CATHOLIC UNIVERSITY COLLEGE OF GHANA

ANALYSIS OF THE EFFECT OF INTERNAL CONTROL PRACTICES ON

ORGANISATIONAL PERFORMANCE: A CASE OF SUNYANI

TECHNICAL UNIVERSITY, SUNYANI

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CATHOLIC UNIVERSITY COLLEGE OF GHANA

USER PERCEPTIONS OF GHANA INTEGRATED FINANCIAL

MANAGEMENT SYSTEM (GIFMIS) ON FINANCIAL

ADMINISTRATION ON PUBLIC SECTOR ORGANIZATIONS: A CASE

STUDY OF DORMA EAST DISTRICT

BY

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DECLARATION

Candidate's Declaration

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature: …………………………Date: …………………

Name: Vincent Agyei

Supervisor's Declaration

 I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the Catholic University College of Ghana.

Supervisor's Signature: ………………..………..Date: …………………….…

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ABSTRACT

This study sought to analyse the effect of internal control mechanism on institutional performance at the Sunyani Technical University (STU). The study adopted quantitative research approach and also used the descriptive survey design. The target population for this present study comprised staff and management of STU. They included staff and management excluding junior staff (auxiliary staff – security, cleaners and casual workers). Convenience sampling technique was employed to select 184 respondents from STU. Pearson's linear regression analysis model was used to analyse the relationship between internal control systems and business performance. The study revealed positive relationship between the asset controls, and procurement controls and institutional performance. The positive relationship between them was significant and therefore supported the state hypothesis. Again, it was revealed that between the cash controls, payroll controls and institutional performance, there exists a positive relationship between them and it was significant and therefore supported the stated hypothesis.

ACKNOWLEDGEMENTS

DEDICATION

To my late grandmother Madam Mary Konamah. May she rest in perfect peace.

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

The issue of internal control is an essential measure taken to ward off unhealthy financial behaviour of employees entrusted with the power to manage organisations' finances. They are instituted, implemented and monitored to ensure financial discipline to inure to the benefits of all concerned with the organisation. Both profit and not-for profit organisations have been observed to take internal control seriously as they all use money in their operations. Not-for profit making educational institutions are expected to institute internal control measures to safeguard the monies extended to them by the state as well as donations and internally generated funds.

This study therefore sought to analysis the consequences of internal control measures on an institution's performance. This chapter presents the background to the study, statement of the problem, research objectives, research questions, significance of the study, the scope of the study, limitations of the research, organisations of the study and ethical consideration for the study.

Background of the Study

The effect of internal control on organizational operations and performance cannot be under estimated. Internal controls are put in place to keep organization on course towards profitability goals and achievement of its mission and to minimize surprises along the way (Cameron & Quinn, 2011). According to Hill, Jones, and Schilling (2014), internal controls enable management to deal with rapidly changing economic and competitive environment, shifting customer demands and priorities and restructuring for future growth. Internal controls promote efficiency, reduce risks of assets loss

and help to ensure the reliability of financial statements and compliance with laws and regulations. Internal controls services constitute several component purposes, hence an increasing call for better internal control systems; internal control is looked upon more and more as a solution to a variety of potential problems.

According to Vijayakumar and Nagaraja (2012), internal control is the set of accounting and administrative controls and practices that helps managers in operating their organization more effectively and efficiently. These ensure that both the accounting and administrative activities are in order with the laid down procedures, standards, and statutory requirements. It also detects deviation if any and calls for immediate corrective measure. These systems are not only related to accounting and reporting but also relate to the organizations communication processes, internally and externally, and include procedures for: - handling funds received and expended by the organization, preparing appropriate and timely financial reporting to board members and officers, conducting the annual audit of the organization's financial statements, maintaining inventory records of real and other properties and their whereabouts. Successful organizations ensure that they attain and consolidate continued survival in a competitive environment, (Ansoff et al., 2019). Thus, successful organizations set performance measures that focus attention that identifies and communicates the success, support organization learning and provide a basis for assessment and reward (Cummings & Worley, 2014).

Vijayakumar and Nagaraja (2012) internal control can help an entity achieve its performance and profitability targets, and prevent loss of resources. It can help ensure reliable financial reporting. Internal control involves an

organization's structure, work and authority flows, people and management information systems, designed to help the organization accomplish specific goals (Alkhafaji & Nelson, 2013). Organizational performance comprises the actual output or results of an organization as measured against its intended outputs (or goals and objectives) (Zairi, 2012). It involves the ability of an organization to fulfil its mission through sound management, strong governance and a persistent rededication to achieving results. Effective non-profits are mission-driven, adaptable, customer-focused, entrepreneurial, outcomes oriented and sustainable. Creating flexible, high-performing, learning organizations is the secret to gaining competitive advantage in a world that won't stand still. Performance measures can be financial or non-financial (Stredwick, 2013). Both measures are used for competitive firms in the dynamic business environment). Financial measures of organizational performance include; return on assets, return on sales, return on equity, return on investment, return on capital employed and sales growth. Accounting measures have several strengths. They are widely available because governments require firms to publish accounting data and the fact that they are subject to internal controls within firms enhances their reliability (Salehi et al., 2010; Schaltegger & Burritt, 2017). Non-financial organizational performance measures include; opportunities to maximizing returns on investment at minimal costs, promote stakeholder relations between customers, suppliers, investors, and competitors, increase profits, volume of sales, market share, development of new products, and communication within and outside the organization. But the foundation of long-term performance is lifetime customer value; the revenue customers

3

generate over their lives, less the cost of acquiring, converting, and retaining them.

Sunyani Technical University is, no doubt, ranked among essential organizations that require effective controls due to their provision of critical service to the Ghanaian economy and their special commitment to serving the citizenry. In line with this, persistent efforts by policy makers to pursue policies that would improve internal control system at the Sunyani Technical University have yielded abysmal results. But, according to Albrecht, Albrecht, Albrecht, and Zimbelman (2011), poor control systems in institutions has led to huge investments lost through fraud and misuse of assets that are used to generate revenues while members and institutions have suffered big losses. Inadequate controls have also led to corruption and collusion of management and external auditors leading to institutions failing to achieve their set objectives (Pickett, 2010; Rendon et al., 2015). Sunyani Technical University, as part of its internal control systems, has created internal audit department to ensure laydown rules, regulations and procedural compliance. This effort has been put in place in order to achieve positive performance. Nonetheless, Sunyani Technical University, still struggle with untimely financial reports, and misuse of the institution's resources. This study therefore sought to analyse internal control mechanisms and their consequential implications on operations and performance at the Sunyani Technical University.

Statement of the Problem

Making adaptable, and high-performing university education system is the key to building resilience in the 21st century. The university is no doubt rank among essential elements that require effective controls due to their provision

of critical service to the economy and their special commitment towards meeting the challenges socially, economically, culturally, and technologically and as well ensure growth and development. In line with this, persistent efforts by policy makers to pursue policies that would improve internal control system at the universities have yielded abysmal results and comes with various degrees of consequences dwindling the productivity of the institution.

A report from the Ghana Initiative Integrity (2017) revealed that weak and ineffective internal control mechanisms such poor procurement practices, poor cash management, poor asset management and payroll control systems have resulted in various counts of operational inefficiencies within the education sector in Ghana. The report further revealed that tendering and procurement procedures had become a conduit through which certain contractors, individuals, and their political cronies through the complicity abetting of some corrupt officials from the management of public institutions were swindling massive amounts of money from the institutional funds through skewed processes.

Most tertiary educational institutions officials in Ghana has as of late been in the news on issues relating to high recurrence of fraud, misappropriation, embezzlement, manipulation, missing records and ledger cards and various forms of malpractices, with the management and stakeholders not knowing how to handle the adverse the unfavourable situation (mynewsgh.com, 2018). This situation has culminated in the lack of confidence by the staff, stakeholders and clients over the development and productivity of the organization. More so, the Polytechnics in Ghana has been upgraded into Technical University status, thus the volume of bookkeeping records has

radically expanded, consequently the volume of accounting records has drastically increased, thereby necessitating the appraisal of the adequacy and reliability of records, and overall efficiency of operations. Furthermore, with the public interest in the "truth and fairness" of financial statements – profit and loss account and balance sheet, whose stratum of reliable is on the internal control system, the research is therefore aimed at investigating the extent of adherence to the internal control system and its impact on the operations and performance of Sunyani Technical University.

Purpose of the Study

The purpose of this study is to analyse the effect of internal control mechanism on organisational performance at the Sunyani Technical University.

Specific objectives

The study specifically sought to;

1. examine the effect of cash control mechanisms on organisational performance of the university.

2. examine the effect of procurement control mechanisms on organisational performance of the university.

3. analyse the effect of payroll control mechanisms on organisational performance of the university.

4. investigate the effect of asset control mechanisms on organisational performance of the university.

Research Questions

The study is guided by the following research questions

1. What is the effect of cash control mechanisms on organisational performance of the university?

2. What is the effect of procurement control mechanisms on organisational performance of the university?

3. What is effect of payroll control mechanisms on organisational performance of the university?

4. What is the effect of asset control mechanisms on organisational performance of the university?

Hypotheses Statement

The study tested the following hypotheses:

1. H_0: There is no significant relationship between cash control and organizational performance

   H_1: There is a significant relationship between cash control and organizational performance

2. H_{01}: There is no significant relationship between procurement control and organizational performance

   H_1: There is a significant relationship between procurement control and organizational performance

3. H_0: There is no significant relationship between asset control and organizational performance

   H_1: There is a relationship between asset control and organizational performance

4. H_0: There is no significant positive relationship between payroll control and organizational performance

   H_1: There is a relationship between payroll control and organizational performance

Significance of the Study

This study is geared towards internal control mechanism on organisational operations and performance in Ghana. The subject of internal control mechanism at the university education context though new, is very critical due to its adverse implications on the performance of the institution and its ripple effects on the economy at large. To help circumvent the high costs associated with poor internal control mechanisms which adversely affect profitability and shareholder value, the study assesses the internal control mechanism at the Sunyani Technical University and make recommendations for effective internal control practices so as to protect Sunyani Technical University itself, their valued customers and build a resilient operational and sound financial system for economic development of the institution and the Nation at large.

The study has both theoretical and practical significance to academia, practitioners and policy makers. This study will come out with recommendations based on valid data analysis for government and non-governmental agencies, both public and private – Ministry of Labour, Ministry of Finance and Economic Planning, Local Governments and significant stakeholders who have interest in ensuring value for money and also to help put measures in place to ensure better performance.

Furthermore, the outcome of this study will be an additional reference material to the stakeholders in public organizations in Ghana especially in designing strategies to deal with increasing rate of poor internal control mechanisms in organizations. Findings and recommendations also would help policy makers and regulators inform better policies in internal control

mechanisms for a resilient and sustainable public and financial sector. Further studies can focus on a comparative assessment of internal mechanisms within public and private firms in Ghana.

Delimitation

Internal control mechanism is a broad issue entirely. One can hardly deal or explore every aspect of it. Therefore, this study would focus mainly on internal controls and its relationship with organizational performance in the Ghanaian context. Geographically, the scope of the study is the Sunyani municipality. The study covers management and employees of two divisions of the Sunyani Technical University.

Limitations

Ideally, the study should cover more than one institution, but in view of financial constraints, limited time available to conduct the research, and loaded academic schedule of the researcher, the study was limited to only one institution - Sunyani Technical University. Another major limitation that was encountered in the study was access to data. Some data were deemed sensitive and confidential and respondents were not willing to reveal such data to the researcher. Nonetheless, upon persistent confrontation with the respondents, the researcher was able to access data from the respondents which could answer the research objectives.

Organization of the Study

This study is organized into five chapters - Chapter one concerns the background to the study, statement of the problem, research objectives, research questions, significance of the study, scope of the study, limitations of the study and organization of the study. Chapter two concerns the literature review; it

9

provides a review of the previous work done by people who matter in the topic of discussion. Chapter three introduces an overview of the research method, the study design, study area, population of the study, sample size and sampling technique, sources of data, data collection instruments and techniques, and data analysis.

Chapter four includes the detailed analysis and discussion of result from the study. The last chapter provides a brief summarization of the overall study, conclusion, recommendations, and suggestions for further studies.

<div align="center">**CHAPTER TWO**</div>

<div align="center">**LITERATURE REVIEW**</div>

Introduction

This chapter puts the study into scholarly context by reviewing studies conducted by scholars on this field of study. The study focuses on theoretical framework, definitions of concepts and empirical evidence on the subject under review which is analysis of internal control mechanism on organisational performance.

Theoretical Framework

This section focuses on the theoretical framework that has been used for assessing internal control mechanisms on organisational performance. The theoretical framework concept, as well as its significance to this study, is discussed. Grant and Osanloo (2014) defined a theoretical framework as a structure that guides research by relying on a formal theory constructed using an established, coherent explanation of a certain phenomenon and relationships. The following theories were adopted as the theoretical foundation of the study: Agency theory and Contingency theory. These are discussed below.

Agency theory

Agency theory is concerned with resolving problems that can exist in agency relationships; that is, between principals such as shareholders and agents of the principals for example, company executives (Dharwadkar et al., 2000). The two problems that agency theory addresses are: the problems that arise when the desires or goals of the principal and agent are in conflict, and the principal is unable to verify what the agent is actually doing and the problems that arise when the principal and agent have different attitudes towards risk.

Because of different risk tolerances, the principal and agent may each be inclined to take different actions.

Adams (1994) in his article stated that agency theory can provide for richer and more meaningful research in the internal audit discipline. Agency theory contends that internal auditing, in common with other intervention mechanisms like financial reporting and external audit, helps to maintain cost-efficient contracting between owners and managers. Agency theory may not only help to explain the existence of internal controls and internal audit in firms but can also help explain some of the characteristics of the internal audit department, for example, its size, and the scope of its activities, such as financial versus operational auditing (Schulze et al., 2001). Agency theory can be employed to test empirically whether cross-sectional variations between internal auditing practices reflect the different contracting relationships emanating from differences in organizational form

Contingency theory

Contingency theory is an approach to the study of organizational behaviour in which explanations are given as to how contingent factors such as technology, culture and the external environment influence the design and function of organizations (Islam & Hu, 2012). The assumption underlying contingency theory is that no single type of organizational structure is equally applicable to all organizations. Rather, organizational effectiveness is dependent on a fit or match between the type of technology, environmental volatility, the size of the organization, the features of the organizational structure and its information system. Contingency theories were developed from

the sociological functionalist theories of organization structure such as the structural approaches to organizational studies by (Donaldson, 1995).

Contingency theory is used to describe the relationships between the context and structure of internal control effectiveness and organizational performance, especially reliability of financial reporting (Chenhall, 2006). Empirical study suggests that internal auditors who are specialized and higher in internal audit ability will achieve internal control effectiveness analysis and that the firm will benefit from the organizational effectiveness via internal control mechanism efficiency (Chenhall, 2003).

Cadez and Guilding (2008) identified some factors, which impact management control systems; these are: external environment, technology, structure and size, strategy and national culture. It suggests that the demands imposed by technical tasks in the organization encourage the development of strategies to coordinate and control internal activities. The location of information in relation to technology and environment has an important influence on organization structure. In uncertain environments with non-routine technology, information is frequently internal. Where environments are certain, or where technology is routine, information is external. The dimensions of structure and control include authority structure and activities structure, i.e., rules and procedures that determine the discretion of individuals. Authority relates to social power. In the contingency model, decentralized authority is more appropriate where uncertain environments or non-routine technology exist (Waterhouse & Tiessen, 1978). Centralized authority is more appropriate when environments are certain.

Contingency theory states that the design and use of control systems is contingent upon the context of the organizational setting in which these controls operate, (Fisher, 1998). Therefore, the idea of contingency theory is that the selection and use of a management control system is contingent on a variety of internal and external factors. It is therefore clear that, factors such as external environment, technology, structure and size, strategy and national culture impact management control systems. The theory suggests that the demands imposed by technical tasks in the organization encourage the development of strategies to coordinate and control internal activities. Skinner (2014) in his book writes: Contingency means: one thing depends on other things" and "Contingency theory means: it depends. Audit functions are task oriented and can be loosely structured. The functions also can vary considerably, depending on the area of a company under audit and the type of business model, so auditors must carefully manage their inspections and take variables into account to get the job done. The contingency theory also can be applied to an audit team's structure. Typically, audit team managers receive audit projects. They then create ad hoc audit teams for the projects, selecting auditors based on expertise and experience in the subject areas, and on auditor availability, all of which add up to contingencies for any given audit project.

The Concept of Internal Control Mechanism

Afolabi (2004) defined internal control systems as the whole system of controls, financial and otherwise, established by management in order to carry out the business of the enterprise in an orderly and efficient manner, ensure adherence to management, safeguard the assets and secure as far as possible the completeness and accuracy of the records. Moeller (2014) defined internal

controls as a process, and rightly as an internal control system is not an end in itself but a means to an end.

Internal control is means by which the management obtains the information, protection and control for successful operation of business enterprises. Wilson (2005) in his definition states: Internal control constitutes the methods followed by a company to protect assets, protect against improper asset disbursement, protect against incurrence of improper liabilities, assure the accuracy and dependability of all financial and operating information, judge operating efficiency and measure adherence to company's establishment policies. He further stressed that internal control may be administrative or financial. Administrative control normally pertains to activities which are not directly financial in nature and are built into the system to promote the attainment of the major goals of internal control (Spira & Page, 2003). Financial control pertains to financial activity and may be exemplified by the separation of the duties of personnel in disbursing cases and recording related cash transaction. The Institute of Chartered Accountants in England and Wales (ICAEW), (2005) statement of Auditing defines internal control as: "Not only internal check and internal audit, but the whole system of controls; financial and otherwise, established by the management in order to carry on the business of the company in an orderly manner, safeguard its assets and secure as far as possible the accuracy and reliability of its records". From this definition, internal control may be summarized as consisting of internal checks, internal audit, other financial system of control and administrative systems of control. These systems are established by the management to achieve a number of

purposes identified as; orderly conduct of enterprise business, safeguard of assets and accuracy and reliability of records.

A review of literature on internal control system reveals that (the most widely used reference framework is the American document published in 2019 entitled Internal Control Integrated Framework, more commonly referred to as COSO, an acronym of Committee of Sponsoring Organizations of the Tread way Commission, derived from the name of the committee which conceived the reference framework (Moeller, 2014). Inputs of COSO have evolved since then into various aspects of internal control, it is now recognized worldwide for providing guidance on critical aspects of organizational governance, business ethics, enterprise risk management, fraud, and financial reporting (COSO 2019). Its objective is to present a framework which allows a common understanding of internal control among interested parties. Control criteria are specified and tools are suggested to assist management in evaluating internal control and in improving the control of the entity. Finally, the COSO Report offers guidelines for preparing reports on internal control for use by external parties. Since the approach to internal control recommended by COSO in its Internal Control Integrated Framework is widely used all over the world, this research adopts the definition of this framework to designate what internal control means.

COSO defines internal control as "a process, affected by an entity's board of directors, management and other personnel", this process is designed to provide reasonable assurance regarding the achievement of objectives in effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations (COSO, 2019).

Effective internal control is a system of internal control whereby the designs, functions and programs of internal control achieve their intended results (Chenhall, 2003). Although internal control systems operate at different levels of effectiveness, a system of internal control is said to be effective when there is existence of sound control environment, risk assessment process, sound operational control activities, effective information and communication system and effective monitoring and evaluation system (COSO, 2019). These five interrelated components of internal control need to be present to conclude that internal control is effective.

The literature on internal control commonly acknowledges that the three main objectives that an enterprise should follow in order to design an effective internal control system are: reliability of financial reporting, efficiency and effectiveness of Operations, and compliance with laws and regulations (COSO, 2019). Reliability of financial reporting is the preparation of reliable published financial statements. The report includes interim and condensed financial statements and selected financial data derived from such statements. Reliability refers to the quality of information, to what extent the information is free from error in reasonable terms. Such assurance is possible with the establishment of effective internal control system.

Performance and profitability goals as well as safeguarding of resources are the major objectives to be attained by effective and efficient operations (Kaplan, 2001). This implies that operations are performed so as to attain their intended effect. Such objectives can be assessed through biannual or quarterly performance audits. Compliance with laws and regulations deals with those laws and regulations which the enterprise is subject to. The company must be

aware of all laws and regulations to which it is subject such as generally accepted accounting principles (GAAP), corporate governance rules, and other specific ones. Therefore, the system of internal control must be designed in such a way that it complies with the requirements of applicable laws.

As indicated in the Internal Control - Integrated Framework of COSO, the control environment sets the tone of a company or enterprise, influencing the control consciousness of its people. It is the foundation for all other components of internal control, providing discipline and structure. Control environment encompasses the ethical values of the staff, management's philosophy and operating style, assignment of authority and responsibility, and finally the leadership and direction of the Board of Directors (COSO, 2019). An effective control environment is an environment where competent people understand their responsibilities, the limits to their authority, and are knowledgeable, mindful, and committed to doing what is right and doing it the right way. They are committed to following an organization's policies and procedures and its ethical and behavioural standards. The control environment encompasses technical competence and ethical commitment; it is an intangible factor that is essential to effective internal control.

Researches prove that a commitment to strong internal control by the top management is often translated into a better performance. However, not only at the top management level but building a strong consciousness of control mechanisms throughout the organization's culture is one of the ways to ensure effective control environment in the enterprise. Risk assessment is a vital exercise for all-size companies since every entity faces a variety of risks from external and internal sources that must be assessed (Lewis et al., 2000). A

requirement for a sound risk assessment is the identification of clear objectives. Operations of the enterprise can be put in danger and its objectives remain unattained by uncontrolled risk-taking. This is why the management must assess all risks. Risk assessments are considered effective if they help determine what the risks are, what controls are needed, and how they should be managed. It is important that risk identification be comprehensive, at the department level and at the activity or process level, for operations, financial reporting, and compliance objectives.

Risk assessment entails that after risks have been identified, a risk analysis is performed to prioritize those risks. A complete risk assessment encompasses the assessment of the likelihood of risk occurring as well as the estimation of quantitative and qualitative costs of the potential risk. In addition, also included is the determination of how to manage the risk (Edem, 2017).

Control activities, are the policies and procedures that help ensure management directives are carried out. They help ensure that necessary actions are taken to address risks to achievement of the company's objectives. Control activities occur throughout the organization, at all levels and in all functions - be it in small or large companies (Yirenkyi-Fianko & Chileshe, 2015). According to the purpose or intention of the type of control desired, there is a need to differentiate between preventive and detective controls. Preventive controls seek to prevent undesirable events from occurring. Such types of controls deter losses and they include proactive measures. Examples of preventive controls are separation of duties, proper authorization, adequate documentation, and physical control over assets. Detective controls, on the other hand, attempt to identify undesirable acts. Such controls make it evident that a

certain loss has occurred but they do not prevent a loss from occurring. These types of control activities include reviews, analyses, variance analyses, reconciliations, physical inventories, and audit.

Control activities are summarized below as follows: (i) separation of the custody of assets from accounting. A custodian of an asset should not perform an accounting function relating to that asset. The reason for not permitting this is to protect the entity against malpractices. When one performs both functions, there is an excessive risk of that person disposing off the asset for personal gains and adjusting the records to relieve oneself of responsibility, (ii) Separation of the authorizations of transactions from the custody of related assets. Where possible it is desirable to prevent persons, who authorize transactions from having control over the related assets and being in possession of ownership documents of such assets. The authorization of a transaction and the handling of the related assets and ownership documents by the same person increase the possibility of malpractices within the organization, (iii) Separation of the operational responsibility from record keeping responsibility. If each department or division in an organization were responsible for preparing its own records and reports, there would be a tendency to bias the results to improve its reported performance. In order to ensure unbiased information, record keeping is typically included in a separate department under the chief accountant (Allen et al., 2004; Spira & Page, 2003; Vijayakumar & Nagaraja, 2012).

There also should be adequate separation of duties within the accounting function. An effective system of internal control should not allow an employee to process a transaction from its original to its ultimate posting and preparation of the financial statements. This would allow for non-detection of intentional or

unintentional errors and sloppy performance of duties, (v) Proper authorization and approval of transactions. The system in operation should make provisions for proper authorization or approval of all transactions by appropriate individuals whose authorization limits are clearly outlined. Authorization can either be general or specific. General authorization means that the management establishes policies for the organization to follow. Subordinates are instructed to implement these general authorizations by approving all transactions within the limits set by the policy (Chang, 2017). Specific authorization has to do with individual transactions. Management is often unwilling to establish a general policy of authorization for some transactions. Instead it prefers to make authorizations on a case by case basis.

Documents and records are the physical objects upon which transactions are entered and summarized. They include such diverse items as sales invoice, purchase orders, sales journals and employee time sheets. Both documents of original entry and records upon which transactions are entered are important but the inadequacy of documents normally causes greater control problems. Documents perform the functions of transmitting information throughout the organization and between different organizations. The documents must be adequate to provide reasonable assurance that all assets are properly controlled and records well maintained. Certain relevant principles dictate the proper design and use of documents and records. Documents and records should be: Pre-numbered serially so as to facilitate control over missing documents as well as easy retrieval when needed, prepared as soon as transactions takes place, sufficiently simple to ensure that they are clearly understood, designed for

multiple uses whenever possible and constructed in a manner that encourages correct preparation (Edem, 2017; Pritchard et al., 2014).

Independent checks on performance involve careful and continuous review of the other control activities. The need for independent checks arises because an internal control structure tends to change over time unless there is a mechanism for frequent review. The basic essentials of a good system may all be present but unless internal controls receive attention, 'short cut " will appear causing some procedures to be unnecessary and others inadequate. The use of an internal auditor a person trained in accounting systems and auditing is an approach adopted in maintaining and improving internal control systems. Conceptually the internal auditor should report to the highest office in the organization. This could be a committee of the board of directors (Spira & Page, 2003).

For an internal control to be effective one, pertinent information must be identified, captured and communicated in a form and timeframe that enable people to carry out their responsibilities reports are produced by the information systems. Thus, operational, financial, and compliance related information contained in such reports ensures effective control over the business. Effective communication is central to effective internal control. Employees are expected to participate in the internal control activities as much as they are kept informed of what is expected of them, and how their specific duty fits into the grand picture. Therefore, controls are standardized by the use of information technology and effective communication system (Abu Naser et al., 2017).

The quality of internal control needs to be assessed overtime through monitoring mechanisms such as on-going monitoring and separate evaluations.

The purpose of such activities is to ensure that internal control is well designed and duly applied. Monitoring is the glue that links the 5 components of effective internal control. Monitoring activities are relevant to all aspects of these components. Ongoing monitoring activities include various management and supervisory activities that evaluate and improve the design, execution, and effectiveness of internal control. Separate evaluations, on the other hand, such as self-assessments and internal audits, are periodic evaluations of internal control components resulting in a formal report on internal control (Gupta et al., 2016).

Determiners' of Organizational Performance

Operational efficiency is the ability for an organization to execute its tactical plans while maintaining a healthy balance between cost and productivity. This is affected by the productivity of the organization which is measured by examining the amount of output (product or service) for a given amount of input (assets, employee work hours, and other inputs) (Masenene, 2015). In order to increase operational efficiency, an organization should strive to increase the output without a change in input of a similar order of magnitude. This is done in one of two ways:

(i) changing the underlying processes to eliminate unnecessary steps with the aim of Six Sigma and other process-oriented frameworks and

(ii) Adding capabilities to the underlying processes that increase output without increasing input. It is nearly impossible to increase output without affecting the input requirements, so an organization must realize that it is simply trying to get a higher ratio of output: input than simply higher numbers (Van Greuning & Brajovic-Bratanovic, 2009).

Improving operational efficiency is one objective of internal controls. Unlike business organizations where shareholders are the major class of stakeholders and profitability is the primary objective, public institutions serve the society and thus have a diffuse group of shareholders thus efficiency rather than profitability becomes an important measure of performance. As a consequence, internal controls are no less important for public sector institutions than for businesses (Akpolat & Pitinanondha, 2009). In this study the following components were discussed as determiners of organizational performance.

Cash control

Cash Control means managing and monitoring credit and collection policies, cash allocation, and disbursement policies, accounts payable policies and the invoicing cycle (Ross, Westerfield, & Jordan, 2008). Cash Control is an important part of business as it is required for proper cash management, monitoring and recording of cash flow and analysing cash balance. Cash is the most important liquid asset of the business. A business concern cannot prosper and survive without proper control over cash. In accounting, cash includes coins; currency; deposited negotiable instruments such as cheques, bank drafts, and money orders; amounts in chequing and savings accounts and demand certificates of deposit. A certificate of deposit (CD) is an interest-bearing deposit that can be withdrawn from a bank at will (demand CD) or at a fixed maturity date (time CD). Cash only includes demand CDs that may be withdrawn at any time without prior notice. Cash does not include postage stamps, IOUs, time CDs or notes receivable. A business concern maintains two types of cash accounts in its general ledger – cash and petty cash. But in the balance sheet, the balances of these two accounts are shown together as cash.

Since most of the transactions of a business concern are cash transactions, cash is considered an important liquid asset (Scitovsky, 2016). Misuse of cash may happen easily through stealing or due to carelessness. This therefore calls for cash control systems for efficient and effective cash control.

Steps of Cash Control are: Cash transactions of a business are to be accounted properly to know cash flow and cash balance; Cash sufficiency is to be ensured on due dates of notes payable; Idle cash should be minimal because additional cash investment earns more revenue; and Loss caused due to misappropriation and forgery is to be controlled and stopped (Gitman, Juchau, & Flanagan, 2015; Scitovsky, 2016). The necessity of cash control is very clear and it has many sides. A business cannot survive without time-related cash flow and proper cash management.

Procurement controls

According to Development Assistance Committee (DAC, 2005), about 15 per cent of the world's Gross Domestic Product (GDP) is spent through public procurement. In developing countries' economies, Thai (2001) notes that approximately 9 to 13 per cent of GDP of developing economies is spent through public procurement. It is exemplified that in Angola, public procurement accounts for 58 per cent while in Uganda it accounts for a whopping 70 per cent of public spending. Also, in Ghana, public procurement accounts for around 24 percent of total imports into the country (Adjei, 2018). Furthermore, besides personnel emoluments, public procurement makes up between 50 and 70 percent of the national budget, contributing some 14 percent to Ghana's GDP. Yet, procurement is argued by Arrowsmith, Linarelli, and Wallace, (2000) to be increasingly vulnerable to internal control challenges. The

findings of Mamiro (2010) study indicated that one of the major setbacks in public procurement is poor procurement planning and management of the procurement procedures. Kakwezi and Nyeko (2019), in their study, observed that the procurement departments of public organizations in Uganda are faced with the problem of inadequate information regarding the procurement procedure. As such, those organizations are unable to determine their efficiency and effectiveness. This argued to result from failure to establish clear procurement procedures and performance standards.

Integration of Information and Communications Technology (ICT) in procurement procedures is very important. This assertion is reinforced by the results of a study by Loader (2007) where it was established that ICT adoption affected procurement process at Kenya government ministries to a great extent. Incorporating ICT was found to enhance the process of effective tendering through advertising, sourcing reviews, pre-qualification, potential for cost savings and greater awareness for new development. The adoption of ICT was argued by the two scholars to capacitate the aforementioned ministries to provide excellent service to their suppliers in an effective and transparent manner. Their study inferred that operating procedures afore-explained affected the procurement process at Kenya government ministries to a very great extent.

Edquist, Vonortas, Zabala-Iturriagagoitia, and Edler (2015) stipulate the procurement methods to be applied, advertising rules and time frames, the content of tender documents and technical specifications, tender evaluation and award criteria, procedures for submission, receipt and opening of tenders, and the complaints system structure and sequence. It is further pointed out in a critical appraisal of CDF Act in Kenya by Wittig, (2003) that regulations as

established by PPDA lay the basis upon which there is creation of separation of powers between institutions that manage public procurement and those checking compliance with procurement procedures. Kimenyi (2005) study findings further indicate that the CDF Act 2007 play a fundamental role in auditing of procurement activities of various CDF projects in Kenya. The findings of Gatumo and Achuora, (2011) concurred with those of Wanyonyi and Muturi, (2015) that public procurement regulation is one of the most important factors in carrying out effective public procurement audit.

Payroll control system

Payroll can be defined as the process to pay employees for services rendered (Means, 2017). The process includes deducting or withholding authorized amounts from employees' pay and remitting to the appropriate vendor or governmental entity. As discussed earlier in this study, an effective internal control structure has five interrelated components: Control environment; Risk assessment; Control activities; Information and communication and Monitoring. Each of these components is important in establishing and maintaining an effective control system for payroll. Controls can either be an entity control or an application control. The control environment is considered to be an entity control because it addresses characteristics from management's perspective rather than from an application such as payroll software (Avgerou & Walsham, 2017).

If the overall tone from management is not ethical and positive, then the possibility of the success of other internal control components is minimized. The control environment is the foundation on which all other internal control components are built. Just as the foundation of a house ultimately supports the

entire structure, so does the control environment support the internal control structure of an organization. The various principles of the control environment for payroll demonstrates commitment to and ethical values, exercises oversight responsibility, establishes structure, authority, and responsibility, demonstrates commitment to competence, and enforces accountability. The control environment affects payroll by establishing protocols.

A published code of ethics needs to be communicated with employees on a consistent basis (Stead et al., 1990). For example, employees should be required to read the code of ethics on entering the government's workforce and reminded of that code of ethics at set intervals during employment. Also, management needs to visibly adhere to that code. The code of ethics could also be published on the government's website. Again, personnel should be hired that have the knowledge and skills to accomplish payroll tasks. This characteristic can be accomplished by including appropriate knowledge and skills in the job description so that only qualified employees are hired. In addition, employees should be supervised by qualified personnel. Moreover, the organizational structure of the payroll department should be such that there are job descriptions that provide for assignment of responsibility and authority. These job descriptions should allow for proper segregation of duties. Furthermore, written procedures should be provided in the payroll area. These procedures should cover all phases of payroll from when an employee is hired through the employee's separation from the government. Procedures should also address when an outstanding payment becomes legally an escheat property and submitted to the appropriate state agency. Finally, management should exhibit a commitment to ongoing education and training process for employees in the

payroll area. This is especially important due to frequent updates to deductions and withholdings from employees' pay (Rae et al., 2017).

Again, for any organization to run and control its operations, reliable and accurate information is a must. Information must flow up, down, and across the organization, as well as in and out of the organization. Information can be formal or informal.

Again, monitoring, the fifth internal control element, ensures that the internal controls operate as intended over time, and is accomplished through on-going evaluations, separate evaluations or a combination of both. Ongoing monitoring occurs in the course of operations. It includes regular management and supervisory activities, and other actions personnel take in performing their duties. Ongoing monitoring in payroll takes the form of supervisory activities. Payroll reconciliations should be reviewed by an appropriate level supervisor. The supervisor should initial and date the face of the reconciliation as evidence of the review (Moeller, 2013). The payroll supervisor or another member of management should review all changes to employee information. This can be easily accomplished by regularly producing an employee addition/change report. Separate evaluations of internal controls are those completed by persons outside of operations; however, the objectives of this type of evaluation are the same as the ongoing, routine evaluations. Specifically, to enable management to determine if internal controls continue to function over time and to provide a communication tool for identified control deficiencies. Separate evaluations take place after the fact. These evaluations can be incorporated into the annual audit of financial statements or can be a separate contractual

29

agreement with an external public accounting firm. Separate evaluations can also be a function of internal audits.

Asset control system

In the pursuit towards the attainment of a goal or a set of goals, resources are required, which will enable the entity to achieve the goal as set. Some obvious examples of resources are assets (inventory, immovable property, transport assets, cash) and human (a number of people with different kinds of expertise). When these combined resources are used to the best possible advantage the goal will be achieved quicker and easier. The decision-making process to decide what to use, where to use it and how to use it, is generally referred to as "management" or control systems (Moeller, 2014).

The asset control systems process weighs up the advantages and disadvantages (cost versus benefit) of utilising resources or asset in a specific way against the risk of not doing so and not achieving the set goal in the shortest period and most effective way possible. Any company that truly wants to steward its revenues responsibly requires an asset control system.

Regardless of where your organization is a small start-up or a multinational entity, numerous fixed assets are necessary in order for you to do business. Fixed assets can include anything from office furniture to warehouse equipment to vehicles to assets like PCs, tablets, mobile phones, printers, A/V equipment and much more. All of these items are required to be tracked for accounting and compliance purposes. Accuracy is a must, because mistakes can be costly. Until recently, the term asset control system typically involved an Excel spreadsheet and employee – or multiple employees – who were charged with tracking fixed assets, their whereabouts and maintenance schedules. Even

the most detail-oriented employee, however, is bound to be human. Errors and oversight happen. Items fall through the cracks, duplication of effort occurs, and expensive assets aren't serviced on a regular basis, leading to premature breakdown or replacement. Some companies even continue to pay insurance on assets that aren't in their inventory anymore, thanks to the failure to report theft or equipment breakdown (Rae et al., 2017; Vijayakumar & Nagaraja, 2012).

Good asset control is critical in any business environment and more so in the public sector, particularly as some of the significant assets are infrastructure assets with long life spans and enormous capital outlay that are vital to providing a foundation for economic activity.

There are two main systems of recording income and expenditure being used in the public sector in the world today. One system is the cash-based system that has historically been used by most governments for accounting in the past, and the accrual-based system. There has been a steady move towards the use of an accrual system in recent years in the public sector at large. Under the cash-based system there is a tendency to focus on whether or not to spend on new assets rather than measuring the full and most effective and efficient use of assets available. In addition, maintenance of assets on hand is frequently ignored or postponed in favour of other pressing needs (Le & others, 2016).

On the other hand, under an accrual-based system, the focus can extend further on whether to retain and upgrade existing assets as opposed to only the purchase of new assets by providing information for continued measurement of actual cost against benefits derived. Decision-makers are thus able to focus on the broader range of options available in managing assets. Financial management and accounting conventions provide a disciplined and consistent

framework for recording and reporting much of the information needed for asset management. Accounting conventions and reporting obligations influence all phases of the Asset Life Cycle (Narayanaswamy, 2017).

Effects of Effective Internal Control system on Organizational Operations

Gupta et al., (2016), in his study ―Effective Internal Controls System as Antidote for Distress in the Banking Industry in Nigeria‖ examined the role of effective internal controls system in the reduction or total elimination of distress in the banking sector in Nigeria. A survey research design was adopted in which fifty-six workers of selected deposit money banks were used and data were collected using questionnaire. Four research hypotheses were raised and tested; the hypotheses were tested using t-test statistic at a significant level of 5%. The testing of the hypotheses revealed that: existence of effective internal controls system has positive effect on fraud elimination in banks; effectiveness of internal controls system can be accurately ascertained; effective internal controls system has great impact on accuracy and reliability of records of banks and distresses in banks were traced to non-adherence to established internal controls system (Tunji, 2013). Tunji (2013) study has shown the importance of effective internal control system by correlating effective internal control system to business operational issues such as fraud detection and accuracy and reliability of records. However, Tunji (2013) study differs from this research in two major ways. Firstly, the research design of Tunji (2013) study is causal while this research would adopt the descriptive research design. Secondly, the study location of Tunji (2013) was deposit banks in Nigeria but this research focus on Sunyani Technical University.

A similar study conducted by Abiola (2013) in Nigeria on the topic —Internal Control System on Fraud Detection: Nigeria Experience revealed that there is a strong relationship between internal control system and fraud detection. In addition, Abiola (2013) found out that proper, well designed employee training techniques improves fraud detection and that adequate employee training on internal control system also has effect on fraud detection. An earlier study conducted by Schneider and Church (2008) examined the effect of internal control reports on lending officers' assessments of a company's creditworthiness in the United States of America.

The researchers gathered data from 111 loan officers and find that their judgments are affected by the auditor's report on the effectiveness of internal controls. The lenders' assessment of the risk of extending a line of credit and the probability of extending the line of credit are negatively affected when the company receives an adverse internal control opinion as compared to an unqualified one. Additional analyses suggest that an adverse internal control opinion weakens the importance assigned to the balance sheet and income statement in lending decisions and reduces lenders' confidence that financial statements are presented fairly in conformance with generally accepted accounting principles (Schneider and Church, 2008). Ali (2013) also discovered that, there is a significant positive relationship between internal controls and organizational financial performance of the People's Bank of Zanzibar. Ali (2013) further discovered that, internal control activities relate positively with responsibility, reliability of financial reporting and performance, effectiveness, productivity and general organizational objectives inward People's Bank of Zanzibar.

Nyakundi, Nyamita, and Tinega, (2014) conducted a study into the effect of internal control systems on financial performance of small and medium scale business enterprises in Kisumu City, Kenya. The study specifically assessed the relationship between internal control systems and return on investment; and establishing the level of business knowledge of an entrepreneur in internal control systems and its effect on financial performance. The sample was selected from the study population through stratified and simple random sampling techniques. The research was conducted using both quantitative and qualitative approaches; adapting cross-sectional survey research design. The study used both primary and secondary data. Primary data was collected using structured questionnaire and interview, while secondary data was obtained from financial statements of the sampled enterprises. Data was analyzed using descriptive statistics as well as inferential statistics. The study specifically revealed that a significant change in financial performance is linked to internal controls systems. Based on the findings of the study, it is concluded that internal control systems as supported by the study findings significantly influence the financial performance of Small and Medium scale Enterprises.

Sabina, and Sankeetha, (2012), examined the extent of internal control systems influence on the performance of the Sri Lankan Telecom limited. Primary data and secondary data were used for this study, but study solely depends on primary data collection technique. The primary data collection techniques were used in this research they were Questionnaire, Interview and Observation. The samples were selected from staff of the Sri Lanka Telecom limited. Thus sixty (60) employees of the company were selected. Percentage, Correlation and SWOT analysis were the main tools used in the analysis. The

findings of the study showed there is a strong relationship between internal control system and organizational performance of the Sri Lanka Tele com limited. And also, internal control of the Sri Lanka Tele com limited will lead to high organizational performance in the future.

Internal Control Systems and Business Performance

Internal control systems and business performance according to Rezaee (2009), multinational corporations have a significant role in the World's economic status. With the increase in the number of the corporations, internal control and governance becomes essential in aligning the interests of the subsidiaries with those of their headquarters. In the absence of such control, the subsidiaries may decide to maximize their interests undermining the long-term performance of a corporation. At the same time, the management of the parent company may also take decisions that reduces the shareholders' value hence the need for monitoring and control at both levels. Both external and internal corporate governance mechanisms have evolved with time to bond, control and monitor the management. These governance mechanisms include managerial labour markets, capital markets, investors, regulation and the board of directors who aligns the interest of management and stockholders. The parent-subsidiary governance structure is governed by factors in the host or home country. The factors include legal, cultural, regulatory and political systems, global capital, historical patterns of the countries, labour, global institutional investors and managerial markets. Other important factors include strategy of the company, the size and the industry in which the subsidiary is operating.

Beeler (1999) asserts that internal control has a broader purpose which includes exploring the control problems that are caused by lower revenues and

explains the interrelationship between fraud and material weakness. Internal control is therefore an independent appraisal of managerial performance. Effective internal control system is unequivocally correlated with an organizations success and it involves reviewing of the authenticity of the operational activities, the controls safeguarding the organization assets, assessment of compliance of employees to the managerial laws and regulations, following operational guides, and an assessment of the efficiency of achieving the team objectives.

Daniela and Attila (2013) classified internal controls into three forms of controls; the preventive, normative and detective controls. Preventive controls give an insight of problems that are likely to occur and institutes adjustments before the problems are experienced. Detective controls detect and reports errors, omissions or malicious acts, while corrective controls ensure the effects of the threats are minimized.

Dineshkumar and Kogulacumar (2011) studied internal control system of the Sri Lanka Telecom Limited the impact of the controls on its performance. The study found that 76% of Sri Lanka Telecom had a high level of internal auditing procedures. There were no rules and regulations to monitor internal control environment properly hence the auditing rules were not adhered to during the exercise. By efficiently applying the internal control resources, the level of efficiency gets moderated subsequently. On profitability, the study found that 27% of the company's strategic level had low profitability, 20% of the company's tactical level had low level of profitability while 53% of the operational level had high profitability. Overall, 62% of the organization had high level of performance hence 62% of the organizational goals were achieved.

Mire (2016) researched on the effects of a control system on the levels organizational performance of remittance corporations in Mogadishu. The findings of the study showed a variation of 99.3% on the performance of the organizations as a result of changes in risk assessment, control activity and control environment at 95% confidence interval. Kinyua (2016) carried out a study on how the financial performance of some companies included in the Nairobi Stock Exchange are affected by the set internal control systems. This study used descriptive research design and employed both qualitative and quantitative approach. It targeted 372 senior managers managing 62 companies that are quoted in the NSE. The researcher tested whether risk management, internal audit function, corporate governance, internal control activity and internal control environment had an impact on the performance of the companies using multiple regression models. Using the Pearson correlation coefficient, the researcher showed that risk management function was the leading variable with the highest influence at 0.55. Corporate governance followed closely at 0.554, control activity and internal control at 0.457 and 0.420 respectively while internal audit function came fifth at 0.341.

Amissah (2017) conducted a study to critically examine the effect of internal control systems (ICS) on performance of companies in the Ghanaian insurance industry. The five variables of ICS developed by the Committee of Sponsoring Organisations (COSO) were used as independent variables whereas the dependent variable relied on performance measures of building block model. The study concludes that control environment, risk assessment, control activities, information and communication and monitoring of controls positively affected the performance of companies in the Ghanaian insurance

industry. This implies that improved control environment, risk assessment, control activities, information and communication and monitoring leads to improved performance.

Amoo and Adeyiga (2013) also conducted a study to examine the effect of internal control on organizational performance using a case study of Ecobank Nigeria Plc. The research design used during the course of this study was the descriptive survey research design in which a population of 50 staff of Ecobank Nigeria Plc was look into. The researcher made use of stratified sampling technique and the research instrument used during the course of this research was questionnaire. Statistical package for social sciences (SPSS) was being employed to analyze data in form of frequency tables in knowing the effect of internal control on organizational performance. Findings reveals that the calculated t-statistics for the parameter estimates was (t = 3.653), P < 0.01 which is greater than tabulated t statistics (1.9960) at 0.01 level of significance. Therefore, the Null hypothesis was rejected and Alternative hypothesis was accepted, that is there is significant relationship between internal control system and organizational performance of Ecobank Nigeria Plc. Furthermore, findings also reveal that the calculated t-statistics for the parameter estimates was (t = 0.439), P < 0.01 is less than tabulated t statistics (1.9960) at 0.01 level of significance. Therefore, the Null hypothesis was accepted and Alternative hypothesis was rejected, that is, weakness in the internal control system in Ecobank Nigerian Plc does not lead to frauds.

Njeri (2017), conducted a study to determine the effects of internal control systems on the performance of multinational financial services companies in Kenya. The findings affirmed a correlation between

organizational performance and the strength of the internal control systems in the companies studied. The researcher concluded that strong internal control systems are necessary for organizations to survive, grow and utilized opportunities that arises in their environments while controlling risks. The study found that feedback to junior officers was given less priority and therefore recommended regular feedback to be given to all officers including the junior ones in order to strengthen the organization performance.

Eke (2018) also a study to determine the effect of internal control on financial performance of hospitality organisations (HOs) in Rivers State. The investigation found that internal controls to a significant extent influence financial performance of HOs and that a positive relationship exist between internal control and financial performance of HOs in Rivers State. The study concluded that the control environment affects total revenue as such influences the financial performance of HOs, its non-existence or inadequacy may spell doom for an organisation.

Conceptual Framework

Independent Variables

Dependent Variable

| Cash control |
| Procurement control |
| Payroll control |
| Assets control |

Institutional Performance
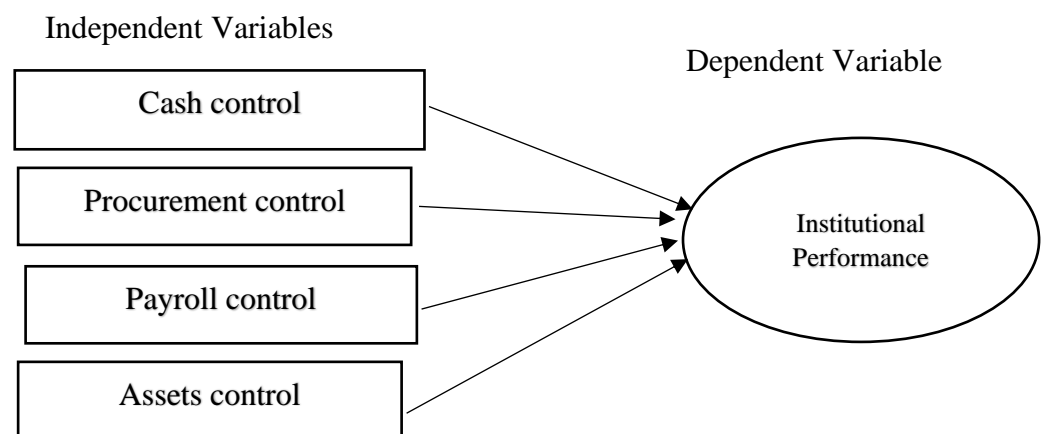
Figure 1: Conceptual model for the study

Source: Author's construct (2020)

The conceptual framework of this study was developed in relation to the research objectives of this study. In assessing the components of the internal control system of Sunyani Technical University - Sunyani, and the independent variables assessed includes; cash control, procurement control, payroll, and assets control. Again, to ascertain the effects of internal control system on the organizational operations and performance of Sunyani Technical University, constructs such as the effect of internal control system on: fraud elimination; accuracy and reliability of records; stakeholders' confidence that organizational financial statements are presented fairly in conformance with generally accepted accounting principles; and organizational overall performance will be tested. The diagrammatic representation of the conceptual framework of this study are presented in Figure 1.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter deals with the methodology of the study. The research methodology process includes a number of activities to be performed. These are arranged in proper sequence of timing for conducting research. One activity after another is performed to complete the research work. Research methodology includes the type of research and the research design adopted, the research population, sample size and sampling technique, data collection, administration procedures for data collection and data analysis techniques.

Research Design

The study adopts quantitative research approach. A quantitative research generates quantifiable data (Gelo et al., 2008). It is primarily concerned with observable and measurable phenomena involving people, events or things, and establishing the strength of the relationship between variables, usually by statistical tests (Suen & Ary, 2014). A quantitative research lends itself to investigating phenomena that require precise measurement and quantification often involving a rigorous and controlled design (Blaikie, 2003).

The study adopted the descriptive design. The term survey can be used to designate any research activity in which the investigator gathers data from a portion of a population for the purpose of examining the characteristics, opinions or intentions of that population (Creswell & Creswell, 2017). A descriptive design was selected because of its high degree of representativeness and the ease in which a researcher could obtain the participants' opinion. In this present study, the researcher obtained and described the views of the

respondents with regard to the nature of their exposure to internal control systems, implications of internal controls on organizational business performance. Descriptive research design enabled the researcher to generalize findings to a larger population (Creswell & Creswell, 2017).

Population

Kalton (2014) defines a population as the entire aggregation of cases that meet a designated set of criteria. The target population for this present study was drawn from staff and management (senior staff and senior members' category) of Sunyani Technical University (STU) excluding auxiliary (junior) staff –janitors, messengers, security, labourers, cleaners and casual workers. These auxiliary staff were excluded from the target population because almost all of them are not literates, hence could not read and understand the research instruments. From the office of the Registrar of STU, the senior staff and senior members totals four and twenty-seven (427) members.

Sampling Procedure

A mathematical formula by Krejcie and Morgan (1970) was adopted for the purpose of determining the sample size selected from the senior staff and senior members of the targeted population category.

$$s = \frac{X^2NP\,(1-P)}{d^2\,(N-1) + X^2P(1-P)}$$

Where:

S   =   *Required Sample size*

X   =   *Z value (e.g. 1.96 for 95% confidence level)*

N   =   *Population Size*

P   =   *Population proportion (expressed as decimal) (assumed to be 0.3 (30%)*

d $\quad$ = $\quad$ *Degree of accuracy (5%), expressed as a proportion (.05); It is margin of error*

Therefore, with a confidence level of 1.96 (95%), population proportion of 0.3 (30%) and a degree of accuracy of 5% (.05), the sample size for the senior staff and senior members of the targeted population of 427 is calculated as

$$s = \frac{1.96^2 * 427 * 0.3\,(1 - 0.3)}{0.05^2\,(427 - 1) + 1.96^2 * 0.3(1 - 0.3)} = \frac{344.476272}{1.871736}$$

$$s = 184.041057072$$

In the selection of respondents (staff and management), simple random sampling techniques employed to select 184 respondents from the organization. The simple random sampling techniques used for the selection of 184 respondents for the study. The researcher employed randomization process for sample selection so that there is no preferential treatment in selection which may introduce selectivity bias.

Data Collection Instrument

Both primary and secondary data used. The primary data were collected from staff and management of the institution through structured data collection instruments. Secondary data were obtained from official documents of the institutions such as the institutional strategic plan policy document on internal control mechanisms of the institution. Secondary data refers to data that is collected by someone other than the user. The primary and secondary data were collected to cover every aspect of the study. The primary data related to opinions and response of employees. Primary data are information collected by a researcher specifically for a research assignment. In other words, primary data are information that a company must gather because no one has compiled and

published the information in a forum accessible to the public. Primary data are original in nature and directly related to the issue or problem and current data.

For collection of data, questionnaire was used. Questionnaire is a set of questions has been prepared to ask a number of questions and collect answers from respondents relating to the research topic. For this study purpose a set of questions prepared to collect information relating to the topic of the study. In this study a structured questionnaire was used with different types of questions such as closed ended and open ended.

Data Collection Method

In collecting primary data from the field, the researcher visited STU. Once the respondents were identified, the researcher administered the questionnaire to them. The researcher assumed the role of a facilitator by explaining the questions so that the respondents could follow through as they answer. Upon completion of the questionnaire, the researcher scanned the questionnaire in order to ascertain which respondents had difficulty writing and answering the questions. In the administration of the research instrument, two undergraduates were selected, trained and engaged as research assistant. The researcher held a day training for the research assistant before the start of work. The researcher with the research assistant administered the research questionnaire to the respondents of the study through hand delivery.

Data Collection Procedure

The data was gathered through administration of questionnaire which took almost three weeks for the exercise. A letter of introduction was taken from the Faculty of Economics and Business Administration (EBA) to the university

to seek permission for the study to be done there. When this was accepted, the department heads were informed appropriately as well as the staff.

Permission was sought, through filling of informed consent, from the selected staff prior to giving them the questionnaires to fill. The researcher went for the filled questionnaire after two weeks. Those who misplaced their questionnaires had them replaced. Those respondents were given a few days to fill.

Method of Data Analysis

Palinkas et al. (2015) refer to data analysis as the systematic organisation and synthesis of research data, and the testing of a research hypothesis using those data. This research study is descriptive in nature and therefore descriptive statistics was calculated. Descriptive statistics enabled the researcher to reduce, summarise and describe quantitative data obtained from empirical evidence(Ott & Longnecker, 2015)(Ott & Longnecker, 2015)(Ott & Longnecker, 2015)(Ott & Longnecker, 2015). To enhance data management, the researcher coded the respondents' responses in preparation for data capturing, using SPSS 25.0 for Windows. With regard to the nominal data, the researcher calculated frequency statistics and the modes. The items, were measured on the ordinal level, and were subjected to calculating the frequencies, standard deviations and means.

Simple tables and figures were used to present findings of respondents. Pearson's linear regression analysis model was used to analyse the relationship between internal control systems and organizational performance.

Data collected was organized into various categories; a relationship was then established from these categories. The results were tested to see the extent of relationship using the following linear regression equation model:

45

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + + \beta_4 X_4 \text{€}$$

Where;

Y = Institutional Performance

X₁ = procurement control mechanisms

X₂ = cash control mechanisms

X₃ = procurement control mechanisms

X₃ = asset control mechanisms

X₄ = payroll control mechanisms

€ = Error term

The **β** coefficient from the equation represented the strength and direction of the relationship between the variables. To apply drawn conclusions to a more general population with the representative sample size as previously indicated, inferential statistical analysis was employed in addition. The quantitative data presentation method was used to measure relationship between the variables to make valid and objective inferences.

Ethical Considerations

In order to ensure that this study falls in line with ethical standards, an introductory letter was sought from the School of Graduate Studies, Catholic University College, Fiapre - Ghana. The letter was used to officially seek permission from the management of the selected institution (Sunyani Technical university).

An informed consent form detailing the researchers' background, contact information, purpose of the study, procedures, confidentiality, voluntary participation, and right to withdraw in the study was given to participants to read. Upon agreement to participate in the study, research participants were

asked to sign the forms. Research participants were informed that they could choose not to answer questions they feel uncomfortable with. Participants were made to understand that participation in the study is voluntary and they can withdraw from the study at any time without attracting any consequence.

Again, regarding the ethics of this research, the researcher strongly observed all the variable ethics of a successful research by not (a) breaking agreements to keep people's identity secret thus fostering confidentiality. (b) Exaggerating or distorting responses of respondents to mean something else. (c) Deceiving participants of the implications of the research. (d) Attacking respondent's views and opinions.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents the analysis and interpretation of the results gathered by the researcher. The chapter is divided into two different sections: Section one presents demographic data (see Table 4.1) of respondents in the survey that were conducted; whilst section two relates to the research questions of the study. Out of the 184 questionnaire that were administered to the respondents of the study, the researcher was able to retrieve 142 of the questionnaires sent out, representing 77.1% response rate.

Section Tne: Demographic Data of the Respondents

Obtaining personal data from the respondents was important because it enabled the researcher to ascertain the characteristics of the respondents to help establish some form of relationship with other variables of the study. This enabled the researcher to make conclusion and possibly make generalizations from the study. The demographic data consists of the gender, age, marital status, educational status of respondents, number of years of working in the institution and rank of respondents. The data is represented in table 4.1 below.

Table 1 shows the distribution of the gender groups that was used for the study. Male recorded the highest with 53.5% while female recorded the least with 46.5%. It shows that male respondents were higher in number than their female counterpart in the study. The gender discrepancy is in line with the Ghana Statistical Service National Analytical report of the 2010 Population and Housing Census which reveals that males forms the greater proportion of the

workforce in the public sector whiles women are predominant in the informal sector (Ghana Statistical Service, 2012).

Table 1: Demographic Data of the Respondents

Variable	Frequency	Percent
Gender		
Male	76	53.5
Female	66	46.5
Total	**142**	**100.0**
Marital Status		
Single	29	20.4
Married	108	76.1
Divorced	5	3.5
Total	**142**	**100.0**
Age		
18 - 30	15	10.6
31 - 40	62	43.7
41 - 50	37	26.1
51 - 60	28	19.7
Total	**142**	**100.0**
Educational		
Diploma/HND	19	13.4
Degree	57	40.1
Post Graduate	66	46.5
Total	**142**	**100.0**
Length of Stay in the Institution (years)		
Less than 3 year	6	4.2
4 - 8 years	67	47.2
9 – 14 years	38	26.8
15 years or more	31	21.8
Total	**142**	**100.0**

Source: Field survey (2020)

In assessing the marital status of respondents in the institution, it was revealed that those who were married recorded the highest with 76.1%; which

was followed by those Single with 20.4%; and respondents who were Single with 3.5%.

In assessing the age distribution of the respondents, it was revealed that respondents between the ages of 18 -30 years recorded the highest with 10.6%, followed by those between the ages of 31 – 40 years recorded 43.7%, 41 – 50 years recorded 26.1%, 51 – 60 years recorded 19.7%. It demonstrates that respondents between the ages of 31 – 40 as well as those with 41 – 50 years constituted the majority in the study. Majority of the respondents were young and energetic; hence the university were at an advantage of benefiting from the youthful exuberance of the workforce when well-motivated.

Again, Table 4.1 presents the educational level of the respondents. It was revealed that respondents with Master's Degree recorded the highest with 46.5%; followed by respondents with Bachelor's Degree with 40.1%; respondents with Diploma recorded 13.4%. The educational background of the respondents enabled them to better appreciate research questionnaire administered. Thus, the responses from the respondents were not influenced by the researcher in any way. Furthermore, objectivity was served by minimizing interaction with respondents; thus, the interpretation of the research instrument (questionnaire) was not affected by the researchers' personal biases.

From the field survey, 4.2% of the respondents had worked in the university for less than 4 years. Again, 47.2% of the respondents had worked in the university for 4 to 8 years, 26.8% of the respondents had worked in the university for 9 – 14 years whiles 21.8&. The researcher believed their rich experience and long stay in the institution would provide informed answers to questions, hence any information obtained from them could be deemed accurate

and reliable. Nonetheless, the demographic characteristics of the respondents in no way affected this study since the major focus was not to observe the gender, age, educational attainment and number of years of service of respondents and its correlation on the subject matter. Besides, factors of internal controls in the university is a matter of concern to all the stakeholders of the university irrespective of their gender, age or educational qualification.

Section Two: Objectives of the Study

Cash controls at the University

This section sought to ascertain the cash controls practices as part of the university's internal control mechanisms. The statistical representation is illustrated in Table 2.

Table 2: Descriptive Statistics on Cash Controls at the University

Statements	N	SA %	A %	N %	D %	SD %	Mean	Std. Deviation
The organization carries out proper recording of transactions	142	59 41.5%	42 29.6%	9 6.3%	21 14.8%	11 7.7%	2.1761	1.32247
The organization carries out proper authorization and approval of transactions	142	58 40.8%	43 30.3%	10 7.0%	23 16.2%	8 5.6%	2.1549	1.27327
Bank reconciliations are prepared by someone different from the one receiving, processing and recording activities	142	45 31.7%	68 47.9%	-	14 9.9%	6 4.2%	2.0352	1.02737
Management investigate all substantial variations from norms such as cash register voids, refunds, errors, revenue levels, etc.	142	29 20.4%	63 44.4%	17 12.0%	21 14.8%	12 8.5%	2.4648	1.21259
The organization carries out regular (periodic) bank reconciliation	142	46 32.4%	63 44.4%	9 6.3%	14 9.9%	10 7.0%	2.1479	1.18470
STU prepares its trial balances periodically	142	51 35.9%	45 31.7%	13 9.2%	22 15.5%	11 7.7%	2.2746	1.30544
STU regularly carries out internal audit	142	48 33.8%	36 25.4%	3 2.1%	30 21.1%	25 17.6%	2.6338	1.55047

Source: Field survey (2020)

By use of rule of thumb, where the mean is below 3 the researcher conclude that the respondents strongly agree or agree to the statement and where the mean is higher than 3 the researcher conclude that the respondents strongly disagree or disagree to the statement. From Table 4.2, it can be seen that generally the mean for all responses ranged between 2.0352 and 2.6338.

From Table 4.2, it was observed that 71.1% of the respondents were of the view that the university carries out proper recording of transactions and this statement had a mean value of 2.18. Similarly, 71.1% of the respondents were of the opinion that the university carries out proper authorization and approval of transactions and this statement also had a mean value of 2.1549. Again, 79.6% of the respondents agree to the statement that Bank reconciliations are prepared by someone different from the one receiving, processing and recording activities. This statement had a mean value of 2.0352. In addition, 64.8% of the respondents were of the opinion that Management investigate all substantial variations from norms such as cash register voids, refunds, errors, revenue levels, etc. and this statement had a mean value of 2.4648. Moreover, 76.8% of the respondents agree or strongly agree to the statement that the university carries out regular (periodic) bank reconciliation and this statement also had a mean value of 2.1479. Again, 67.6% of the respondents were of the view that STU prepares its trial balances periodically and this statement had a mean value of 2.2746. Moreover, 59.2% of the respondents were of the view that STU regularly carries out internal audit. This statement had a mean value of 2.6338.

From the field survey, as part of the cash controls mechanisms of the university, it was revealed that the university carries out proper recording of transactions and as well carries out proper authorization and approval of

transactions. Again it was noted that Bank reconciliations are prepared by someone different from the one receiving, processing and recording activities, Management investigate all substantial variations from norms such as cash register voids, refunds, errors, revenue levels, etc. the university carries out regular (periodic) bank reconciliation, STU prepares its trial balances periodically and that STU regularly carries out internal audit. The cash control mechanisms practiced by the Sunyani Technical University are consistent with Ross, et al, (2008) definition of cash controls. They speculates that Cash Control means managing and monitoring credit and collection policies, cash allocation, and disbursement policies, accounts payable policies and the invoicing cycle Ross, et al, (2008) contends that Cash Control is an important part of business as it is required for proper cash management, monitoring and recording of cash flow and analysing cash balance and as well an important liquid asset of the business. They further posit that a business concern cannot prosper and survive without proper control over cash.

Similarly, the findings of the study on the cash control practices of the university are consistent with Gitman, et al. 2015; and Scitovsky, (2016) who contends that steps of Cash Control in an organization includes: Cash transactions of a business are to be accounted properly to know cash flow and cash balance; Cash sufficiency is to be ensured on due dates of notes payable; Idle cash should be minimal because additional cash investment earns more revenue; and Loss caused due to misappropriation and forgery is to be controlled and stopped.

Table 3: Descriptive Statistics on Procurement Controls at the University

Statements	N	SD %	D %	N %	A %	SA %	Mean	Std. Deviation
All tenders are advertised openly	142	42	63	16	14	7	2.1620	1.10856
		29.6%	44.4%	11.3%	9.9%	4.9%		
Bids are assessed objectively	142	35	57	5	25	20	2.5634	1.39637
		24.6%	40.1%	3.5%	17.6%	14.1%		
The winning bidder is the one who is awarded the tender	142	37	63	9	19	14	2.3662	1.27429
		26.1%	44.4%	6.3%	13.4%	9.9%		
The tendering process is free of manipulations	142	31	73	14	12	12	2.3028	1.15464
		21.8%	51.4%	9.9%	8.5%	8.5%		
Tender payments are authorized by authorized persons	142	42	54	7	20	19	2.4366	1.39128
		29.6%	38.0%	4.9%	14.1%	13.4%		

Source: Field Survey (2020)

By use of rule of thumb, where the mean is below 3 the researcher conclude that the respondents strongly agree or agree to the statement and where the mean is higher than 3 the researcher conclude that the respondents strongly disagree or disagree to the statement. From Table 4.3, it can be seen that generally the mean for all responses ranged between 2.1620 and 2.5634.

From Table 4.3, it was observed that 73.9% of the respondents agree that all tenders are advertised openly and this statement had a mean value of 2.1620. Again, 64.8% of the respondents were of the view that bids are assessed objectively and this statement had a mean value of 2.5634. Also, 70.4% of the respondents were of the view that the winning bidder is the one who is awarded the tender. This statement also had a mean value of 2.3662. Moreover, 73.2% of the respondents were of the view that the tendering process is free of manipulations and this statement had a mean value of 2.3028. In addition, 67.6% of the respondents were of the view that tender payments are authorized by authorized persons. This statement had a mean value of 2.4366.

From the field survey, as part of the procurement controls mechanisms of the university, it was noted that all tenders are advertised openly, bids are assessed objectively, the winning bidder is the one who is awarded the tender, the tendering process is free of manipulations and that tender payments are authorized by authorized persons. The findings of the study are consistent with Edquist, et al. (2015) who stipulates that the procurement methods to be applied in an institution as part of its internal controls includes; advertising rules and time frames of public procurement, the content of tender documents and technical specifications, tender evaluation and award criteria, procedures for submission, receipt and opening of tenders, and the complaints system structure

and sequence. The findings of Gatumo and Achuora, (2011) concurred with the findings of the study that public procurement regulation is one of the most important factors in carrying out effective public procurement audit.

Table 4: Descriptive Statistics on Payroll Controls at the University

Statements	N	SD %	D %	N %	A %	SA %	Mean	Std. Deviation
Current job descriptions are on file for each employee in the organization	142	51 35.9%	67 47.2%	13 9.2%	6 4.2%	5 3.5%	1.9225	.96810
Personal policies are maintained and distributed to all staff	142	24 16.9%	36 25.4%	3 2.1%	48 33.8%	31 21.8%	3.1831	1.45680
Salary review systems are working	142	41 28.9%	61 43.0%	12 8.5%	13 9.2%	15 10.6%	2.2958	1.27044
There is a separate personnel department which maintains complete personnel records including job description, wage and salary data	142	44 31.0%	49 34.5%	6 4.2%	31 21.8%	12 8.5%	2.1775	1.34915
The departmental management review, sign, and date the payroll recap sheets to document that staff are paid according to wage contracts and terminated employees are not being paid?	142	38 26.8%	58 40.8%	20 14.1%	14 9.9%	12 8.5%	2.3239	1.21193
The HR/payroll department is immediately notified of employee terminations –including National Service Personnel terminations	142	36 25.4%	44 31.0%	7 4.9%	28 19.7%	27 19.0%	2.7606	1.49671
Departmental payroll expenditures are reviewed by management for accuracy and compared to budgeted amounts	142	19 13.4%	70 49.3%	11 7.7%	21 14.8%	21 14.8%	2.6831	1.29576
Departmental procedures are in place to ensure that overtime hours are planned or controlled so as not to become excessive	142	46 32.4%	60 42.3%	5 3.5%	18 12.7%	13 9.2%	2.2394	1.28234

Source: Field Survey (2020)

From Table 4, it was observed that 83.1% of the respondents agree that current job descriptions are on file for each employee in the institution. The statement had a mean value of 1.9225. Again, 55.6% of the respondents disagree to the statement that personal policies are maintained and distributed to all staff and this statement had a mean value of 3.1831. Also, 71.8% of the respondents were of the view that salary review systems are working. This statement also had a mean value of 2.2958. Moreover, 65.5% of the respondents were of the view that there is a separate personnel department which maintains complete personnel records including job description, wage and salary data and this statement had a mean value of 2.1775. In addition, 67.6% of the respondents were of the view that the departmental management review, sign, and date the payroll recap sheets to document that staff are paid according to wage contracts and terminated employees are not being paid. This statement had a mean value of 2.3239. Again, 56.3% of the respondents were of the opinion that the HR/payroll department is immediately notified of employee terminations – including National Service Personnel terminations. This statement had a mean value of 2.7606. Furthermore, 62.7% of the respondents were of the view that departmental payroll expenditures are reviewed by management for accuracy and compared to budgeted amounts. These statements had mean values of 2.6831. Finally, 74.6% of the respondents were of the view that departmental procedures are in place to ensure that overtime hours are planned or controlled so as not to become excessive. This statement had mean values of 2.2394.

From the field survey, as part of the university payroll controls system, it was revealed that current job descriptions are on file for each employee in the institution, personal policies are maintained and distributed to all staff, salary

review systems are working, there is a separate personnel department which maintains complete personnel records including job description, wage and salary data, departmental management review, sign, and date the payroll recap sheets to document that staff are paid according to wage contracts and terminated employees are not being paid, and that the HR/payroll department is immediately notified of employee terminations –including National Service Personnel terminations. Also, it was noted that departmental payroll expenditures are reviewed by management for accuracy and compared to budgeted amounts and that departmental procedures are in place to ensure that overtime hours are planned or controlled so as not to become excessive. The findings of the study are consistent with COSO (2019) report that the process of internal controls includes deducting or withholding authorized amounts from employees' pay and remitting to the appropriate vendor or governmental entity. The report further contends that an effective internal control structure has five interrelated components: Control environment; Risk assessment; Control activities; Information and communication and Monitoring. Each of these components is important in establishing and maintaining an effective control system for payroll.

Table 5*: Descriptive Statistics on Asset Controls at the University*

Statements	N	SD %	D %	N %	A %	SA %	Mean	Std. Deviation
The organization have a policy on asset purchase	142	54	44	15	18	11	2.2113	1.28731
		38.0%	31.0%	10.6%	12.7%	7.7%		
The organization have a policy on asset use	142	59	75	5	1	2	1.6525	.65450
		41.5%	52.8%	3.5%	0.7%	1.4%		
The organization have a policy on asset Disposal	142	30	31	42	31	8	2.8915	1.49659
		21.1%	21.8%	29.6%	21.8%	5.6%		
All assets in the organization tagged	142	28	64	13	24	13	2.5070	1.24198
		19.7%	45.1%	9.2%	16.9%	9.2%		
All assets in the organization well serviced	142	44	55	2	24	1	2.6549	3.51904
		31.0%	38.7%	1.4%	16.9%	0.7%		
The organization have an asset movement register	142	49	55	8	14	16	2.2465	1.32722
		34.5%	38.7%	5.6%	9.9%	11.3%		
The organization puts restriction on assets to authorized personnel only	142	40	86	13	2	1	1.8592	.69027
		28.2%	60.6%	9.2%	1.4%	0.7%		

Source: Field survey (2020)

From Table 5, it was observed that 69.0% of the respondents agree that the organization have a policy on asset purchase. The statement had a mean value of 2.2113. Again, 95.0% of the respondents were of the view that the organization have a policy on asset use and this statement had a mean value of 1.6525. Also, 43.0% of the respondents were of the view that the organization have a policy on asset disposal. This statement also had a mean value of 2.8915. Moreover, 64.8% of the respondents were of the view that all assets in the organization are tagged and this statement had a mean value of 2.5070. In addition, 69.7% of the respondents were of the view that all assets in the organization well serviced. This statement had a mean value of 2.6549. Again, 73.2% of the respondents were of the opinion that the organization have an asset movement register. This statement had a mean value of 2.2465. Furthermore, 88.7% of the respondents were of the view that the institution puts restriction on assets to authorized personnel only. This statement had mean values of 1.8592.

From the field survey, as part of the university assets controls mechanisms it was noted that the organization have a policy on asset purchase, the organization have a policy on asset use, the organization have a policy on asset disposal, all assets in the organization are tagged, all assets in the organization well serviced, the organization have an asset movement register and the institution puts restriction on assets to authorized personnel only. the findings are in line with Rae et al., 2017; Vijayakumar & Nagaraja, (2012) who contends that good asset control is critical in any business environment and more so in the public sector, particularly as some of the significant assets are

infrastructure assets with long life spans and enormous capital outlay that are vital to providing a foundation for economic activity.

Table 6: Descriptive Statistics on Relationship between Internal Controls and Institutional Performance

Statements	N	SD %	D %	N %	A %	SA %	Mean	Std. Deviation
Full capacity utilization of resources due to proper maintenance of equipment	142	38 26.8%	48 33.8%	8 5.6%	25 17.6%	23 16.2%	2.6268	1.45187
customer (students) satisfaction – STU meets students demands and needs	142	54 38.0%	59 41.5%	7 4.9%	15 10.6%	7 4.9%	2.0282	1.14200
Employment stability – low employee turnover (exiting) rate	142	67 47.2%	60 42.3%	3 2.1%	9 6.3%	3 2.1%	1.9859	.69431
Enhanced employee training and development – improvement in staff capacity	142	29 20.4%	91 64.1%	18 12.7%	3 2.1%	1 0.7%	1.7394	.93535
Productivity and business efficiency and improvement in asset holdings of the institution	142	32 22.5%	97 68.3%	13 9.2%	-	-	1.8662	.54874

Source: Field survey (2020)

From Table 6, it was observed that 60.6% of the respondents agree that full capacity utilization of resources due to proper maintenance of equipment. The statement had a mean value of 2.6268. Again, 79.6% of the respondents were of the view that customer (students) satisfaction – STU meets students demands and needs and this statement had a mean value of 2.0282. Also, 89.4% of the respondents were of the view that employment stability – low employee turnover (exiting) rate. This statement also had a mean value of 1.9859. Moreover, 84.5% of the respondents were of the view that enhanced employee

training and development – improvement in staff capacity and this statement had a mean value of 1.7394. In addition, 90.8% of the respondents were of the view productivity and business efficiency and improvement in asset holdings of the institution. This statement had a mean value of 1.8662.

From the filed survey it was revealed that internal control mechanisms at the university has resulted in full capacity utilization of resources due to proper maintenance of equipment, customer (students) satisfaction – STU meets students demands and needs, employment stability – low employee turnover (exiting) rate, enhanced employee training and development – improvement in staff capacity and productivity and institution efficiency and improvement in asset holdings of the institution.

From the field survey, it was revealed that internal controls of Sunyani Technical university were noted to impact positively on the performance of the institution. The finding of the study is consistent with Amissah (2017) who contends that control environment, risk assessment, control activities, information and communication and monitoring of controls positively affected the performance of companies in the Ghanaian insurance industry. This implies that improved control environment, risk assessment, control activities, information and communication and monitoring leads to improved performance. Similarly, the results of the study are in line with Amoo and Adeyiga (2013) who in a similar study found out that the calculated t-statistics for the parameter estimates was (t = 3.653), P < 0.01 which is greater than tabulated t statistics (1.9960) at 0.01 level of significance. Therefore, the Null hypothesis was rejected and Alternative hypothesis was accepted, that is there

is significant relationship between internal control system and organizational performance of Ecobank Nigeria Plc.

Again, the findings are in line with Njeri (2017), who also in a similar study noted that there is a correlation between organizational performance and the strength of the internal control systems in the companies studied. The researcher concluded that strong internal control systems are necessary for organizations to survive, grow and utilized opportunities that arises in their environments while controlling risks.

Table 7: Model Summary of the Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856[a]	.733	.722	.44091

a. Predictors: (Constant), ACT, PCT, PACT, CCT

b. Dependent Variable: IPT

Source: Field survey (2020)

From table 7, it is clear that, the R Square explained 73.3 % of the variance which shows that other factors also contributed to the internal control factors on the performance of the university.

Table 8: ANOVA Table of the Regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.241	4	12.810	65.895	.000[a]
	Residual	18.663	96	.194		
	Total	69.904	100			

a. Predictors: (Constant), ACT, PCT, PACT, CCT

b. Dependent Variable: IPT

Source: Field survey (2020)

Table 8 shows a statistical significance result of the model where, sig = .000 which is less than p < .005. It therefore demonstrated that was a relationship between internal control mechanism on institutional performance.

Table 9: Coefficients of the Regression Summary

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.632	.123		5.143	.000
CCT	.071	.114	.307	3.618	.000
PCT	.281	.075	.485	3.733	.000
PACT	.060	.118	.373	3.504	.000
ACT	.350	.096	.550	3.636	.000

a. Dependent Variable: IPT

Source: Field survey (2020)

Table 9 evaluates each of the independent variables that were included in the model after the extraction from the factor analysis. In comparing the contribution of each variable, the beta values under the Standardized coefficients were used. A value with a greater number was considered first and all the negative signs out front of the values were ignored. In that case the largest beta coefficient was 0.550 which was a factor for "Asset Controls", which means that variable makes the strongest unique contribution to explaining the dependent variable. Followed by "Procurement" with .485; "Payroll" with 373 which was also significant; while "Cash Controls" recorded with .307 and also significant which indicated that it made a unique contribution.

Table 10*: Analysis of the Study's Hypothesis Based on Objectives*

Study's hypothesis		Hypothesis	Standardised Beta values	P - Values	Supported / Rejected
Cash Controls ⟶ institutional Performance		H1	0.307	0.000 ***	**Supported**
Procurement ⟶ institutional Performance		H2	0.373	0.000 ***	**Supported**
Payroll Controls ⟶ institutional Performance		H3	0.085	0.000 ***	**Supported**
Assets Controls ⟶ institutional Performance		H4	0.550	0.000 ***	**Supported**

Source: Author's own compilation (2020)

Summary of the hypothesized relationships or the main objectives of the study

The summary of the hypothesized relationships was done according to the conceptual model presented in the path diagram analysis in Fig 1. as well as outcome from Table 10.

The relationship between cash controls and institutional performance

The relationship between the cash controls and institutional performance at STU revealed that there was a positive relationship between them and it was significant and therefore supported the stated hypothesis. It means that the cash control activities within the organisation as part of its internal control mechanism does have an influence on the institutional performance and it was significant. The results suggest a significant relationship (0.000, p > 0.05). This then rejects the null hypothesis. It simply explains that cash control activities in the organisation tend to positively and significantly influence the performance of the institution.

The relationship between procurement and institutional performance

The relationship between the procurement and institutional performance at STU revealed that there was a positive relationship between them and it was significant and therefore the stated hypothesis is true. It means that the procurement activities within the organisation as part of its internal control mechanism does have an influence on the institution performance and very significant too. The results suggest a significant relationship $(0.000, p < 0.05)$. This then holds true for the stated alternative hypothesis. It simply explains that procurement activities in the organisation tend to positively and significantly influence the performance of the institution.

The relationship between payroll controls and institutional performance

The relationship between the payroll controls and institutional performance at STU revealed that there was a positive relationship between them but it was significant and therefore supported the stated hypothesis. It means that the payroll control activities within the organisation as part of its internal control mechanism does have an influence on the institution performance and was significant. The results suggest a significant relationship $(0.000, p > 0.05)$. This then supported the stated alternative hypothesis. It simply explains that payroll control activities in the organisation tend to positively and significantly influence the performance of the institution.

The relationship between assets controls and institutional performance

The relationship between the asset controls and institutional performance at STU revealed that there was a positive relationship between them and it was significant and therefore the stated hypothesis is true. It means that the asset control activities within the organisation as part of its internal

control mechanism does have an influence on the institution performance and significant as well. The results suggest a significant relationship (0.000, p < 0.05). This then holds true for the stated alternative hypothesis. It simply explains that asset control activities in the organisation tend to positively and significantly influence the performance of the institution.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents summary of findings which emerged from the interpretation and discussion of the results. The also presents conclusions and recommendations based on the findings as well as suggestion for further study.

Summary of the Study

From the field survey, as part of the cash controls mechanisms of the university, it was revealed that the university carries out proper recording of transactions and as well carries out proper authorization and approval of transactions. Again it was noted that Bank reconciliations are prepared by someone different from the one receiving, processing and recording activities, Management investigate all substantial variations from norms such as cash register voids, refunds, errors, revenue levels, etc. the university carries out regular (periodic) bank reconciliation, STU prepares its trial balances periodically and that STU regularly carries out internal audit.

From the field survey, as part of the procurement controls mechanisms of the university, it was noted that all tenders are advertised openly, bids are assessed objectively, the winning bidder is the one who is awarded the tender, the tendering process is free of manipulations and that tender payments are authorized by authorized persons.

From the field survey, as part of the university payroll controls system, it was revealed that current job descriptions are on file for each employee in the institution, personal policies are maintained and distributed to all staff, salary review systems are working, there is a separate personnel department which

maintains complete personnel records including job description, wage and salary data, departmental management review, sign, and date the payroll recap sheets to document that staff are paid according to wage contracts and terminated employees are not being paid, and that the HR/payroll department is immediately notified of employee terminations –including National Service Personnel terminations. Also, it was noted that departmental payroll expenditures are reviewed by management for accuracy and compared to budgeted amounts and that departmental procedures are in place to ensure that overtime hours are planned or controlled so as not to become excessive.

From the field survey, as part of the university assets controls mechanisms it was noted that the organization have a policy on asset purchase, the organization have a policy on asset use, the organization have a policy on asset disposal, all assets in the organization are tagged, all assets in the organization well serviced, the organization have an asset movement register and the institution puts restriction on assets to authorized personnel only.

From the field survey, the relationship between the cash controls and institutional performance at STU revealed that there was a positive relationship between them and was significant and therefore supported the stated hypothesis. It simply explains that cash control activities in the organisation tend to positively and significantly influence the performance of the business. Also, the relationship between the procurement and institutional performance at STU revealed that there was a positive relationship between them and it was significant and therefore the stated hypothesis is true. It means that the procurement activities within the organisation as part of its internal control mechanism does have an influence on the institutional performance and very

significant too. Again, the relationship between the payroll controls and institutional performance at STU revealed that there was a positive relationship between them and it was significant and therefore supported the stated hypothesis. It simply explains that payroll control activities in the organisation tend to positively and significantly influence the performance of the institution. Finally, the relationship between the asset controls and institutional performance at STU revealed that there was a positive relationship between them and it was significant and therefore the stated hypothesis is true. It simply explains that asset control activities in the organisation tend to positively and significantly influence the performance of the institution.

Conclusions

Internal controls help put structures in place that help in evaluating the processes and procedures. Policies and procedures are periodically reviewed by the STU management to ensure that appropriate internal controls have been established. At the same time, the STU external auditors periodically assess the adequacy of the STU internal control systems. Internal controls affect institutional performance.

The study therefore based on the findings concluded that cash controls within STU is positively and significantly related to the institutional performance of the organization. The ability of STU to maintain a conducive cash control system determines the ability of the organization to meet the organizational goals, objectives, needs and execute duties efficiently thus leading to improved performance of the organization.

Procurement strategies adopted also affect the level of the organization's performance. From the study, it can be concluded that organizations with

effective procurement controls in their operations are in better performance chances as these are able to obtain value for money in their operations that might contribute to improved institutional performance. With minimal procurement risks in operation, an organization is guaranteed with increased financial performance. Again, there is a positive and significant relationship between payroll controls and the institutional performance. The level of payroll control at an organization contributes significantly to the ability of the organization to grow financially. Similarly, asset controls were noted to have a positive and significant relationship with institutional performance. From the findings of the study, the study concludes that Management of organizations has the central responsibility for designing, implementing, and monitoring their internal control system. With appropriate internal control systems against frauds and other threats to the organizations operations, organizations are in a healthier performance position. Internal control provides complete and accurate records are kept of business operations of the organization securely.

Nonetheless, the presence of an effective monitoring system for the internal control systems of an organization is critical for the organization's success in their operations. Internal controls need to be adequately monitored in order to assess the quality and effectiveness of the system's performance over time.

Recommendations

From the findings and conclusions of the study, the following recommendations are given;

1. Internal control system has been found to have a statistically positive effect on performance, hence there is the need for STU to improve on their internal control system.

2. Management is responsible for establishing and maintaining internal control to achieve the objectives of effective and efficient operations, reliable financial reporting, and compliance with applicable regulations. Management should consistently apply the internal control standards to meet each of the internal control objectives and to assess internal control system effectiveness.

3. Policies and procedures should be periodically be reviewed by management of the institution to ensure that appropriate internal controls have been established. The external auditors should periodically assess the adequacy of the organization's internal control systems.

4. Processes should exist to ensure that there is continuing and independent reconciliation of all balances, both asset and liabilities and balance sheet items. Management should also ensure existence of policies and procedures that ensures decisions are made with proper approvals.

Suggestions for Further Study

The study suggests that further studies should be conducted to comparatively assess the relationship between internal control systems between private and public firms in Ghana.

Similarly, the study could be replicated in other educational institutions in the country since this study was limited to only one institution.

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APPENDICES

APPENDIX A

ANALYSIS OF INTERNAL CONTROL PRACTICES ON

ORGANISATIONAL PERFORMANCE: A CASE OF SUNYANI

TECHNICAL UNIVERSITY, SUNYANI

Please answer the following questions by marking the appropriate answer(s)

with an **X.** This questionnaire is strictly for research purpose only.

SECTION A: GENERAL INFORMATION

The section is asking for your background information. Please indicate your

answer by ticking

(X) Or **(√)** on the appropriate box.

A1   Please indicate your gender

Male		Female	

A2   Please indicate your marital status

Single	
Married	
Divorced	

A3   Please indicate your age category

18 - 30	
31 - 40	
41 - 50	
Above 50	

A4   Please indicate your highest educational level

MSLC/JHS	
SSSCE	
Diploma	
Degree	
Post Graduate	
Other (Specify)	

A5   Please indicate your department

………………………………………………………………………..

A7   Please indicate your rank

Senior Member	
Senior Staff	
Management (HODs)	

Please tick only one option for each type by using a rating from 1 to 5 where **5**

= *[(1) = Strongly Agree, (2) = Agree, (3) = Neutral, (4) = Disagree, (5) =*

Strongly Disagree.

SECTION B: Internal Control Mechanisms

OBJECTIVE 1: CASH CONTROLS

No.	Questions	1	2	3	4	5
1.	The organization carries out proper recording of transactions					

No.		1	2	3	4	5
2.	The organization carries out proper authorization and approval of transactions					
3.	Bank reconciliations are prepared by someone different from the one receiving, processing and recording activities					
4.	Management investigate all substantial variations from norms such as cash register voids, refunds, errors, revenue levels, etc.					
5.	The organization carries out regular (periodic) bank reconciliation					
6.	STU prepares its trial balances periodically					
7.	STU regularly carries out internal audit					

OBJECTIVE 2: PROCUREMENT CONTROLS

No.	Questions	1	2	3	4	5
1.	All tenders are advertised openly					
2.	Bids are assessed objectively					
3.	The winning bidder is the one who is awarded the tender					
4.	The tendering process is free of manipulations					
5.	Tender payments are authorized by authorized persons					

OBJECTIVE 3: PAYROLL CONTROLS

No.	Questions	1	2	3	4	5
1.	Current job descriptions are on file for each employee in the organization					
2.	Personal policies are maintained and distributed to all staff					
3.	Salary review systems are working					
4.	There is a separate personnel department which maintains complete personnel records including job description, wage and salary data?					
5.	The departmental management review, sign, and date the payroll recap sheets to document that staff are paid according to wage contracts and terminated employees are not being paid?					
6.	The HR/payroll department is immediately notified of employee terminations –including National Service Personnel terminations					
7.	Departmental payroll expenditures are reviewed by management for accuracy and compared to budgeted amounts					
8.	Departmental procedures are in place to ensure that overtime hours are planned or controlled so as not to become excessive					

OBJECTIVE 4: ASSET CONTROLS

No.	Questions	1	2	3	4	5
1.	The organization have a policy on asset purchase					
2.	The organization have a policy on asset use					
3.	The organization have a policy on asset Disposal					
4.	All assets in the organization tagged					
5.	All assets in the organization well serviced					
6.	The organization have an asset movement register					
7.	The organization puts restriction on assets to authorized personnel only					

Please indicate the effectiveness of STU performance in the following areas using a rating from 1 to 4 where *[(1) = Very effective, (2) = Effective, (3) = Not effective, (4) = Very poor*

SECTION C: INSTITUTIONAL PERFORMANCE

No.	Variable	1	2	3	4
1.	Full capacity utilization of resources due to proper maintenance of equipment				
2.	customer (students) satisfaction – STU meets students demands and needs				
3.	Business process improvements				
4.	Employment stability – low employee turnover (exiting) rate				
5.	Enhanced employee training and development – improvement in staff capacity				

6.	Productivity and business efficiency and improvement in asset holdings of the organization				

Please, provide any comment on the above subject under review

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