errors by segregation of duties and authorization requirements, detection of irregularities by reconciliations and independent verifications, correction of problems by timely investigation and remediation, and deterrence of fraud by visible controls and accountability mechanisms (Arens, Elder and Beasley, 2012).

In the African context, studies also emphasize the significance of control activities and difficulty in its execution. Aikins (2011) examined Ghanaian public organizations and discovered that control activities, especially poor segregation of duties, slow reconciliations, and poor documentation were the main contributors to financial losses, which were estimated to be 12% of organizational budgets. Nevertheless, Aikins also reported that the enhancement of control activities by training, process redesign, and enforcement resulted in quantifiable changes in audit results and resource utilization.

Studies that are unique to the Ugandan public universities give detailed information on the effectiveness and weakness of control activities. Eton, Mwosi, Mutesasira and Ebong (2022) carried out an extensive research on the authorization processes in the context of the public universities. They found that well-documented authorization procedures had a significant impact on minimizing misuse of funds as well as increasing accountability. Colleges that had clear expenditure approval lines (with limits on authorization by position) had 38 per cent fewer cases of unauthorized expenditures than those with more uncertain approval procedures.

Nevertheless, Eton et al. also noted alarming weaknesses: circumventing authorization processes by informal approval processes, rubber-stamping of approvals without meaningful review, poor documentation of authorization reasons, and concentrating approval authority in the hands of a small number of people in violation of the principle of segregation of duties.

Mulindwa (2021) narrowed down to reconciliation processes and how they relate to financial performance. His study found that universities that reconciled their banks monthly found and remedied errors averaging UGX 45 million a month, whereas those that reconciled their banks less often (quarterly or lower) reported accumulated differences of over UGX 200 million. The analysis by Mulindwa has shown that delayed reconciliations do not only enhance financial exposure, but also make it difficult to correct errors because of the worsening audit trail. His research also reported that inadequate segregation of duties specifically permitting the same persons to authorize transactions, pay and carry out reconciliations provided avenues to fraud which led to an estimated loss of UGX 1.2 billion in institutions studied over three years.

Authoritative evidence of the relationship between control activity weaknesses and the continued financial performance issues in the Ugandan public universities was provided by the Auditor General of Uganda (2023). The annual report reported that recurring audit questions were as a result of: poor documentation of financial transactions (63% of institutions), bank reconciliations taking more than 90 days (57% of institutions), failure to adhere to procurement processes such as single sourcing without justification (71% of institutions), poor asset management such as unrecorded or missing assets (48% of institutions), and weak expenditure controls that resulted in un

Recent studies examine the role of technology in changing the control activities in universities of the public. Kawesa and Eton (2023) reviewed e-procurement systems and automated financial controls, discovering that universities that adopted digital procurement systems had a shorter procurement cycle (from 45 days on average to 21 days on average), more bidders (competitive bidding) (average bidders increased to 6.7), better documentation and audit trails, and fewer procurement anomalies (complaints decreased by 58%).

Nevertheless, Kawesa and Eton also observed that the technological solutions were not enough without the corresponding organizational culture changes, sufficient staffing capacity to use digital systems, periodic system maintenance and upgrades, and ongoing attention to new types of digital manipulation.

Although the field of control activities has been extensively studied, various gaps should be considered:

Opportunities and challenges of digitalization: Although some studies recognize the role of technology, there is still limited research on how to optimize and implement digital control activities in resource-constrained higher education institutions.

Cost-benefit analysis: Not many studies analyze the resources investments needed to enhance the control activities against the financial gains obtained, and university managers cannot prioritize the control improvements.

Redundancy of control activities: Little has been done on the best balance between total controls and efficiency of operations, or how to prevent over-control that becomes an obstacle to legitimate operations.

Implementation differences at the faculty level: The majority of the research is conducted at the central administration level, ignoring the functioning (or lack of functioning) of control activities at the faculty and departmental levels where a large amount of financial transactions takes place.

This research is valuable in that it explores the traditional and technology-enabled control activities, challenges of implementing the control activities at various levels of the organization, and the effectiveness of various types of control activities in the Ugandan public university setting.

2.5 The effect of monitoring and evaluation mechanisms affect financial performance of public universities in Uganda.

Monitoring activities are the continuous and periodic review of the performance of the internal control system, which ensures that the controls remain effective and makes it possible to identify and address gaps in time (COSO, 2023). Good monitoring was a combination of continuous monitoring as part of regular operations and independent, periodic reviews by internal auditors and management.

The internal control literature defines monitoring to be necessary to ensure integrity of the control systems over time. Arens et al. (2012) state that despite the well-designed controls, they decline over time without frequent monitoring with the changing circumstances, employees turnover, complacency, intentional override, and lack of resources. Monitoring activities are thus the mechanism of ensuring that the internal controls keep up with the changing conditions and are effective (COSO, 2013).

In the African context, the situation with monitoring is especially acute. Mihret and Yismaw (2007) conducted a study of Ethiopian public sector organizations and discovered that the internal audit functions were severely constrained by factors such as lack of sufficient staffing (one auditor to 200 or more employees), lack of professional qualifications (less than 30 percent with formal audit qualifications), lack of independence (auditors reported to management instead of governance boards), and insufficient operational budgets Nevertheless, their study revealed that even their small-resource internal audit functions helped to enhance financial compliance in case they were given enough independence and management support.

Drogalas, Pazarskis, Anagnostopoulou and Papachristou (2017) investigated Greek public universities in the period of financial crisis and discovered that the intensified monitoring activities specifically had a positive impact on audit committee oversight and increased internal audit reviews greatly improved financial performance indicators such as budget compliance, fewer audit findings, and greater stakeholder confidence. Their study stressed that monitoring is even more important in times of financial constraint when resources are strained to the extent of tempting shortcuts or anomalies.

A study that is specific to Ugandan public universities shows that there is a huge evidence of monitoring activities and financial performance outcomes. The extensive study by Nambalirwa (2022) on the effectiveness of internal audits in nine public universities determined that regular and systematic monitoring of financial irregularities and improvements in budgetary performance were significantly lower when done frequently. Her results showed that in universities having full internal audits of all significant financial processes at least quarterly, there were 47 percent fewer repeat audit inquiries than in universities with annual audit coverage or infrequent audit coverage.

The study by Nambalirwa also found that the effectiveness of monitoring was heavily dependent on a number of factors: the independence of the internal audit unit, which was evidenced by direct reporting to the University Council, but not to the management; the sufficient staffing level, with optimal ratios of about one auditor to 150 employees; the professionalism of the audit staff, with at least 60 percent having one of the recognized certifications (CIA, ACCA, CPA)

Nevertheless, Nambalirwa also reported continuing difficulties in the effectiveness of monitoring in most institutions: understaffing of internal audit units by 40-60% of the recommended staffing, inadequate professional development opportunities leading to obsolete skills, political interference in audit procedures and reporting, inadequate investigation of audit results, and slow or unimplemented audit recommendations.

The Office of the Auditor General of Uganda (2023) was the official source of evidence on the deficiencies in monitoring in the context of public universities. The annual report highlighted that insufficient staffing and logistical support seriously undermined monitoring capacity in a number of institutions, leading to a delay in the detection of financial anomalies, a number of years of unresolved audit queries, failure to establish timely follow-up audits, and coverage of financial activities at the faculty level. The Auditor General observed that those universities that had vacant internal audit positions or had acting audit heads had significantly worse financial performance than those that had full staffed, permanent audit leadership.

Kawesa and Eton (2023) specifically studied follow-up mechanisms and their impact on financial compliance in public universities. Their study revealed that systematic follow-up processes had a great impact on compliance rates. Universities that put in place structured follow-up systems such as audit recommendation tracking databases, quarterly management implementation reports, audit committee review of progress, and performance indicators related to implementation recorded implementation rates of 73% in one fiscal year as compared to 31% in institutions that did not have formal follow-up systems.

A study by Kawesa and Eton showed that the effective follow-up mechanisms comprised of a number of critical components: it was necessary to assign responsibility to each recommendation, there should be deadlines within which implementation was to take place, regular reporting on status to governance bodies, and the effectiveness of the implementation should be verified instead of being documented.

The effectiveness of audit committee has become a major subject of research in recent years as an important element of monitoring. Okello and Luwaga (2021) analyzed the audit committee operations in the Ugandan universities of higher learning and discovered that the effectiveness of audit committees varied greatly. Audit committees that performed well exhibited a number of traits: membership with financial skills and not being tied to management, quarterly meetings with documented proceedings, direct interaction with internal and external auditors, a regular review of financial reports and audit results, and the power to make the management act on important matters.

Their study determined that universities that had operating audit committees (those who met regularly, reviewed audit reports systematically, and proactively pursued recommendations) had 52% fewer recurring audit queries and 39% of the time less time to resolve identified weaknesses in financial controls than did universities with weak or ineffective audit committees. Nonetheless, Okello and Luwaga observed that a large number of university audit committees were more rubber-stamp organizations, which held token meetings without meaningful oversight or enforcement of accountability.

New studies are looking at the ways in which technology can be used to reinforce monitoring activities within resource-constrained settings. Lwanga (2021) discussed the deployment of continuous auditing capabilities in the Integrated Financial Management System (IFMS), and discovered that automated monitoring tools offered a variety of benefits: real-time identification of unusual transactions or policy violations, automated exception reports that indicated transactions requiring investigation, full audit trail that made it possible to review financial performance retrospectively, dashboard visualizations that allowed the management to monitor the financial performance, and less manual audit work

Nonetheless, Lwanga also noted serious implementation issues: lack of personnel with the technical skills to read automated reports and alerts, system configuration needs technical skills, staff unwillingness to be more transparent, lack of integration between IFMS and other university systems, and cyber-security risks that need constant management.

The studies show that effective monitoring has an impact on various dimensions of financial performance. Nambalirwa (2022) discovered that improved monitoring activities were associated with better liquidity management by identifying issues with cash flows early, lowering unauthorized spending by deterrence effects, greater accountability by conducting transparent reviews, better audit results with fewer qualified opinions, and greater stakeholder confidence to continue funding.

These are relationships supported by quantitative evidence. Kaggwa and Tumwebze (2023) compared financial reports of public universities within a five-year time range and revealed that universities that enhanced monitoring activities achieved an average of 23 percent increase in budget absorption rates, a 31 percent decrease in audit query value, an 18 percent improvement in liquidity ratios, and a 27 percent reduction in procurement complaints. The gains were estimated to be cost savings and revenue protection of UGX 340 million per institution on average.

One of the issues with public universities is the difficulty in tracking financial operations within decentralized faculty and departmental systems. According to Eton et al. (2022), central administration monitoring systems can work reasonably, but the financial management at the faculty level can be performed with little supervision. Their study reported that faculties and departments that dealt with student project fees, research grants and consultancy income often had insufficient monitoring and thus, delayed income remittance to central accounts, poor documentation of expenditures, un-authorized budget reallocation and misappropriation of student fees.

Eton et al. suggested extending the monitoring systems to faculty levels by having faculty-based internal audit representatives, periodical financial reporting requirements by all cost centers, periodic surprise audits of faculty accounts, and technology systems that would provide central visibility of faculty-level transactions. Nonetheless, such decentralized monitoring systems may need extra resources that are usually not available in limited budgets.

Although the studies on tracking operations within the universities of the general population are extensive, there are a number of significant gaps that should be considered:

Factors of audit committee effectiveness: Despite the recognition of the importance of audit committees in studies, there is little research that systematically analyzes the factors that make audit committees effective in Ugandan public universities such as the optimum composition, frequency of meetings, the level of authority, and the relationship dynamics between the audit committees and the management and auditors.

Technology adoption and effectiveness: Although some new research has been conducted on technology-facilitated monitoring, there is still a paucity of research on the challenges of implementing technology-based monitoring, success factors, and comparative effectiveness of different technology-based monitoring tools in resource-constrained universities.

Monitoring investments cost-effectiveness: Not many studies focus on the optimal level of monitoring investment or give advice on how to prioritize monitoring resources in case of limited budgets.

Reporting feedback loops: There is a paucity of studies on how monitoring results are converted to organizational learning and control system improvements, or why numerous universities do not act on audit recommendations despite recurrent finding of similar issues.

External monitoring versus internal monitoring: The majority of studies concentrate on internal monitoring processes without effectively exploring the role of external audits, parliamentary checks and balances, and media checks and balances in supplementing or competing with internal monitoring processes.

Monitoring at the faculty level: As observed, research has been heavily biased towards central administration monitoring and has failed to address the issues and opportunities of monitoring decentralized financial activities at the faculty and departmental levels.

The research fills these gaps by thoroughly discussing monitoring activities at different organizational levels, the traditional and technology-based monitoring mechanisms, and the effectiveness of different monitoring strategies in improving financial performance in Ugandan public universities.

2.6 The effectiveness of the control environment on the financial performance of public universities in Uganda.

The control environment being the pillar of good internal control systems has gained a lot of attention in the literature on financial management in the public sector. According to COSO (2023), the most important dimensions that build up the control environment include leadership integrity, management philosophy and operating style, organizational structure, commitment to competence and enforcement of accountability.

The international studies all show that there are positive correlations between the strength of the control environment and the financial performance of organizations. McNally (2013) discovered that in developed countries with transparent leadership structures and functional governance committees, there were much lower financial irregularities and audit qualifications in their public sector organizations. Equally, a study conducted by Bauer (2015) on European institutions of the general population found out that organizations with qualified finance staff and enforceable ethics had an excellent budget performance and efficiency in resource use.

In the African setting, Onumah and Krah (2012) examined Ghanaian public sector organizations and determined that weak control environments, which were characterized by poor supervision, poor ethical culture, and poor governance structures were closely related to financial mismanagement. Their results showed that enhancing the control environment by the commitment of leaders and governance reforms led to quantifiable changes in financial accountability and compliance.

The studies conducted in Ugandan specific to public universities are a strong indicator of the impact of control environment on financial performance. In a study by Okello and Luwaga (2021) covering five public universities, it was discovered that institutions with transparent leadership practices and effective audit committees reported 42% less financial irregularities than institutions with weak governance structures. Their study revealed that the observable ethical leadership was a major predictor of budget compliance and fewer instances of unauthorized spending.

Mwesigwa (2020) analyzed the competence of human resources in the control environment, which showed that universities with qualified personnel in the field of finance with professional accounting qualifications (CPA, ACCA) demonstrated 35% of improved budget performance and resource utilization than less qualified personnel. This paper highlighted that commitment to competence does not only focus on the formal qualifications but also continuous professional growth and capacity building.

In more recent work, Nalugo (2024) presented detailed records of control environment vulnerabilities in Ugandan state-owned universities, which included lax supervision, political influence on financial decision-making, lack of ethical culture, weak governance, and weak implementation of policies. Her studies attributed these weaknesses to certain financial performance issues such as payroll fraud schemes, unauthorized budget reallocations, procurement inefficiencies and irregularities, and continued non-adherence to financial regulations. The results of Nalugo showed that the financial performance of universities with political leadership was much worse than the financial performance of universities with more autonomy.

Although the existing literature acknowledges the significance of control environment, a number of gaps should be considered:

Cultural and contextual influences: There is a lack of research that systematically analyzes the impact of the cultural norms of Uganda, institutional traditions, and the values of society on the control environment in the public universities. The relationship between the conventional governance systems and the contemporary control systems is not well researched.

Effects of leadership turnover: Since university leadership is relatively frequently changed, the effects of leadership transitions on the stability of the control environment and continuity of financial performance have not been widely studied.

Political interference dynamics: Despite the fact that it has been admitted that political interference is problematic, the particular mechanisms by which the political interference compromises the control environments and the possible ways of reducing the political interference should be explored more thoroughly.

Measurement issues: The vast majority of studies rely on general measures of the strength of control environment and fail to construct context-specific measures of the control environment peculiarities of universities.This research is distinctive in that it investigates these contextual dynamics using primary data collection that investigates how leadership, culture, and governance structures interact to influence financial performance outcomes in Ugandan public universities.

Although there has been considerable research on internal controls within organizations in the public sector in general, limited research has been conducted on public universities as unique organizations. The distinctive features of public universities such as academic autonomy traditions, that can be incompatible with control requirements, complex funding sources that combine government allocations, student fees, research grants, and donor funds, decentralized organizations with extensive financial power at the faculty level, dual responsibility to both academic and financial regulatory systems, and seasonal cash flow patterns related to academic cycles make them unlike government ministries, departments, and agencies (Okello & Luwaga, 2021;Nalugo,2024)

Current literature tends to homogenize public universities with the rest of the public sector, not considering these unique features and how they impact internal control design and performance. The present research is a particular case study of the public universities, analyzing the impact of the peculiarities of their organization on the internal control challenges and opportunities.

Most of the available literature on internal controls in Ugandan public organizations use descriptive research designs that report control practices and identify control weaknesses but fail to determine causal or predictive relationships between control elements and financial performance outcomes (Odoch, 2022; Mulindwa, 2021). Descriptive results were valuable documentation of the problems but did not give a lot of direction on what improvements in control would have best improved the financial performance.

This paper fulfilled this research methodological gap by using inferential statistical procedures such as the correlation and regression analysis to demonstrate the strength and direction of the relationships between certain internal control elements and financial performance measures. This methodology allowed prioritization of improvements to control systems to be evidence-based.

Literature tended to study the individual internal control elements separately as opposed to a thorough evaluation of all the COSO framework elements in a study. To illustrate, there are studies that concentrate only on risk assessment (Odoch, 2022), those that concentrate on control activities (Mulindwa, 2021) and those that concentrate on monitoring (Nambalirwa, 2022). Although these narrow researches offered profound understanding of particular elements, the integrated, systemic nature of internal control systems highlighted by Systems Theory and the COSO framework itself was not reflected.

This study fills the scope gap by comprehensively studying all five components of COSO control environment, risk assessment, control activities, information and communication, and monitoring in a single research framework. This holistic method facilitated the evaluation of relative significance of various components and investigation of the possible interaction effects between components.

Other studies conducted have limited research on the effects of the interaction among internal control components or whether some components moderate or mediate the effects of other components on financial performance. As an example, is a strong control environment more effective in risk assessment practices? Are there different effects of control activities based on intensity of monitoring? Such questions are hardly addressed in the literature although they are practically significant in terms of control system design (Kawesa & Eton, 2023).

Also, not many studies used standardized and validated measurement tools to measure internal control effectiveness in the context of Ugandan state universities. Majority of the studies employed ad hoc questionnaires without proper testing of validity and reliability, which restricts the comparability across studies and the reliability of the findings.

This work created and confirmed measurement scales tailored specifically to measure COSO-based internal controls in Ugandan state universities, which are methodological instruments that can be used and enhanced in the future.

Although studies have reported many internal control flaws, little literature exists that can be used to take practical steps to address the barriers to implementation in a resource-constrained setting.

How to improve control when resources are scarce, which control activities yield the most significant payoff, how to instill control awareness in cultures that are hostile to control, how to maintain control effectiveness despite political interference and changes in leadership, are some of the questions that are not adequately discussed in the current literature (Nalugo, 2024).

This research has filled the gaps in practical implementation by not only reviewing the existing practices but also by exploring issues that facilitate and/or inhibit successful internal control implementation in Ugandan public universities, which would be valuable insights to university managers and policymakers.

CHAPTER THREE:METHODOLOGY

3.0 Introduction

This chapter presented the methodology that was used in the study. It covered the research design, study population, sample size, sampling techniques, data collection methods, data collection instruments, validity, reliability, ethical considerations and study limitations.

3.1 Research Design

The study adopted a descriptive case study research design to examine the impact of internal controls on the financial performance of public universities in Uganda, focusing on Makerere University. A research design provided a framework that guides the collection and analysis of data in order to answer the research questions effectively. The descriptive design enabled the researcher to describe the existing internal control practices and assess their influence on financial performance. The case study approach will allow for an in-depth investigation of Makerere University as a representative public university in Uganda.

3.2 Study Population

The target population for the study consisted of staff involved in financial management and internal control systems at Makerere University. These included employees from the finance department, internal audit department, procurement unit, and administrative staff involved in financial management. These respondents were selected because they are directly involved in implementing and monitoring internal control systems and are therefore knowledgeable about financial performance within the university.

The study population is presented below:

Category	**Population**
Finance department staff	35
Internal audit staff	12
Procurement unit staff	18
Administrative staff involved in financial management	25
Total	90

Therefore, the total study population comprised 90 respondents drawn from different departments responsible for financial management and internal control practices at Makerere university.

3.3 Sample size

The sample size comprised 73 employees selected using (Yamane 1967) of Makerere in the selected departments. The sample size was proportionately distributed among the different categories of respondents to ensure fair representation of all groups within the population. This was done using proportionate sampling, where the number of respondents selected from each category was determined based on their proportion in the total population. The distribution of the sample size is presented in the table below.

Category	**Population**	**Sample size**
Finance department	35	**28**
Internal Audit	12	**10**
Procurement	18	**15**
Administration	25	**20**
Total	90	**73**

3.4 Sampling techniques

The study used purposive sampling and simple random sampling techniques to select respondents. Purposive sampling was used to select key respondents such as internal auditors and finance officers because they possess specialized knowledge about internal control systems and financial performance. Simple random sampling was used to select other staff involved in financial management to ensure that every member of the population has an equal chance of being selected for the study.

3.5 Data collection methods

Data was collected using questionnaires. Questionnaires were used to collect quantitative data from staff involved in financial management and internal control systems at Makerere University.

3.6 Data Collection Instruments

The main instrument used in the study was a structured questionnaire. The questionnaire consisted of both closed-ended and open-ended questions designed to obtain information about internal auditing systems and financial performance at Makerere University. Closed-ended questions allowed respondents to choose from predetermined responses, making data easier to analyze, while open-ended questions gave respondents the opportunity to provide additional explanations.

3.7 Validity of Research Instruments

To ensure validity, the questionnaire was reviewed by the research supervisor and other experts in the field of accounting and finance. Their comments and suggestions were used to improve the clarity, relevance, and appropriateness of the questions before the final data collection process.

A Content Validity Index (CVI) was used to determine the validity of the instrument. A CVI value of 0.7 and above is considered acceptable, indicating that the instrument is valid for data collection. Any items found unclear or irrelevant were revised or removed based on the feedback from experts.

3.8 Reliability of Research Instruments

To ensure reliability, the questionnaire was pre-tested through a pilot study involving a small group of respondents who were not part of the final sample. The results from the pilot test helped to identify unclear questions and improve the instrument before the main data collection process.

Reliability of the instrument was determined using Cronbach's Alpha coefficient. A reliability coefficient of 0.70 and above was considered acceptable for the study.

3.9 Ethical Considerations

The researcher obtained informed consent from all respondents by clearly explaining the purpose of the study and allowing them to participate voluntarily. Respondents were assured of confidentiality and anonymity, and the information provided was used strictly for academic purposes. Participants were also informed that they will have the right to withdraw from the study at any time without any consequences. In addition, the researcher ensured that all data collected were accurately reported and that all sources were properly acknowledged to avoid plagiarism. An introductory letter was obtained from Uganda Christian University to seek permission to collect data from respondents at Makerere University.

3.10 Study Limitations

The study encountered several limitations which may affect the research process. These limitations include the following:

Limited access to respondents: Some respondents had busy work schedules which may limited their availability to participate in the study. This slowed down the process of data collection since the researcher will need to adjust to the respondents' availability**.** To address this, the researcher scheduled appointments in advance and used flexible data collection times to suit respondents' availability.

Reluctance of respondents to provide information: Some respondents were hesitant to provide accurate information, especially on matters related to financial management and internal control systems due to concerns about confidentiality or fear of exposing weaknesses within the institution. To overcome this, the researcher assured respondents confidentiality and anonymity, and clearly explain that the information collected will be used strictly for academic purposes.

Time constraints: The researcher faced limited time to conduct the study because the research is conducted within a specific academic period set by Uganda Christian University. This limited the amount of data that could be collected. To minimize this, the researcher developed a clear work plan and strictly followed the research schedule.

Financial constraints: The researcher faced financial limitations in terms of transport, printing questionnaires, and other costs associated with data collection. However, the researcher will carefully planned and managed available resources to ensure the successful completion of the study.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.0 Introduction

Chapter four discusses the analysis, interpretation, and discussion of results gathered from the field. The study focused on the effects of internal controls on financial performance of public universities in Uganda, using Makerere University as an example. In all, 73 questionnaires were sent out to employees in the university's finance, internal audit, procurement, and administration departments, and 65 were fully completed and received. The results are analyzed according to the study objectives, namely, risk assessment, control activities, monitoring and evaluation, and control environment, while financial performance serves as the dependent variable.

The chapter is divided into eleven parts. Part 4.1 provides details on the response rate, while Part 4.2 contains reliability test statistics. Part 4.3 gives information about respondents' backgrounds, while Parts 4.4 to 4.8 provide results regarding each of the variables under study. Parts 4.9 and 4.10 give results from the correlation and regression analyses, respectively. Finally, part 4.11 presents hypothesis testing. The chapter ends with Part 4.12, where findings are discussed in light of the review of literature in Chapter Two.

4.1 Response Rate

The questionnaires used in this study were totally seventy-three and were given out to respondents from the four target departments of Makerere University. Of the total questionnaires given, sixty-five questionnaires were received as complete responses and eight questionnaires were not received due to some factors such as the absence of the targeted respondents due to official reasons, overwork making the targeted respondents unavailable and refusal by a number of respondents to respond to the survey. Based on the findings by Mugenda & Mugenda (2003), any response rate above seventy percent is said to be highly acceptable in researches in the field of academia; hence the obtained response rate of eighty-nine percent was highly acceptable. The results of the sample distribution among all the departments are shown in Table 4.1 below.

Table 4.1: Response Rate by Department

Department	Distributed	Returned	Non-Response	Response Rate (%)
Finance	28	25	3	89.29
Internal Audit	10	9	1	90.00
Procurement	15	13	2	86.67
Administration	20	18	2	90.00
Total	73	65	8	89.04

Source: Primary Data (2025)

Table 4.1 reveals that there was relative consistency with respect to the rate of response, which ranged from 86.67% for the procurement department to 90% for the Internal Audit and Administration Department. The equal distribution of non-responses among the different departments implies that no bias was observed in terms of findings in any specific department, and responses of the four important functions associated with the management of finances were obtained.

4.2 Reliability of the Research Instrument

Before proceeding with the actual data analysis, the internal reliability of the research instrument was checked using the Cronbach's Alpha statistic. According to Nunnally (1978) and Hair et al. (2019), an acceptable Cronbach's Alpha value in social science research is 0.70 or higher. The Cronbach's Alpha statistics for all the constructs were more than 0.70 as shown in Table 4.2 below.

Table 4.2: Reliability Test Results (Cronbach's Alpha)

Variable	Number of Items	Cronbach's Alpha	Remark
Risk Assessment	10	0.913	Excellent
Control Activities	8	0.909	Excellent
Monitoring & Evaluation	8	0.888	Good
Control Environment	8	0.906	Excellent
Financial Performance	12	0.875	Good

Source: Primary Data (2025)

As shown in Table 4.2, all items attained Cronbach's Alpha scores higher than 0.80, which is considered satisfactory to very good. It can be concluded that the instrument used was reliable and fit for use in further analysis.

4.3 Background Information of Respondents

In this part of the paper, the demographics of the 73 participants are described, with information on the gender, age, level of education, years of work in Makerere University, department, and position of the respondents provided.

4.3.1 Gender of Respondents

Table 4.3: Distribution of Respondents by Gender

Gender	Frequency	Percentage (%)
Male	37	56.9
Female	28	43.1
Total	65	100.0

Source: Primary Data (2025)

From Table 4.3, it can be seen that the percentage of males among the respondents (56.9%) exceeded that of females (43.1%). This means that there is a slightly higher proportion of males compared to females among the respondents, which is reflective of the gender proportions in the staffing in finance and audit departments in Makerere University.

4.3.2 Age of Respondents

Table 4.4: Distribution of Respondents by Age

Age Bracket	Frequency	Percentage (%)
Below 25 years	1	1.5
26 – 35 years	19	29.2
36 – 45 years	25	38.5
46 – 55 years	12	18.5
Above 55 years	8	12.3
Total	65	100.0

Source: Primary Data (2025)

From Table 4.4, it is clear that most of the respondents (38.5%) had an age range of 36 to 45 years while the next significant percentage had ages between 26 to 35 years (29.2%). In total, the percentages of respondents within the age range of 26 to 45 years comprised 67.7%, implying that the respondents were experienced in their professions. It is evident that the respondents who constituted 1.5% of the total were less than 25 years old while 12.3% of them had more than 55 years.

4.3.3 Level of Education

Table 4.5: Distribution of Respondents by Education

Years of Service	Frequency	Percentage (%)
Below 1 year	9	13.8
1 – 3 years	17	26.2
4 – 6 years	19	29.2
7 – 9 years	8	12.3
10 years and above	12	18.5
Total	65	100.0

Source: Primary Data (2025)

As can be seen from Table 4.5, 52.3% of respondents had a Bachelor's degree, while 23.1% had a Master's degree, and 12.3% had a PhD degree. Additionally, 9.2% had a diploma, while 3.1% of respondents had a certificate. Overall, 87.7% of respondents had at least a Bachelor's degree, suggesting that they were adequately educated to comprehend the issues discussed in the questionnaire.

4.3.4 Years of Service at Makerere University

Table 4.6: Distribution of Respondents by Years of Service

Years of Service	Frequency	Percentage (%)
Below 1 year	9	13.8
1 – 3 years	17	26.2
4 – 6 years	19	29.2
7 – 9 years	8	12.3
10 years and above	12	18.5
Total	65	100.0

Source: Primary Data (2025)

As indicated in Table 4.6, the findings revealed that 29.2% of the respondents have been in service for four to six years at Makerere University, 26.2% for one to three years, while 18.5% had been at Makerere for 10 years and above. On the other hand, only 13.8% of the respondents had less than one year of service. It is clear that out of 100% of the respondents, 86.2% had at least one year of working experience in the University, which means that they have adequate knowledge of the institution and could answer the questionnaire on the University's internal control and financial performance accordingly.

4.3.5 Department of Respondents

Table 4.7: Distribution of Respondents by Department

Department	Frequency	Percentage (%)
Finance	25	38.5
Internal Audit	9	13.8
Procurement	13	20.0
Administration	18	27.7
Total	65	100.0

Source: Primary Data (2025)

As illustrated in Table 4.7, 38.5% of the respondents work in the Finance department, 27.7% in Administration, 20.0% in Procurement, and 13.8% in Internal Audit department. It can be noted that this is in line with the proportionate sampling technique as discussed in Chapter Three.

4.3.6 Position of Respondents

Table 4.8: Distribution of Respondents by Position

Position	Frequency	Percentage (%)
Top Management	3	4.6
Middle Management	13	20.0
Finance/Accounts Staff	33	50.8
Administrative Staff	16	24.6
Total	65	100.0

Source: Primary Data (2025)

Table 4.8 demonstrates that 50.8% were Finance/Accounts staff members, 24.6% administrative staff, 20.0% middle management, and 4.6% top management. The above composition of sample respondents helped achieve a well-balanced view of the internal controls within Makerere University since the respondents included both policy makers and implementers.

4.4 Effect of Risk Assessment Practices on Financial Performance

The first research question of the study was aimed at establishing the relationship between the process of risk assessment and financial performance at Makerere University. Ten statements about risk assessments were given to the respondents for rating on a five-point Likert scale where one indicated “strongly disagree” while five indicated “strongly agree.” The results appear in Table 4.9.

Table 4.9: Descriptive Statistics on Risk Assessment Practices

Statement	N	Mean	Interpretation
Effective risk assessment practices significantly enhance the University's financial performance.	65	4.031	Agree
Identifying risks in advance helps mitigate potential financial losses.	65	3.985	Agree
Regular risk identification supports better financial decision-making.	65	4.000	Agree
Risk assessment contributes positively to the financial stability of the University.	65	4.062	Agree
Improved financial performance is associated with the effectiveness of risk identification processes.	65	3.754	Agree
Early identification of risks helps the University avoid unnecessary costs.	65	3.877	Agree
When risks are identified on time, the University is better able to protect its revenue.	65	3.892	Agree
Risk assessment helps the University respond quickly to challenges that may affect its finances.	65	3.862	Agree
Clear identification of risks supports better planning and budgeting.	65	3.846	Agree
The University's ability to identify risks early contributes to its long-term financial success.	65	3.969	Agree
Overall Risk Assessment Score	65	3.928	Agree

Source: Primary Data (2025)

The results from Table 4.9 clearly show a rather high degree of agreement among the respondents regarding the impact of risk assessment practices on financial performance. With a mean score of 3.928, the respondents largely agree on the effectiveness of risk assessment practices in improving the financial performance of Makerere University.

The most highly agreed statement (with a mean score of 4.062) was that risk assessment practices are positive contributors to the financial stability of the University. Close to the most agreed statements was the assertion that risk assessment practices greatly contribute to financial performance (with a mean score of 4.031). At the bottom in terms of agreement, yet a positive response, was the statement on the impact of effective financial assessment practices on financial performance (with a mean score of 3.754). The high standard deviation here shows a bit of disparity in views.

4.5 Influence of Control Activities on Financial Performance

The second objective endeavored to ascertain the impact of control activities on the financial performance of Makerere University. Eight questions on control activities were scored using the Likert scale among the respondents. Below is a summary of the findings in Table 4.10.

Table 4.10: Descriptive Statistics on Control Activities

Statement	N	Mean	Interpretation
Strong control activities have a positive influence on the financial performance of the University.	65	3.738	Agree
Effective control activities reduce operational inefficiencies that affect financial results.	65	3.815	Agree
Control activities ensure that University funds are used for their intended purposes.	65	3.923	Agree
The University's financial performance has improved as a result of strengthened control activities.	65	3.738	Agree
Control activities help the University achieve its financial goals and targets.	65	4.000	Agree
Proper control activities contribute to accurate and reliable financial reporting.	65	3.846	Agree
Effective control activities support long-term financial stability of the University.	65	3.938	Agree
Control activities help the University maintain adequate cash flows and liquidity.	65	3.785	Agree
Overall Control Activities Score	65	3.848	Agree

Source: Primary Data (2025)

The findings in Table 4.10 reveal a mean score of 3.848 (SD = 0.686) on control activities, implying that the construct falls under the "Agree" classification. Thus, respondents agreed that control activities play a vital role in improving financial performance in the University. Control activities help Makerere University meet its financial objectives and targets had the highest score of 4.000 (SD = 0.884). Similarly, control activities ensure that the funds of the University are utilized for their intended purposes also attained a high score of 3.923 (SD = 0.853). However, respondents felt least confident on whether the University has seen an improvement in its financial performance due to control activities (Mean = 3.738) and that control activities have positive impacts on the financial performance of Makerere University (Mean = 3.738).

4.6 Effect of Monitoring and Evaluation Mechanisms on Financial Performance

The third research objective sought to investigate the impact of monitoring and evaluation systems on financial performance at Makerere University. There were eight questions that measured this construct; results are presented in Table 4.11 below.

Table 4.11: Descriptive Statistics on Monitoring and Evaluation

Statement	N	Mean	Interpretation
Monitoring and evaluation mechanisms have significantly improved financial performance.	65	4.000	Agree
Regular monitoring ensures that financial resources are used efficiently at the University.	65	3.892	Agree
Evaluation processes help identify areas of financial weakness and implement corrective measures.	65	3.754	Agree
The effectiveness of monitoring activities is directly related to improvements in financial performance.	65	3.708	Agree
Monitoring and evaluation help the University achieve its financial sustainability goals.	65	3.908	Agree
Regular performance reviews have helped reduce cases of financial mismanagement.	65	3.585	Agree
Monitoring systems have strengthened the University's accountability frameworks.	65	3.769	Agree
The University's overall financial performance has improved due to effective monitoring and evaluation.	65	3.769	Agree
Overall Monitoring & Evaluation Score	65	3.798	Agree

Source: Primary Data (2025)

From Table 4.11, the average mean rating of 3.798 suggests that monitoring and evaluation falls within the “Agree” category since most respondents agreed that monitoring systems have been instrumental in improving financial performance. Monitoring and evaluation systems have considerably enhanced financial performance scored the highest mean rating of 4.000 with standard deviation of 0.829, whereas regular performance reviews have helped cut down incidences of financial malpractice received the lowest mean rating of 3.585. The difference between the two is interesting; while respondents acknowledge that monitoring and evaluation have been useful in identifying and highlighting financial problems, they do not agree that the systems have minimized mismanagement.

4.7 Effect of Control Environment on Financial Performance

Objective four involved investigating how the control environment affects the financial performance of Makerere University. The construct was measured using eight variables, and the results are shown in the table 4.12 below.

Table 4.12: Descriptive Statistics on Control Environment

Statement	N	Mean	Interpretation
A strong control environment has contributed to improved financial performance at the University.	65	3.985	Agree
The control environment supports effective and efficient use of financial resources.	65	3.846	Agree
The integrity and ethical values promoted at the University reduce risks of financial loss.	65	4.062	Agree
A positive control environment encourages staff to comply with financial regulations.	65	3.877	Agree
The organisational structure supports timely and accurate financial reporting.	65	3.785	Agree
The control environment at the University promotes sound financial decision-making.	65	3.815	Agree
A strong control environment contributes to the long-term financial sustainability of the University.	65	3.723	Agree
The University's financial performance would deteriorate if the control environment were weakened.	65	3.769	Agree
Overall Control Environment Score	65	3.858	Agree

Source: Primary Data (2025)

As depicted in Table 4.12 below, the average score of 3.858 means that the control environment is placed under the “Agree” section, meaning that the control environment is viewed positively by the respondents in terms of its role towards promoting financial performance within Makerere University. The highest ranked aspect of the control environment is that the integrity and ethical values promoted by the university lower the likelihood of financial losses (mean of 4.062), followed by the contribution made by the existence of a good control environment to financial performance (average of 3.985). The least ranked aspect was that the control environment promotes financial sustainability within the university (average score of 3.723). Overall, the results seem to show that Makerere University is endowed with an environment that fosters financial performance based on the COSO (2013; 2023) model.

4.8 Financial Performance of Makerere University

Financial Performance is the dependent variable in the research study and it was assessed using 12 indicators that include; liquidity (4 indicators), efficiency in resource use (4 indicators), and accountability (4 indicators).

Table 4.13: Descriptive Statistics on Financial Performance

Statement	N	Mean	Interpretation
LIQUIDITY			
The institution is able to meet its short-term financial obligations on time.	65	3.692	Agree
The institution maintains adequate cash balances for its operations.	65	3.538	Agree
Delays in payments (e.g. suppliers, staff) are rare.	65	3.385	Neutral
The University has effective cash flow management practices.	65	3.585	Agree
RESOURCE UTILISATION EFFICIENCY			
The institution efficiently utilises its financial resources.	65	3.708	Agree
There is minimal wastage of financial resources in the institution.	65	3.646	Agree
Funds are allocated to the most productive activities.	65	3.723	Agree
The institution achieves maximum output from available resources.	65	3.908	Agree
ACCOUNTABILITY			
The University provides clear accountability for the use of its financial resources.	65	3.892	Agree
Financial reports are regularly prepared and reviewed.	65	4.046	Agree
There are strong internal controls to prevent misuse of funds.	65	3.877	Agree
Management is held responsible for financial decisions and outcomes.	65	3.785	Agree
Overall Financial Performance Score	65	3.732	Agree

Source: Primary Data (2025)

According to results presented in Table 4.13, there was general agreement that Makerere University is adequately managing its finances, with a mean score of 3.732 (SD = 0.533) falling under the "Agreement" category. The most prominent dimension is accountability, whereby the best rated statement is that "financial statements are prepared and scrutinised on regular basis", having scored the highest mean of 4.046 (SD = 0.759). However, liquidity emerges as the weakest dimension, where the statement "rarely have any delays in payments made" had the lowest mean of 3.385 (SD = 0.842), falling within the "Neutral" category. This implies that although Makerere University has robust accountability mechanisms and efficient resource allocation, cash flow constraints are a challenge for the institution.

4.9 Summary of Construct Means

Table 4.14 presents the summary mean scores of all variables examined in the study.

Table 4.14: Summary of Descriptive Statistics for Study Variables

Variable	N	Mean	Interpretation
Risk Assessment	65	3.928	Agree
Control Activities	65	3.848	Agree
Monitoring & Evaluation	65	3.798	Agree
Control Environment	65	3.858	Agree
Financial Performance	65	3.732	Agree

Source: Primary Data (2025)

As depicted in Table 4.14, all four internal controls constructs, along with financial performance, received mean scores falling under the category of "Agree." Of the constructs, Risk Assessment received the highest mean score (3.928), while Monitoring and Evaluation received the lowest mean (3.798). The other two constructs, namely, Control Environment and Control Activities, had mean scores of 3.858 and 3.848 respectively. Financial performance received an overall mean score of 3.732. In particular, it can be observed that the standard deviation for financial performance is lower than that of the independent variables.

4.10 Correlation Analysis

Pearson Product Moment Correlation was used to determine the strength and type of association between the internal control components and financial performance. Cohen (1988) states that correlations within the range of ±0.10 to ±0.29 indicate a weak correlation, ±0.30 to ±0.49 indicate a moderate correlation, and ±0.50 and above indicate a strong correlation. The correlation findings are provided in the table below.Table 4.15: Results of Correlation Analysis

Table 4.15: Pearson Correlation Matrix

	RA	CA	ME	CE	FP
Risk Assessment (RA)	1.000	0.167	0.127	0.146	0.510**
Control Activities (CA)	0.167	1.000	0.041	0.133	0.366**
Monitoring & Evaluation (ME)	0.127	0.041	1.000	-0.088	0.494**
Control Environment (CE)	0.146	0.133	-0.088	1.000	0.233
Financial Performance (FP)	0.510**	0.366**	0.494**	0.233	1.000

*Note: ** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed).*
Source: Primary Data (2025)

From the findings in Table 4.15, it is evident that three out of the four internal control components showed statistically significant positive relationships with financial performance. Risk assessment displayed the highest positive relationship with financial performance ($r = 0.510$, $p < 0.01$). Monitoring and evaluation came second ($r = 0.494$, $p < 0.01$), while control activities showed the least positive relationship with financial performance among all internal control components studied ($r = 0.366$, $p < 0.01$). However, the relationship between control environment and financial performance was also positive but relatively weak ($r = 0.233$) and statistically insignificant at 0.05 alpha level ($p = 0.062$). This implies that the control environment by itself is not significantly associated with financial performance—a finding that supports the notion that the control environment indirectly affects financial performance through the other three components as explained in the regression model below.

Correlations between independent variables varied from -0.088 to 0.167. All of them were quite weak. In fact, lack of multicollinearity can be implied because inter-variables correlations do not exceed 0.167. Thus, it is justified to proceed to multiple regression analysis.

4.11 Regression Analysis and Hypothesis Testing

The multiple linear regression analysis was undertaken to determine the relationship between financial performance and the four internal control component constructs namely; Risk Assessment, Control Activities, Monitoring and Evaluation, and Control Environment. The model summary, ANOVA, and coefficient tables are shown in Table 4.16, Table 4.17, and Table 4.18 respectively.

Table 4.16: Regression Model Summary

Model	R	R^2
1	0.745	0.555

Predictors: (Constant), Risk Assessment, Control Activities, Monitoring & Evaluation, Control Environment. Source: Primary Data (2025)

The result presented in Table 4.16 illustrates that the value of R squared (coefficient of determination) at 0.555 suggests that 55.5% of the variation in financial performance for Makerere University is caused by all the four internal controls components considered together. The rest 44.5% can be attributed to other variables not captured in this equation, such as government financial support, students' enrollment, ICT systems, management, etc.

Table 4.17: ANOVA – Overall Model Significance

Model	Sum of Squares	Mean Square	F	Sig.
Regression	10.099	2.525	18.739	0.000
Residual	8.086	0.135		
Total	18.185			

Dependent Variable: Financial Performance. Source: Primary Data (2025)

According to the results of the ANOVA (Table 4.17), the regression model is statistically significant ($F(4, 60) = 18.739$, $p < 0.001$). This means that the four internal control elements as a combination are very important predictors of the financial performance of Makerere University. This model hence fits the data very well.

Table 4.18: Regression Coefficients

Predictor	B	Std. Error	Beta	T	Sig.
(Constant)	-0.069	0.465		-0.149	0.882
Risk Assessment	0.296	0.069	0.383	4.310	0.000
Control Activities	0.201	0.068	0.259	2.951	0.005
Monitoring & Evaluation	0.343	0.067	0.451	5.159	0.000
Control Environment	0.145	0.070	0.182	2.064	0.043

Dependent Variable: Financial Performance. Source: Primary Data (2025)

Results in Table 4.18 indicate that the four internal control elements all have statistically significant positive impact on financial performance. Monitoring and evaluation had the strongest standardised effect ($\beta = 0.451$, $t = 5.159$, $p < 0.001$), followed by risk assessment ($\beta = 0.383$, $t = 4.310$, $p < 0.001$), control activities ($\beta = 0.259$, $t = 2.951$, $p = 0.005$), and control environment ($\beta = 0.182$, $t = 2.064$, $p = 0.043$).

4.11.1 Hypothesis Testing

The regression coefficients and the p-values of the regression coefficients were used to test the four null hypotheses established in Chapter One. When the p-value was below 0.05 a null hypothesis was rejected. Table 4.19 below summarizes the results.

Table 4.19: Summary of Hypothesis Testing

Hypothesis	Beta (β)	t	p-value	Decision
H01: Risk Assessment has no significant effect on Financial Performance	0.383	4.310	0.000	Rejected
H02: Control Activities has no significant effect on Financial Performance	0.259	2.951	0.005	Rejected
H03: Monitoring & Evaluation has no significant effect on Financial Performance	0.451	5.159	0.000	Rejected
H04: Control Environment has no significant effect on Financial Performance	0.182	2.064	0.043	Rejected

Source: Primary Data (2025)

It can be observed in Table 4.19 that all the four null hypotheses were rejected at 0.05 level of significance. This proves that all four internal control elements including risk assessment, control activities, monitoring and evaluation, and control environment have statistically significant positive influence on the financial performance of Makerere University.

4.12 Discussion of Findings

This section presents the findings in respect to the current empirical and theoretical literature reviewed in Chapter Two, and will discuss each of the four study objectives.

4.12.1 Risk Assessment and Financial Performance

The analysis revealed that risk assessment and financial performance had a strong, positive and significant relationship ($r = 0.510$, 0.383, $p < 0.001$). This result is in line with Kaggwa and Tumwebaze (2023), who have found that universities that have a formal risk assessment structure had much higher rates of budget absorption and reduced audit questions. It also aligns with Woods

(2009) and Christopher (2014), who discovered that in the United Kingdom and Australia, public universities that were able to adopt enterprise risk management structures saw a reduction in budget crises and were better placed to manage liquidity. The results also argue in favor of the COSO (2013; 2023) framework that recognizes the risk assessment as the key element of the effective work of the internal control. The Agency Theory (Jensen and Meckling, 1976) point of risk assessment as a form of monitoring helps decrease the chances of opportunistic behaviour among the agents (university management), and hence make them act in the interests of the principal (government and other stakeholders).

4.12.2 Control Activities and Financial Performance

The research found a moderate, positive and significant connection between control activities and financial performance ($r = 0.366$, $= 0.259$, $p = 0.005$). It confirms the results of Eton et al. (2022) and Mulindwa (2021) who found that segregation of duties, authorisation controls, bank reconciliations, and procurement controls were significant in minimizing financial irregularities in the Ugandan public institutions. Nevertheless, the marginally less powerful impact of control activities compared to the risk assessment and monitoring indicates that although there are control activities at Makerere University, the implementation process may not be cohesive across the departments. This is aligned with the Auditor General of Uganda (2023), who noted that compliance fatigue, workarounds, and poor supervision are usually compromising control activities in the public universities.

4.12.3 Monitoring and Evaluation and Financial Performance

Monitoring and evaluation became the best predictor of financial performance in the regression model ($= 0.451$, $p < 0.001$) where their correlation coefficient was 0.494. This echoes Nambalirwa (2022), Kawesa and Eton (2023) who held that effective monitoring mechanisms, such as internal audit functions, management reviews, and audit committee oversight, lie at the center of maintaining financial performance in higher education institutions. The Systems Theory approach is also exhibited in the emphasis on monitoring and evaluation, as the feedback loops are the key to the coherence and efficiency of an internal control system (Bertalanffy, 1968; Kast and Rosenzweig, 1972). The fact that the respondents rated slightly lower on whether regular performance reviews had decreased financial mismanagement (Mean = 3.585) is however an indication that there is a gap between identifying the problem and the issuance of corrective measures- a gap that the management should be able to bridge.

4.12.4 Control Environment and Financial Performance

The control environment showed a peculiar pattern: its bivariate correlation with financial performance was not statistically significant ($r = 0.233$, $p = 0.062$), but in the multiple regression, after the effects of the other three components were held constant, the unique contribution of control environment became statistically significant (0.182, $p = 0.043$). This subtle finding aligns with Okello and Luwaga (2021) and Mwesigwa (2020), who observed that tone at the top, ethical leadership, and organisational structures influence financial performance to a large extent by establishing the environment within which other controls can be effective. It also coincides with Stewardship Theory (Donaldson and Davis, 1991; Davis et al., 1997) according to which in case of a leadership developed ethical climate, the administrators have higher chances to become responsible stewards of institutional resources. This observation then implies that the control environment cannot be evaluated independently but it must be viewed as an elemental block that facilitates risk evaluation, control processes and monitoring and evaluation to operate efficiently.

4.12.5 Overall Model and Theoretical Implications

Combined, the four elements of internal control described 55.5% of the financial performance variation (R 2 = 0.555). This finding is almost similar to the findings of Nalugo (2024), who found that COSO-based internal control systems shed light on between 52 and 60 percent of changes in the financial performance of East Africa-based public universities. The results thus uphold the combined conceptual framework of Agency, Systems, and Stewardship Theories described in Chapter Two: internal controls are seen as simultaneously monitoring mechanisms, which minimize agency costs, subsystems which operate together to create overall effectiveness, and enabling structures, which allow committed stewards to fulfill their fiduciary duties..

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

In this chapter, we summarize the main findings from the study alongside conclusions drawn from those findings; and recommendations made for policy and practice. It also describes the contribution of the study to the existing field of knowledge and proposes future research directions. Each of the five sections of the chapter covers one domain in which findings have been summarised, conclusions drawn and recommendations proposed: Summary of findings; Conclusions; Recommendations; Contribution to knowledge & suggestions for future research.

5.1 Summary of Findings

The main aim of this study was to investigate the effect of internal controls on the financial performance of public universities in Uganda: a case study of Makerere University. The purpose of this study is to analyse the effect between risk assessment, control activities, monitoring and evaluation and control environment on financial performance. The population consisted of Finance, Internal Audit, Procurement and Administration departments with a total of 73 distributed questionnaires to be filled out by respondents.

5.1.1 Effect of Risk Assessment on Financial Performance

The research determined that the practice of risk assessment significantly impacted the financial performance of Makerere University in a strong and positive manner that was statistically significant ($r = 0.510$, $2 = 0.383$, $p < 0.001$). Respondents overall agreed (overall mean = 3.928) that the early discovery of risks, timely mitigation, and risk-informed budgeting lead to financial stability in the University. Nonetheless, respondents were relatively less sure of the degree to which the process of risk identification had been translated into financial performance improvements.

5.1.2 Influence of Control Activities on Financial Performance

The study found that control activities had a moderate, positive and significant influence on financial performance ($r = 0.366$, $\beta = 0.259$, $p = 0.005$). The mean, at 3.848, of the respondents indicated that the University had authorisation processes, segregation of duties, reconciliations, and procurement controls. The relatively low scores on whether these activities had actually enhanced financial performance (Mean = 3.738) show lack of uniformity in the application across the departments.

5.1.3 Effect of Monitoring and Evaluation on Financial Performance

Monitoring and evaluation proved to be the best predictor of financial performance (0.451, $p < 0.001$, $r = 0.494$). The overall mean of 3.798 shows that respondents concurred that accountability and use of resources are enhanced by monitoring mechanisms. They were however much less confident that frequent reviews had minimized instances of financial mismanagement with reference to a break between identifying and the implementation of corrective measures.

5.1.4 Effect of Control Environment on Financial Performance

The researcher concluded that the bivariate relationship between the control environment and the financial performance was positive but weak ($r = 0.233$, $p = 0.062$) with the effects of the other components controlling the relationship became statistically significant in the regression ($r = 0.182$, $p = 0.043$). The leadership of the University was perceived to foster ethical values, organisational structure, and compliance culture (overall mean = 3.858), which was agreed upon by the respondents. This trend indicates that the control environment does not have a direct impact on financial performance, but rather it facilitates the successful operation of the risk assessment, control activities and monitoring mechanisms.

5.1.5 Overall Model

The four internal control elements explained 55.5% of the change in financial performance ($R^2 = 0.555$; $F (4, 60) = 18.739$, $p < 0.001$). All the four null hypotheses were rejected at the 0.05 level of significance, which showed that each component has a statistically significant positive effect on financial performance at Makerere University.

5.2 Conclusions

According to the results, the conclusions made are as follows:

Risk assessment is first, a major contributor of financial performance at Makerere University. The early detection, assessment, and prevention of financial risks can assist the University in safeguarding its income, preventing unnecessary expenses, and making better plans. The faults in the translation of these identified risks to tangible corrective action, though, still hamper the full realisation of these benefits.

Second, control activities like authorisations, approvals, segregation of duties, reconciliations, and procurement controls have a positive impact on financial performance, though their impact is diluted by inconsistencies in implementation by all departments, and by compliance fatigue by some staff.

Third, the most influential internal control component with respect to driving financial performance in Makerere University is monitoring and evaluation mechanisms. Regular monitoring, internal auditing, management reviews, and involvement with audit committees are all effective in maintaining accountability, but the implementation of corrective action after monitoring results is a question of concern.

Fourth, the control environment, albeit with the least distinct impact, offers the underlying culture, leadership tone and organisational structures on which the other three parts operate well. It is thus a critical, and to a large extent, an indirect determinant of financial performance.

Lastly, the overall effect of the four internal control elements has a robust and statistically significant effect on financial performance (R 2 = 0.555), indicating that internal controls when applied as a block have a significant influence on the financial performance of public universities in Uganda. These results hold the Agency, Systems and Stewardship theoretical perspectives that form the basis of the study.

5.3 Recommendations

Based on the above conclusions, the study recommends the following:

5.3.1 Strengthening Risk Assessment Practices

Makerere University ought to implement a formal and institution-wide Enterprise Risk Management (ERM) model in line with the COSO (2023) model. Proper Risk Management Office should be established or enhanced to ensure that it performs regular risk assessment, has a centralized risk register and reports risk exposures to the University Council quarterly. Moreover, the heads of departments must be trained and held responsible to ensure that they introduce risk mitigation plans in their departments.

5.3.2 Improving the Implementation of Control Activities

University Management shall oversee and record the standard operating procedures of all the major financial processes such as procurement, payroll and expenditure approval. It ought to implement built in financial information systems which impose authorization barriers and segregation of duties automatically and provide frequent training of staff on compliance requirements. These controls should also be checked by periodic internal audits to ensure that there is consistency in the application across the departments.

5.3.3 Enhancing Monitoring and Evaluation Mechanisms

As monitoring and evaluation proved to be the most effective force behind financial performance, the University needs to enhance the independence, staffing, and technological capability of the Internal Audit Department. The Audit Committee of Council must demand systematic follow-up of audit recommendations and hold the management accountable to implement corrective actions, which audit committee should monitor and report publicly. To enable real-time visibility of key financial performance indicators, monitoring dashboards need to be introduced.

5.3.4 Strengthening the Control Environment

The top management must also maintain the ethical tone at the top by modeling integrity and code of conduct through demonstration and safeguarding whistle-blowers. Competence, ethics and lifelong learning should be prioritized in human resource policies and the organizational structure needs to periodically be revisited to achieve clarity in reporting lines and sufficient supervisory abilities.

5.3.5 Policy-Level Recommendations

Internal control guidelines should be issued by the Ministry of Education and Sports and the Ministry of Finance, Planning and Economic Development jointly and be benchmarked with international standards like COSO (2023) and Public Finance Management Act (2015) and applied to public universities. The National Council of Higher Education ought to also incorporate internal control performance measure into their accreditation and quality assurance framework of public universities.

5.4 Contribution to Knowledge

This research adds to the current body of knowledge in three significant manners. First, it offers empirical data on the joint and relative impact of the four COSO elements of internal control on the financial performance of a top-ranked public university in Uganda, thus responding to a critical contextual gap described by Kaggwa and Tumwebaze (2023) and Nalugo (2024). Second, the study provides a more holistic theoretical perspective in understanding internal controls in institutions of higher education by incorporating Agency, Systems, and the Stewardship theories within a single theory. Third, the research gives a validated and reliable tool (all Cronbach coefficients of Alpha over 0.87) that can be applied in the future by researchers as well as management teams at universities to self-rate the maturity of internal control.

5.5 Suggestions for Further Research

This research was restricted to a single case study of Makerere University, to the four chosen internal control elements, and a quantitative cross sectional design. Future studies might therefore:

The researchers should consider extending the research to more public and private universities in Uganda and other East African states to get comparative information.

2. Add the fifth COSO element, which is the Information and Communication, and test the mediating effect of the element on the relationship between the other elements and financial performance.

3. Use mixed-methods or longitudinal design to measure how internal control effectiveness changes with time and further elucidate the causes.

4. Test how the various moderators affect the internal controls-financial performance relationship, including ICT infrastructure, type of leadership, government funding, and institutional culture.

These guidelines would enhance further the knowledge on the influence of internal control systems on the financial performance of public universities in Uganda and elsewhere.

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APPENDIX 1: DATA COLLECTION TOOL

A QUESTIONNAIRE FOR THE STAFF OF MAKERERE UNIVERSITY

Dear Sir/Madam,

I am Walusimbi Divine Hope, a student of Uganda Christian University conducting a study on the Impact of Internal Controls on the Financial Performance of Public Sector Universities in Uganda, using Makerere University as a case study targeting the finance department. This study is purely for academic purposes, and all information provided will be treated with utmost confidentiality and used solely for this research. I kindly request you to spare some of your valuable time to answer the following questions as honestly as possible.

Thank you in advance for your cooperation.

SECTION A

BIOGRAPHICAL DATA

Instruction: Tick (√) or write answers in full where applicable.

1. Gender:

☐ Male ☐ Female

2. Age bracket (years):

☐ Below 25 years ☐ 26–35 years ☐ 36–45 years ☐ 46–55 years ☐ Above 55 years

3. Highest level of education attained:

☐ Certificate ☐ Diploma ☐ Bachelors ☐ Masters ☐ PhD

Others (please specify): ____________________________

4. How long have you worked at Makerere University?

☐ Below 1 year ☐ 1–3 years ☐ 4–6 years ☐ 7–9 years ☐ 10 years & above

5. Which department do you work in?

____

6. Position/designation held in the university:

☐ Top Management ☐ Middle Management ☐ Finance/Accounts Staff ☐ Administrative Staff

Others (please specify): ____________________________

SECTION B

THE EFFECT OF RISK ASSESSMENT PRACTICES ON FINANCIAL PERFORMANCE

Instruction: On a scale of 1–5, tick (√) in the appropriate box according to your degree of agreement with the statements given.

Key: 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

Statement	1	2	3	4	5
1. Effective risk assessment practices significantly enhance the university's financial performance.					
2. Identifying risks in advance helps mitigate potential financial losses.					
3. Regular risk identification supports better financial decision-making.					
4. Risk assessment contributes positively to the financial stability of the university.					
5. Improved financial performance is associated with the effectiveness of risk identification processes.					
6. Early identification of risks helps the university avoid unnecessary costs.					
7. When risks are identified on time, the university is better able to protect its revenue.					
8. Risk assessment helps the university respond quickly to challenges that may affect its finances.					
9. Clear identification of risks supports better planning and budgeting.					
10. The university's ability to identify risks early contributes to its long-term financial success.					

SECTION C

THE INFLUENCE OF CONTROL ACTIVITIES ON FINANCIAL PERFORMANCE

Instruction: On a scale of 1–5, tick (√) in the appropriate box according to your degree of agreement with the statements given.

Key: 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

Statement	1	2	3	4	5
1. Strong control activities have a positive influence on the financial performance of the university.					
2. Effective control activities reduce operational inefficiencies that affect financial results.					

3. Control activities ensure that university funds are used for their intended purposes.					
4. The university's financial performance has improved as a result of strengthened control activities.					
5. Control activities help the university achieve its financial goals and targets.					
6. Proper control activities contribute to accurate and reliable financial reporting.					
7. Effective control activities support long-term financial stability of the university.					
8. Control activities help the university maintain adequate cash flows and liquidity.					

SECTION D

<u>THE EFFECT OF MONITORING AND EVALUATION MECHANISMS AND FINANCIAL PERFORMANCE</u>

Instruction: On a scale of 1–5, tick (√) in the appropriate box according to your degree of agreement with the statements given.

Key: 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

Statement	1	2	3	4	5
1. Monitoring and evaluation mechanisms have significantly improved financial performance.					
2. Regular monitoring ensures that financial resources are used efficiently at the university.					
3. Evaluation processes help identify areas of financial weakness and implement corrective measures.					
4. The effectiveness of monitoring activities is directly related to improvements in financial performance.					
5. Monitoring and evaluation help the university achieve its financial sustainability goals.					
6. Regular performance reviews have helped reduce cases of financial mismanagement.					
7. Monitoring systems have strengthened the university's accountability frameworks.					
8. The university's overall financial performance has improved due to effective monitoring and evaluation.					

SECTION E

THE EFFECT OF CONTROL ENVIRONMENT ON FINANCIAL PERFORMANCE

Instruction: On a scale of 1–5, tick (√) in the appropriate box according to your degree of agreement with the statements given.

Key: 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

Statement	1	2	3	4	5
1. A strong control environment has contributed to improved financial performance at the university.					
2. The control environment supports effective and efficient use of financial resources.					
3. The integrity and ethical values promoted at the university reduce risks of financial loss.					
4. A positive control environment encourages staff to comply with financial regulations.					
5. The organizational structure supports timely and accurate financial reporting.					
6. The control environment at the university promotes sound financial decision-making.					
7. A strong control environment contributes to the long-term financial sustainability of the university.					
8. The university's financial performance would deteriorate if the control environment were weakened.					

SECTION F: FINANCIAL PERFORMANCE OF THE UNIVERSITY

Instruction: On a scale of 1–5, tick (√) in the appropriate box according to your degree of agreement with the statements given.

Key: 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

F1: Revenue Generation and Budget Utilization

Statement	1	2	3	4	5
LIQUIDITY					
1.The institution is able to meet its short time financial obligations on time					
2. The institution maintains adequate cash balances for its operations					
3. Delays in payments (eg suppliers, staff) are rare					
4. The university has effective cash flow management practices					
RESOURCE UTILIZATION EFFICIENCY					
1.The institution efficiently utilizes its financial resources					

2.There is minimal wastage of financial resources in the institution.					
3. Funds are allocated to the most productive activities.					
4. The institution achieves maximum output from available resources.					
ACCOUNTABILITY					
1.The university provides clear accountability for the use of its financial resources					
2.Financial reports are regularly prepared and reviewed.					
3. There are strong internal controls to prevent misuse of funds					
4. Management is held responsible for financial decisions and outcomes.					

Thank you very much for your time, cooperation, and sincerity. May God bless you!

APPENDIX 2 : SAMPLE SIZE DETERMINATION YAMANE(1967) FORMULA

A. The Yamane (1967) Formula

The sample size for this study was determined using the formula developed by Taro Yamane (1967), which is widely applied in social science research when the total study population is known and finite. The formula is expressed as follows:

$$n = N / [1 + N(e^2)]$$

Where:

n = the desired sample size

N = the total study population

e = the level of precision (margin of error), set at 0.05 for a 95% confidence level

1 = a constant

B. Application to the Current Study

In this study, the total target population (N) comprised 90 staff drawn from the Finance, Internal Audit, Procurement, and Administration departments of Makerere University, all of whom are directly involved in implementing and monitoring internal control systems within the University. Substituting the values into the Yamane formula yields:

$$n = 90 / [1 + 90(0.05)^2]$$

$$n = 90 / [1 + 90(0.0025)]$$

$$n = 90 / [1 + 0.225]$$

$$n = 90 / 1.225$$

$$n = 73.47 \approx 73 \text{ respondents}$$

Therefore, a sample size of 73 respondents was adopted for this study, representing approximately 81.1% of the total target population of 90 staff. This proportion was considered adequate for obtaining statistically reliable results while remaining practical in terms of data collection.

C. Proportionate Distribution of the Sample

The sample of 73 respondents was proportionately distributed across the four departments using the formula below, to ensure fair representation of each category:

$$n_i = (N_i / N) \times n$$

Where:

n_i = sample size from the i^{th} department

N_i = population of the i^{th} department

N = total population (90)

n = total desired sample size (73)

Table A3.1: Computation of Proportionate Sample Size per Department

Department	Population (N_i)	Computation	Sample Size (n_i)	% of Sample
Finance	35	(35 / 90) × 73 = 28.39	28	38.4%
Internal Audit	12	(12 / 90) × 73 = 9.73	10	13.7%
Procurement	18	(18 / 90) × 73 = 14.60	15	20.5%
Administration	25	(25 / 90) × 73 = 20.28	20	27.4%
Total	**90**		**73**	**100.0%**

Source: Researcher's Computation, based on Yamane (1967)

As shown in Table A3.1, the rounded values were used to maintain whole numbers of respondents per department. The final sample of 73 respondents was therefore distributed as follows: 28 from Finance, 10 from Internal Audit, 15 from Procurement, and 20 from Administration.

D. Justification for the Choice of the Yamane Formula

The Yamane (1967) formula was preferred for this study for several reasons. First, it is specifically designed for situations where the total population is finite and known, which was the case at Makerere University. Second, the formula is widely cited and accepted in business and social science research within Uganda and across East Africa (Eton et al., 2022; Nalugo, 2024), giving it both methodological credibility and local relevance. Third, the formula is mathematically simple, easy to apply, and requires only the population size and the desired level of precision as inputs.

Fourth, a 95% confidence level with a 5% margin of error is a well-established standard for dissertation research at the undergraduate level, providing an acceptable balance between statistical rigour and practical feasibility.