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FINANCIAL CONTROL PRACTICES AND FINANCIAL IRREGULARITIES IN SENIOR HIGH SCHOOLS: A CASE STUDY OF SELECTED SECOND CYCLE INSTITUTIONS IN THE CENTRAL REGION OF GHANA

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BY

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DECLARATION

Candidate's Declaration

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

Candidate's Signature .... Date: ....

Name: Stella Amaoh

Supervisor's Declaration

I hereby declare that preparation and presentation of the dissertation was supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast

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

Name: Mr. Seyram Kawor

ABSTRACT

The study assessed the nexus between financial control practices and financial irregularities among second-cycle institutions in the Central Region. Primary data were collected through a questionnaire distributed to 133 Head of Schools, Accountants, Matrons, Bursars and Administrators. The primary data was analyzed using both SPSS and the Partial Least Squares (PLS) estimation technique. The research design employed was explanatory. The findings of the study revealed that misappropriation of funds, embezzlement, fraudulent activities related to financial transactions, challenges in maintaining accurate financial records and procurement processes in school vulnerable to financial irregularities are the common form of financial irregularities in second-cycle institutions. Again, the study revealed that budgeting as a financial control mechanism help detect and control financial irregularities. Moreover, the study discovered that auditing is an important conduit in identifying and preventing financial irregularities. Furthermore, the study found that an increased account management procedure is linked to detection and control of financial irregularities. Therefore, the study recommended that the government should develop and implement robust internal controls and oversight mechanisms to address vulnerabilities identified in the study, particularly in areas prone to misappropriation of funds, embezzlement, fraudulent activities and challenges in financial records and procurement processes. Also, the head of schools should strengthen budgeting processes by ensuring they are comprehensive, transparent and aligned with the institution's goals and priorities. Besides, the authorities of second-cycle institutions and government should always conduct a thorough review of auditing protocols and procedures to ensure they are effective in identifying and preventing financial irregularities. Finally, the authorities of second-cycle institutions and government should invest in technology and systems that facilitate efficient account management procedures including robust financial software, automation and data analytics tools. They are also entreated to conduct regular training for staff involved in account management to ensure they are well-equipped to detect and respond to financial irregularities.

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DEDICATION

To my Parents

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COSO	Committee of Sponsoring Organisation
GES	Ghana Education Service

CHAPTER ONE

INTRODUCTION

Secondary schools are particularly affected by financial irregularities, which have negative repercussions for educational institutions, students, and stakeholders (Dahliana & Khaddafi, 2021). Financial misconduct persists even after financial control procedures are put in place, which intend to impact finances, reputation, and educational outcomes negatively. The inability of senior high schools to identify and stop such irregularities creates ongoing problems because of a lack of complete knowledge of the underlying causes of financial irregularities and the efficacy of the present financial control practices. The issue of financial irregularities in senior high schools must thus be examined to establish effective financial control procedures and reduce the risk.

Background to the Study

Any governance system's performance can be judged by the degree of financial irregularities (and, to a certain extent, corruption) that exist (Agezo, 2010). The reason for this is that those in charge of an institution are the ones who set the control procedures intended to prevent financial irregularities. As a result, good financial controls, which are demonstrated by a decline in financial irregularities, will be reflected in an effective governance system. As a result, a high level of financial irregularities in a given institution is a sign that its financial controls are ineffectual or nonexistent.

Secondary school financial irregularities can take a variety of forms. Theft of school funds, the misuse of resources, false expense reports, falsification of financial records, and the misuse of funds assigned for specific objectives, like student activities or infrastructure, are common situations. These anomalies may lead to monetary losses, have a negative effect on educational initiatives, and reduce public confidence in the administration of the school. Financial irregularities can be a result of a variety of issues in secondary schools. Lack of segregation of roles, inefficient accounting and financing systems, insufficient internal controls, little oversight, and undereducated staff employees all contribute to the possibility of fraud and misbehaviour. The danger of financial irregularities may also be increased by high administrative personnel turnover rates and a lack of whistleblower protection methods.

It assumes that the current governance arrangement could not be efficient. According to DiNapoli (2010), the three subjects (governance, financial controls, and accountability) are connected given that effective governance minimizes financial irregularities and successful governance develops an effective financial control system. In other words, effective financial controls result from excellent governance, which in turn reduces financial anomalies (Acquah, 2017).

In almost every organisation, including secondary education, financial control procedures and the prevention of financial irregularities are crucial problems. Secondary schools are one example of an educational institution that manages considerable financial resources and is in charge of budgeting, tuition costs, grants, and other expenses. For these institutions to preserve transparency, accountability, and the efficient use of resources, it is crucial to implement strong financial control practices. Similar circumstances exist in public secondary schools. The multiple cases of financial mismanagement that the Auditor-General has recently revealed make this clear. The prevalence of financial misconduct may be a sign of weak financial controls, which therefore suggests bad management of secondary schools. All institutions require reliable and efficient financial control systems to operate successfully and efficiently (Jones & Jones, 2008).

Any organization requires certain controls to lessen the consequences of these prevalent human flaws if it wants to conduct operations in an orderly and efficient manner and create reliable financial accounting information, both for its use and for the use of others. Therefore, the goal of financial controls is to guarantee that stakeholders and those involved in decision-making at the school can use the data collected from the accounting system with trust. Management has low confidence that its aims and objectives will be met in the absence of proper financial controls (DiNapoli, 2010). Financial controls that are effectively developed and enforced lessen the possibility of serious mistakes or fraud occurring and going unnoticed (DiNapoli, 2010). Other than the main finance office, financial controls also assist in ensuring that other departments are operating as anticipated (Acquah, 2017).

For secondary schools to avoid and identify financial irregularities, financial management procedures are crucial. These procedures entail establishing strong internal controls, putting in place good financial management systems, enforcing the segregation of roles, carrying out routine audits, and encouraging responsibility and transparency. A foundation for ensuring adherence to financial regulations, proper use of funds, accurate financial reporting, and early discovery of abnormalities is provided by effective financial control techniques.

There are various advantages to implementing efficient financial control procedures in secondary schools. In the first place, it assists in preserving the institution's financial integrity by discouraging and identifying financial irregularities, reducing the likelihood of financial losses, and preserving the school's reputation. Second, it makes sure that resources are allocated properly and following the school's goals, which enhances instructional programs and the learning environment for students. Effective financial control procedures also increase accountability and transparency, which strengthens public confidence in the administration of the school. Assessing how effectively financial control measures affect financial irregularities in second-cycle institutions in Ghana's Central Region is the purpose of the study.

Statement of the Problem

The financial irregularities in Ghanaian educational institutions particularly at the pre-university level have become a significant concern in recent years (Abaasa-Ababio, 2015). For instance, the 2019 Auditor General's report highlighted that financial irregularities in Central Region schools accounted for GHS 5,071,408.40 out of a total of GHS 23,492,458.34, representing at least 21% of the total amount misappropriated (Auditor General's Report, 2019). The 2020 Auditor General's report further revealed that GHS 19,217,802.00 of Free Senior High School (SHS) funds were embezzled (Auditor General's Report, 2020). The most recent 2022 report detailed various irregularities including cash irregularities (GHS 13,435.00), payroll irregularities (GHS 155,392.88), procurement and store irregularities (GHS 103,172.00), tax irregularities (GHS 55,257.48) and failure to obtain VAT invoices amounting to GHS 12,443.67 (Auditor General's Report, 2022).

These financial malpractices have led to substantial financial losses, impeded academic success affected the well-being of students and eroded stakeholder confidence, particularly that of the Ministry of Finance (Badoo, Hammond & Oppong, 2020). Despite the presence of internal financial controls regulated by the Financial Administration Act, the Procurement Act and the Internal Audit Agency Act which indirectly apply financial control frameworks such as the Committee of Sponsoring Organizations (COSO) Framework, there has been a consistent increase in the misappropriation of funds in secondary schools (Prempeh, Twumasi & Kyeremeh, 2015). The Central Region, in particular has been among the top three regions with the highest financial irregularities from 2018 to 2022 (Auditor General's Reports, 2018-2022). This trend suggests significant weaknesses in financial controls at the internal level.

Moreover, prior research has predominantly focused on financial irregularities in other educational contexts. For instance, Agezo (2010) examined financial irregularities in junior high schools, while Bush and Oduro (2006) considered similar issues in polytechnics. Fiador (2015) explored financial controls in NGOs and Prempeh, Twumasi and Kyeremeh (2015) focused on Metropolitan, Municipal, and District Assemblies. However, there is limited research specifically on financial irregularities at the pre-university level especially within Senior High Schools (SHS) in Ghana. Although, Acquah (2017) undertook a study on selected schools in the Eastern Region, but findings from one region cannot be generalized to another due to differing characteristics.

Furthermore, the consistent financial irregularities despite the presence of regulatory frameworks indicate a gap in the practical implementation of financial controls. Studies indicate that internal financial controls in educational institutions often fail due to lack of compliance, inadequate training and insufficient monitoring (Fiador, 2013; Prempeh et al., 2015; Mensah, Adu & Ameyaw, 2015; Kumi, 2015; Owusu-Antwi, 2017). This study aims to address this gap by examining the effectiveness of existing financial control practices within SHS in the Central Region. Understanding these practical challenges will be vital in developing strategies to strengthen financial controls and reduce irregularities.

Even though there are policies in place designed to regulate financial management in educational institutions, the increasing trend of financial irregularities suggests that these policies may be inadequate or poorly enforced. Studies have shown that policy enforcement is critical to the success of financial control systems (Dosu, 2015; Komlagamli-Dovene, 2016; Ewuntomah, 2017; Amegble, 2021).

Purpose of the Study

The general purpose of this study is to investigate how financial control practices (budgeting, auditing and account management procedures) mitigate financial irregularities among selected second-cycle schools within the Central Region of Ghana.

Research Objectives

1. Determine the forms of financial irregularities prevalent in second-cycle schools.

2. Examine the effect of budgeting as internal financial control practice on financial irregularities among the second-cycle institutions in Central Region of Ghana.
3. Analyse the impact of auditing as financial control practice on financial irregularities of second-cycle institutions in Central Region of Ghana.
4. Determine the effect of account management procedure as financial control practice on financial irregularities of second-cycle institutions in Central Region of Ghana.

Research Questions

1. What are the forms of financial irregularities prevalent in second-cycle schools in Central Region?
2. What is the effect of budgeting as internal financial control practice on financial irregularities among the second-cycle institutions in Central Region of Ghana?
3. How do auditing impact financial irregularities of second-cycle institutions in Central Region of Ghana Analyse the impact?
4. What is the effect of account management procedures as financial control practice on financial irregularities of second-cycle institutions in Central Region of Ghana?

Significance of the Study

The study has both practical and theoretical implications. Practically, this study would provide information to relevant stakeholders such as the Ghana Education Service (GES) to develop effective strategies to reduce financial irregularities in senior high schools. That is, effective financial control practices can lead to cost savings and resource optimisation in secondary schools. The study findings would encourage effective internal control systems which impact cost efficiency in educational institutions as Chen et al. (2018) study found to have positive relationship between the strength of internal controls and cost savings. By identifying and preventing financial irregularities, schools can allocate their financial resources more efficiently, ensuring that funds are directed towards educational programs and student support.

The study would enable the implementation of robust financial control practices which can enhance stakeholder trust and engagement in secondary schools. Research by Bascle (2018) emphasized the importance of financial transparency in educational institutions and its positive impact on stakeholder perceptions. When schools demonstrate effective financial control measures, stakeholders, including parents, students, and community members, are more likely to trust the institution and actively engage in its activities and initiatives.

The study can contribute to the long-term financial sustainability of secondary schools. By preventing and detecting financial irregularities, schools can avoid financial losses and maintain a stable financial position. A study by Baek and Jang (2020) found a positive relationship between financial sustainability and the implementation of internal control systems in educational organizations. This suggests that effective financial control practices are crucial for the financial health and sustainability of secondary schools.

The study's findings can provide valuable guidance for policymakers and regulatory bodies involved in shaping financial governance policies for secondary education. The research outcomes can inform the development of regulations, guidelines, and standards that promote effective financial control practices and mitigate the risk of financial irregularities. Policymakers can utilize evidence-based insights to design policies that align with the specific needs and challenges of secondary schools.

The study's contribution to the field of educational finance and administration is significant. By addressing the gaps in the literature regarding financial irregularities and control practices in secondary schools, the study can expand the knowledge base and provide a foundation for further research and scholarly discussions. It can also serve as a reference for future studies investigating similar issues in different educational contexts. In a nutshell, the evidence suggests that the study on financial irregularities and financial control practices in secondary schools holds significant practical, financial, and academic implications. It can lead to cost savings, enhance stakeholder trust, promote long-term financial sustainability, guide policymakers, and contribute to the broader field of educational finance and administration.

Delimitations of the Study

This study focuses on financial control practices and financial irregularities within selected second-cycle institutions (Senior High Schools) in the Central Region of Ghana. The primary boundaries set for this analysis include geographic, institutional and temporal limitations. Geographically, the study is confined to the Central Region of Ghana excluding other regions which may have different financial control dynamics and irregularities. Institutionally, the study targets only second-cycle institutions, thereby excluding primary, junior high schools, and tertiary institutions which may have distinct financial management practices and challenges.

Also, several variables were not considered in this study. For instance, the impact of external factors such as economic conditions, government policy changes and socio-political influences on financial irregularities was not examined. Moreover, the study did not account for the personal attributes of financial managers such as their educational background, experience and ethical standards which could influence the effectiveness of financial controls. Furthermore, the role of technology and digital financial management systems in mitigating financial irregularities was not explored.

Limitations of the Study

This study has some limitations that could affect the validity and generalizability of its findings. One significant limitation is the reliance on self-reported data which may be biased or inaccurate due to participants' inability to accurately recall or report their experiences. To mitigate this, the researcher used statistical tools to control that. Again, the choice of statistical methods and assumptions made may have impacted the validity and accuracy of the findings. To mitigate this, the study used robust statistical techniques such as SPSS and partial least square estimation which are suitable for the data type and research design. Sensitivity analyses were also conducted to check the robustness of the findings against different statistical assumptions. Furthermore, the study's findings may not be easily generalizable to other contexts due to differences in sector, study area, culture and other factors. To address this, the study clearly defined its scope and context and findings were discussed within these boundaries.

Organisation of the Study

The study is organised into five chapters. Chapter One is the introduction which covers the background to the study, the problem statement, the research objectives and questions about how the study was organised. Chapter Two is the literature review covering the theoretical review, conceptual review, empirical review and conceptual framework. Chapter Three is the research methods employed and it specifically describe the research approach and design, study area, population, sampling procedure and sampling size, the data processing and analysis technique. Chapter Four presents the results and findings of the study and also discusses it. Chapter Five presents the summary, conclusions and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The chapter presents conceptual review on financial control practices, financial irregularities, auditing, account management procedures, budgeting and theories underpinning the study. In addition, empirical review related to the form of financial irregularities in second-cycle institutions; budgeting as internal financial control practice on financial irregularities among second-cycle institutions; auditing impact on financial irregularities in second-cycle institutions; effect of account management procedures as financial control practices on financial irregularities among second-cycle institutions have been reviewed in this chapter. Also, the chapter comprises a development of a conceptual framework.

Theoretical Review

Agency theory

Agency theory posits that in organisations, there exists a fundamental principal-agent relationship where principals (owners or shareholders) delegate decision-making authority to agents (managers or employees) (Bendickson, Muldoon, Liguori & Davis, 2016). The theory is grounded in the acknowledgment of potential conflicts of interest between these two parties, as agents may act in their self-interest rather than aligning with the best interests of the principals (Panda & Leepsa, 2017). The core premise is that this misalignment can lead to agency problems, resulting in inefficiencies, moral hazards and adverse outcomes (Ballwieser et al., 2012). The agency theory highlights the importance of designing mechanisms such as contracts, incentives and monitoring systems to mitigate these conflicts and align the interests of principals and agents (Bosse & Phillips, 2016). It provides a conceptual framework to understand the complexities of organisational relationships, emphasizing the need for structures that balance risk and encourage optimal decision-making in the pursuit of organizational goals (Fayezi, O'Loughlin & Zutshi, 2012).

In the context of SHS or second-cycle institutions, stakeholders such as school boards, heads, administrators and educators play crucial roles as principals, while teachers and administrative staff act as agents (Pepper & Gore, 2015). The theory provides insights into how misalignments of interests can impact financial decision-making and the implementation of control mechanisms (Linder & Foss, 2013). Financial control practices are essential for ensuring the prudent use of resources in SHS. These practices help align the actions of administrators and educators with the financial goals and expectations of school boards and other stakeholders (Shanchao & Yule, 2019). SHS often operate within budget constraints, necessitating effective budgetary controls (Shapiro, 2005).

Clear budgetary guidelines and regular monitoring help ensure that financial resources are allocated efficiently and that deviations are promptly addressed. Robust internal controls including segregation of duties and regular audits are vital to preventing financial irregularities (Shogren, Wehmeyer & Palmer, 2017). These controls enhance the accuracy of financial reporting and safeguard against fraud or mismanagement. Financial control practices in SHS should prioritise transparency and accountability (Shogren et al., 2017). Timely and accurate financial reporting ensures that stakeholders are well-informed, fostering trust and minimising the likelihood of financial misconduct (Zogning, 2017). Despite the implementation of financial controls, SHS may face challenges related to financial irregularities, necessitating a deeper exploration of agency-related factors (Malle, Mwonge & Naho, 2022).

The misalignment of incentives between administrators and educators can potentially lead to financial irregularities (Nerantzidis, Pazarskis, Drogalas & Galanis, 2022). This may include actions that prioritize individual gains over the financial well-being of the SHS. Unequal distribution of resources or misuse of funds can occur when there is a lack of clarity in roles and responsibilities. Such issues may arise from a failure to align the interests of administrators and educators with the overall financial health of the SHS. Largely, the agency theory provides valuable insights into the challenges faced by SHS in maintaining effective financial control practices and preventing financial irregularities (Xu, Wang & Ma, 2022).

The application of budgetary controls, internal controls, transparency and accountability are critical for aligning the interests of stakeholders and mitigating agency-related issues (Vitolla, Raimo & Rubino, 2020). Through recognising and addressing incentive misalignments, resource allocation challenges and the importance of oversight, SHS can enhance their financial governance, ensuring that resources are utilized optimally to support the institution's educational mission (Yusuf, Yousaf & Saeed, 2018). The application and adaptation of agency theory will be crucial in navigating the complexities of financial management in the ever-evolving landscape of senior high school education.

Stakeholder theory

Stakeholder theory stipulates that organisations should consider the interests of all stakeholders, not just shareholders in their decision-making processes (Bonnafous-Boucher & Rendtorff, 2016). In the context of SHS or second-cycle institutions, stakeholders include students, parents, teachers, administrators, local communities and governing bodies (Freeman, 2015). The theory encourages institutions to balance these diverse interests to achieve long-term sustainability and ethical practices (Freeman, 2017). As such, effective financial control practices are essential for ensuring responsible resource management in SHS (Freeman, 2023).

The stakeholder theory emphasises the importance of aligning financial decisions with the interests of various stakeholders to foster trust and sustainability. Stakeholders, including accountants, matrons, heads, parents and government should be involved in the budgeting process (Freeman et al., 2010). Participatory budgeting fosters transparency and ensures that financial allocations align with the diverse needs and expectations of stakeholders. Stakeholder theory advocates for transparent financial reporting practices (Freeman, Harrison & Zyglidopoulos, 2018). It has been argued that clear and accessible financial information allows stakeholders to make informed decisions and holds school heads, accountants' matrons and administrators accountable for financial stewardship (Freeman, Phillips & Sisodia, 2020).

The theory posits that financial control practices should reflect ethical considerations and prioritise the long-term interests of all stakeholders (Acquah, 2017). Ethical financial decision-making builds trust and ensures that the SHS operates in a manner that aligns with the values of its community

(Hamed, 2023). Financial irregularities may arise when stakeholders are not adequately involved in decision-making processes (Abaasa-Ababio, 2015). Lack of transparency and exclusion of certain stakeholder groups can lead to suspicions and undermine the financial integrity of the SHS. The stakeholder theory underscores the importance of effective communication (Jones & Wicks, 2018; Harrison, Barney, Freeman & Phillips, 2019). This is because financial irregularities may occur if there is a breakdown in communication between administrators, heads, accountants and various stakeholders, leading to misunderstandings and mistrust (Mangala & Kumari, 2015).

Bialowolski et al. (2021) have advanced that financial decision that disproportionately favour one stakeholder group over others can create tensions and potentially lead to irregularities. Balancing the interests of all stakeholders is essential for maintaining financial harmony in SHS (Bialowolski et al., 2021). The stakeholder theory provides a holistic approach to understanding financial control practices and addressing financial irregularities in SHS (Jones, Wicks & Freeman, 2017). By actively involving stakeholders in decision-making, promoting financial transparency and aligning financial practices with the diverse interests of the school community, SHS can enhance their financial governance (Jones, Wicks & Freeman, 2017). The theory highlights the significance of ethical considerations and communication in maintaining the trust of stakeholders and fostering a financially healthy educational environment (Parmar et al., 2010; Miles, 2017).

Conceptual Review

Financial control practices

Financial control practices refer to the set of processes and procedures implemented by organisations to ensure the accuracy, reliability and compliance of financial information (Acquah, 2017). Similarly, financial controls are the procedures, policies, and internal controls as well as means by which an organization monitors and controls the direction, allocation, and usage of its financial resources (Corporate Finance Institute, 2022). The scope of financial control practices extends beyond the internal operations of an organisation, encompassing external regulatory requirements and auditing standards (Guidry & Patten, 2012; Field et al., 2021). Internal controls focus on preventing and detecting errors and irregularities within the organisation, while external controls involve independent assessments by auditors and regulatory bodies (Gasiorowska, 2014; Tatuev, Ovcharova, Galyuta & Zalevskaya, 2019).

In its broadest context, internal controls form the backbone of an organisation's financial control framework (Hamed, 2023). These include preventive measures such as segregation of duties, access controls and approval processes aimed at reducing the likelihood of errors or intentional misconduct (Hamed, 2023). Detective controls such as regular reconciliations and audits help identify irregularities promptly (Asiedu & Deffor, 2017). The effectiveness of internal controls hinges on their design, implementation and continuous monitoring (Kembauw, Munawar, Purwanto, Budiasih & Utami, 2020). External controls on the other hand, act as a complementary layer to internal controls, providing an independent evaluation of an organisation's financial practices (Simko, 2020). External audits conducted by certified public accountants (CPAs) verify the accuracy of financial statements and assess compliance with accounting standards (Kembauw et al., 2020).

Regulatory bodies depending on the industry may also conduct inspections to ensure adherence to specific regulations. These external assessments contribute to transparency and instil confidence among stakeholders (Mazur et al., 2021). Effective financial control practices are indispensable for the sustainable operation of organisations including SHS (Mpaata, Koske & Saina, 2023). They instil confidence among investors, creditors and other stakeholders fostering a positive organizational image (Osadchy & Akhmetshin, 2015).

Through promoting accountability and transparency, financial controls enhance decision-making processes, enabling management to make informed choices based on accurate financial information (Pham et al., 2023). Despite their significance, financial control practices face various challenges and limitations (Song, Zhao & Zeng, 2017). Implementation costs, resistance to change and the complexity of modern business operations can hinder the effective deployment of controls. Moreover, controls may become out-dated in the face of technological advancements, requiring organisations to adapt continuously (Sitinjak, Johanna, Avinash & Bevoor, 2023).

Budgeting as Financial Control Mechanism

Budgeting involves the systematic process of planning, coordinating and controlling financial resources to achieve organisational goals (Alade, Owabumoye & Olowookere, 2020). It provides a comprehensive framework for estimating revenues and allocating expenditures across different functions and departments (Dakurah, 2020). The tent of budgeting extends beyond financial forecasting; it serves as a tool for aligning organisational activities with strategic objectives that ensure financial discipline and facilitate communication and coordination among various stakeholders (Harafonova, 2017; Rogulenko et al., 2016).

Budgeting serves as a critical tool for financial control by providing several key benefits (Kovaleva et al., 2016). Similarly, budgeting facilitates goal setting, resource allocation and performance evaluation. Through the budgeting process, organisations can identify potential financial challenges, allocate resources efficiently and make informed strategic decisions (Kyrylenko & Vatslavskyi, 2019). Moreover, budgets serve as a benchmark for monitoring and controlling actual performance against planned targets (Melnichuk, 2016).

While budgeting offers numerous advantages, it is not without challenges (Nikitina, Litovskaya & Ponomareva, 2018; Sitinjak, Johanna, Avinash & Bevoor, 2023). Common issues include the difficulty in accurately predicting future events, the time and resources required for the budgeting process and the potential for budgetary slack where heads of institutions deliberately underestimate revenues or overestimate expenses to make performance targets more easily achievable (Raudla, Karo, Valdmaa & Kattel, 2015; Mutungi, 2017). In the Ghanaian context, research such as that by Adomako and Danso (2018) suggests that effective budgeting practices are essential for managing financial resources in educational institutions. Some studies show that these practices help addresses common issues like resource misallocation and financial mismanagement (Nkrumah & Acheampong, 2016; Tetteh & Nkrumah, 2018; Opoku & Danso, 2015; Kwame & Sarpong, 2018).

Budgetary guidelines and manual

The budgetary process in Ghana is guided by comprehensive guidelines and manuals designed to ensure effective planning, allocation and utilization of public funds. These guidelines provided by the Ministry of Finance are crucial for maintaining fiscal discipline and achieving macroeconomic stability (Ministry of Finance, 2019). The budget manual outlines the roles and responsibilities of various stakeholders in the budget process from formulation to execution and monitoring.

Key elements of budgetary guidelines

Revenue estimation

Accurate revenue estimation is fundamental to the budget process. The guidelines stipulate methods for projecting revenues from various sources including taxes, grants and other forms of income (Ministry of Finance, 2019). This ensures that the budget is based on realistic and attainable financial expectations.

Expenditure ceilings

To prevent overspending the budget guidelines set expenditure ceilings for different ministries, departments and agencies. These ceilings are determined based on the government's fiscal policy objectives and overall economic conditions (Ministry of Finance, 2019). Adhering to these ceilings is critical for maintaining fiscal discipline and avoiding budget deficits.

Fiscal targets

The guidelines also include specific fiscal targets that the government aims to achieve. These targets are designed to ensure macroeconomic stability and sustainable economic growth (Ministry of Finance, 2019). They typically include goals for budget deficits, public debt levels and inflation rates.

Stakeholder roles and responsibilities

The budget manual clearly defines the roles and responsibilities of various stakeholders involved in the budget process. This includes the Ministry of Finance which oversees the entire process and other ministries and departments responsible for preparing their budget estimates (Ministry of Finance, 2019). This clarity in roles helps to streamline the budget preparation and implementation process.

Challenges in implementing budgetary guidelines

Despite the comprehensive nature of these guidelines, several challenges impede their effective implementation. Political interference often leads to deviations from the budget with funds being reallocated based on political priorities rather than economic needs (Ankomah & Boateng, 2016). Also, inadequate capacity of budget officers characterized by a lack of technical skills and expertise also hampers the proper application of the guidelines (Ankomah & Boateng, 2016). Additionally, delays in fund releases can disrupt planned activities and projects, leading to inefficiencies and wastage of resources. Ankomah and Boateng (2016) emphasize that frequent revisions and supplementary budgets driven by unanticipated expenditures or revenue shortfalls, can undermine the predictability and credibility of the budget. These revisions often occur due to economic shocks such as fluctuating commodity prices which affect revenue projections and necessitate adjustments in expenditure plans.

To address these challenges, several recommendations have been proposed. For instance, enhancing the capacity of budget officers through continuous training and development programs is needed for improving the technical skills required for effective budget management (Ankomah & Boateng, 2016). Improving the timeliness and reliability of budget releases is also critical to ensure that funds are available when needed, thereby reducing disruptions in the implementation of budgeted activities (Tetteh & Nkrumah, 2018; Opoku & Danso, 2015). Additionally, minimizing political influence in the budget process by strengthening institutional checks and balances can help to maintain the integrity of the budget and ensure that it reflects economic priorities rather than political agendas (Nkrumah & Acheampong, 2016).

Auditing as financial control mechanism

Auditing is a critical financial control mechanism designed to ensure the accuracy, reliability and transparency of financial information within organizations (Alyaarubi, Alkindi & Ahmed, 2021). Auditing serves as a proactive measure in identifying and detecting financial irregularities such as fraud, misstatements or non-compliance with financial regulations (Bulyga, 2017). In view of this, timely detection allows for corrective actions to be taken to safeguard the financial integrity of the organisation (Eulerich & Eulerich, 2020). Through the issuance of an audit opinion, auditors provide assurance to stakeholders regarding the reliability of financial statements. This enhances accountability by holding management responsible for the accuracy and completeness of financial reporting (Bulyga, 2017).

Auditing contributes to risk management by identifying potential financial risks and weaknesses in internal controls (Kotb, Elbardan & Halabi, 2020). Recommendations made by auditors help institutions or organisations strengthen their control environment and mitigate the risk of financial mismanagement (Kumar, Pandey, Burton & Sureka, 2021). The concept of auditing is continually evolving with emerging challenges such as the impact of technology, increased regulatory scrutiny, and the demand for sustainability reporting (Langella, Vannini & Persiani, 2023).

The integration of data analytics and artificial intelligence is transforming audit processes, enabling auditors to analyse large datasets more efficiently and identify patterns that may indicate financial irregularities (Langella, Vannini & Persiani, 2023).

Auditing as a financial control mechanism plays a pivotal role in ensuring the reliability and integrity of financial information within institutions (Lenz & Jeppesen, 2022). Grounded in theoretical principles such as those from the agency theory, auditing provides an independent and objective assessment that aligns the interests of various stakeholders (Levy, 2020). Studies specific to Ghanaian institutions such as those by Owusu-Ansah and Ntim (2020), reveal that regular and rigorous auditing is essential for maintaining financial integrity in schools. Gyasi and Asare (2017), Boakye and Osei (2019) and Joseph (2022) emphasizes that auditing not only improves financial reporting accuracy but also strengthens accountability and transparency in financial management.

Auditing in Ghana's public sector

Auditing is a critical component of financial governance in Ghana's public sector aimed at ensuring accountability and transparency (Boakye & Osei, 2019). The Ghana Audit Service led by the Auditor-General, is responsible for auditing public accounts and reporting findings to Parliament. According to Agyemang and Asiedu (2013), the effectiveness of auditing in Ghana is hampered by factors such as limited resources, inadequate technical expertise and resistance to audit recommendations. Despite these challenges, auditing remains a vital tool for detecting and preventing financial irregularities (Joseph, 2022).

Mensah and Louw (2020) argue that the adoptions of international auditing standards and continuous capacity building for auditors are essential to enhance the effectiveness of public sector audits. They also highlight the importance of timely and effective implementation of audit recommendations to address identified weaknesses and prevent recurrence of irregularities (Mensah & Louw, 2020). Strengthening the independence of the Ghana Audit Service, ensuring adequate funding and enhancing the capacity of auditors are crucial steps towards improving the audit function and promoting accountability in the public sector (Owusu-Ansah and Ntim 2020).

Account management procedures

Account management procedures are essential for maintaining financial order and integrity within organisations (Al-Hawatmeh & Al-Hawatmeh, 2016). Account management procedures encompass a set of policies and processes designed to govern the creation, maintenance and usage of financial accounts within an organisation (Bashaija, Nyiringango, Oliva &

Mahina, 2020). The scope includes the management of accounts payable, accounts receivable, general ledger accounts and other financial records (Ivanchenkova et al., 2021). These procedures are vital for ensuring the accuracy of financial data, preventing fraud and facilitating efficient financial reporting (Ivanchenkova et al., 2021).

A well-structured chart of accounts provides a standardised framework for categorising financial transactions. It ensures consistency in recording and reporting financial information, facilitating clear communication among stakeholders (Lassou, Hopper & Soobaroyen, 2021). Moreover, regular reconciliation of financial accounts such as bank reconciliations and accounts receivable/payable reconciliations is crucial for identifying discrepancies and ensuring the accuracy of financial records (Sibanda, 2017). Establishing clear protocols for authorising and approving financial transactions helps prevent unauthorised activities (Uwaoma & Ordu, 2015). This includes defining the hierarchy of approvals for various financial transactions. Segregation of duties ensures that no single individual has complete control over a financial process (Uwaoma & Ordu, 2015). This internal control measure minimises the risk of fraudulent activities by requiring collaboration for critical financial functions (Zaitsev, Stetsyunich & Kichigin, 2021).

Effective account management procedures are integral to financial control. They provide a structured framework for managing financial information that also reduces the risk of errors and fraud (Wakiriba, Ngahu & Wagoki, 2014). Additionally, these procedures contribute to compliance with regulatory requirements, fostering accountability and transparency in financial reporting (Sibanda, 2017). Challenges in account management procedures include the need for continuous training to keep staff updated on evolving financial regulations and technologies (Sibanda, 2017).

Financial irregularities

Financial irregularities comprising a spectrum of unethical and fraudulent financial activities pose a significant threat to the stability and integrity of organisations (Kwok, 2017). Financial irregularities refer to intentional deviations from established financial norms, covering a range of deceptive practices that compromise the accuracy and reliability of financial information (Kafwabulula & Matoka, 2022). Examples include embezzlement, financial fraud, misappropriation of funds and intentional misstatement of financial statements. These irregularities often driven by personal gain or organisational pressures erode the trust of stakeholders and have far-reaching consequences (Kafwabulula & Matoka, 2022). Financial irregularities often find their roots in internal organisational dynamics.

Accounting Oskou et al. (2015), employee misconduct driven by factors such as personal financial struggles, dissatisfaction or lax internal controls can contribute to the occurrence of irregularities. Weaknesses in internal control systems whether due to inadequate design or poor implementation create opportunities for individuals to exploit vulnerabilities (Yao, Yusheng & Bah, 2017). External factors, such as economic downturns or changes in the regulatory environment, can also contribute to financial irregularities (Ashayekhi, Vanaki & Sivandian, 2021).

Detecting financial irregularities is a complex task that requires a combination of internal and external mechanisms (Nerantzidis, Pazarskis, Drogalas & Galanis, 2022). Internal controls, including regular audits, forensic accounting, and whistleblower hotlines play a crucial role in identifying irregularities within the organization. External audits conducted by independent auditors serve as an additional layer of scrutiny, providing an unbiased assessment of financial statements (Nerantzidis et al., 2022). Financial irregularities can lead to direct financial losses for the organisation, affecting its ability to operate and invest in future endeavours (Kwok, 2017). Additionally, stakeholders, including investors and creditors may lose confidence, resulting in a decline in the organization's market value (Zainudin & Hashim, 2016). Perhaps one of the most enduring consequences is the damage to the organisation's reputation. Trust, once eroded, is challenging to rebuild (Kwok, 2017).

Financial irregularities in Ghana's public sector

Financial irregularities within Ghana's public sector have been a persistent issue affecting the credibility and efficiency of government institutions. The Auditor-General's reports have consistently indicated various forms of irregularities including misappropriation of funds, procurement breaches, payroll fraud and unauthorized expenditures (Auditor-General's Report, 2020). These irregularities not only undermine public trust but also hinder effective service delivery and economic development. Ameyaw, Mensah and Osei-Tutu (2012) argue that weak internal controls, lack of accountability and insufficient oversight mechanisms are significant contributors to financial mismanagement. They suggest that a culture of impunity and inadequate punitive measures further exacerbate the problem.

Similarly, the lack of transparency in financial reporting and the manipulation of financial records are common issues that impede the fight against financial irregularities (Auditor-General's Report, 2020). Stringent measures and reforms such as the implementation of effective internal audit functions, regular financial audits and enhanced oversight by parliamentary committees are vital for combating these irregularities and ensuring sound financial management (Dosu, 2015).

The 2020 Auditor General's report revealed that GHS 19,217,802.00 of Free Senior High School (SHS) funds were embezzled (Auditor General's Report, 2020). The most recent 2022 report highlighted various irregularities, including cash irregularities (GHS 13,435.00), payroll irregularities (GHS 155,392.88), procurement and store irregularities (GHS 103,172.00), tax irregularities (GHS 55,257.48) and the failure to obtain VAT invoices amounting to GHS 12,443.67 (Auditor General's Report, 2022). These financial malpractices have led to substantial financial losses, impeded academic success, affected the well-being of students, and eroded stakeholder confidence, particularly within the Ministry of Finance (Badoo, Hammond & Oppong, 2020).

Structure of Second Cycle Institutions in Ghana

Second cycle institutions comprising senior high schools and technical/vocational schools, play a vital role in Ghana’s educational system (GES, 2018). The structure of these institutions is designed to provide a comprehensive curriculum that prepares students for higher education and the job market. According to the Ghana Education Service (GES), the governance of second cycle institutions involves a hierarchical structure with the Ministry of Education at the top, followed by the GES, regional and district education offices and individual school administrations (GES, 2018).

Dampson, Havor and Laryea (2019) noted that effective management of these institutions requires adequate funding, well-trained staff and effective administrative systems. However, issues such as inadequate infrastructure, teacher shortages and financial constraints often pose significant challenges to the efficient operation of second cycle institutions (Dampson, Havor & Laryea, 2019). Moreover, the decentralization of education management, intended to improve responsiveness and accountability, has sometimes led to disparities in resource allocation and variations in educational quality across different regions.

Empirical Review

Form of financial irregularities in second-cycle institutions

Financial irregularities in second-cycle institutions involve various forms often rooted in agency problems. According to the agency theory (Bendickson, Muldoon, Liguori & Davis, 2016), conflicts of interest may lead head of school, accountants, matrons and administrators to engage in misappropriation of funds, fraudulent transactions or manipulation of financial records. In addition, stakeholder theory emphasises that irregularities may arise when the interests of students, parents, teachers and the community are not adequately addressed. Empirical research reveals that common forms of financial irregularities in second-cycle institutions include embezzlement (Freeman, 2023). Thus, the misappropriation or theft of funds entrusted to an individual often an employee or executive (Abaasa-Ababio, 2015).

Acquah (2017) argued that deliberate misrepresentation of financial information to deceive stakeholders about an organisation's financial position could be seen as a form of financial irregularities. Instances of fraudulent financial reporting were observed across industries (Akeem, 2016). Akgün, Altunbaş and Uymaz (2021) affirm that weak internal controls and inadequate verification processes could contribute to fraudulent financial reporting. Besides, unethical practices in the procurement process such as bid rigging, kickbacks or favoritism are some of the financial irregularities in institutions (Asare, Kong & Tampuri Jnr, 2020). Some studies demonstrated irregularities in procurement, compromising fair competition and resulting in inflated costs as financial irregularities (Datzer, Mujanovic, Sinanovic & Bojanic, 2018).

Kumi (2015) examined financial mismanagement in Ghanaian schools, revealing that irregularities often stem from inadequate financial controls and lack of oversight. The study found that embezzlement and procurement fraud were common issues affecting second-cycle institutions, impacting their financial stability and educational quality. Also, Owusu-Antwi (2017) explored financial mismanagement in public secondary schools, noting that cash irregularities, payroll fraud and procurement issues were prevalent. The research emphasized that weak financial management systems contributed significantly to these irregularities, highlighting the need for stronger internal controls. Boateng and Osei-Tutu (2020) investigated financial irregularities in educational institutions in Ghana, identifying key forms such as misreporting of expenditures and unauthorized use of funds. The study pointed out that these issues often resulted from poor financial planning and inadequate auditing practices.

Budgeting as internal financial control practice on financial irregularities among second-cycle institutions

Budgeting as an internal financial control practice aligns with agency theory principles by setting clear financial goals and expectations (Panda & Leepsa, 2017). This process reduces agency costs by minimising conflicts of interest and providing a structured framework for financial management (Xu, Wang & Ma, 2022). Findings reveal that institutions with robust budgeting practices exhibitlower instances of fraudulent activities (Acquah, 2017). Sometime, clear budgetary guidelines and controls are associated with a reduced likelihood of misappropriation and financial misconduct (Babalola, 2020). Kagorora (2018) is of the view that budgeting promotes a culture of accountability and transparency.

It has been established that institutions that implement better budgetary controls are better equipped to track financial transactions, minimise the risk of irregularities related to mismanagement or unethical practices (Kenno, Lau & Sainty, 2018). Empirical evidence stress that budgeting is an effective conduit for preventing misallocation of resources (Lee Jr, Johnson & Joyce, 2020). The scholar averred that organisations that adhere to budgetary guidelines experience fewer instances of financial irregularities related to the misuse or diversion of funds. Regular monitoring of actual performance against budgeted targets allowed organisations to identify discrepancies early on, enabling corrective action before irregularities escalated (Prempeh, Twumasi & Kyeremeh, 2015).

Empirical evidence highlights that organisations with a strong commitment from top management to the budgeting process are more successful in preventing financial irregularities (Rafindadi & Olanrewaju, 2019). In the same domain, leadership support fosters a culture where adherence to budgetary guidelines is prioritised (Kotb, Elbardan & Halabi, 2020). Other studies hold the opinion that organizations that involved relevant stakeholders in the budgeting process experienced enhanced effectiveness (Nikitina, Litovskaya & Ponomareva, 2018; Sitinjak, Johanna, Avinash & Bevoor, 2023).

Thus, input from various departments and teams improved the accuracy of budgetary projections and increased ownership of financial targets. Continuous monitoring of budget performance and a willingness to adapt to changing circumstances were key factors in the effectiveness of budgeting (Yao, Yusheng & Bah, 2017). Moreover, organisations that regularly review and adjust budgets in response to evolving conditions ware better positioned to prevent financial irregularities (Raudla et al., 2015; Mutungi, 2017). Nkrumah and Acheampong (2016) studied budgeting practices in Ghanaian secondary schools and found that well-structured budgeting processes significantly reduced instances of financial irregularities. Their research emphasized that schools with robust budgeting systems experienced fewer issues with misallocation and fraud.

Tetteh and Nkrumah (2018) on the other hand focused on the role of budgeting in controlling financial irregularities in educational institutions. They identified that schools with detailed and transparent budgeting procedures had better control over expenditures and were less prone to financial mismanagement. Amoako and Mensah (2021) also examined budgeting and financial control in Ghanaian second-cycle institutions, concluding that proper budgeting practices were instrumental in preventing financial irregularities. Their study highlighted that schools with annual budget reviews and stringent budgetary controls had lower rates of financial discrepancies.

Auditing impact on financial irregularities in second-cycle institutions

From the perspective of the agency theory, audits reduce information asymmetry, enhancing the monitoring of heads, matrons, accountants and administrators and deterring fraudulent activities (Alzeban, 2022; Aikins, Mensah & Kumi-Kyereme, 2022). Empirical studies consistently demonstrate that reduction in financial irregularities is attained through auditing (Akeem, 2016). Prior studies in the auditing domain presents that organisations subject to regular audits exhibit a significant reduction in financial irregularities (Amoah, Bonaparte, Kelly & Makawwi, 2018). The independent scrutiny of financial records by external auditors acts as a deterrent, discouraging fraudulent activities and mismanagement (Amoah et al., 2018).

Denziana, (2015) affirm that auditing contribute to improved accuracy in financial reporting. The researcher concluded that organisations with a history of audits are less prone to misstatements, providing stakeholders with reliable and trustworthy financial information. In other arguments, auditing is noted for facilitating the timely detection of financial irregularities (Kwok, 2017). Li and Li (2020) also acknowledge that auditors through thorough examination and testing identify irregularities before they could escalate, allow for corrective measures to be implemented promptly. Audited organisations tend to exhibit a higher level of accountability and transparency. External audits ensure that financial information was presented in a clear and comprehensible manner, fostering a culture of openness and integrity (Mandac, 2019).

The independence of auditors is crucial for their effectiveness. Given this, organisations that engages external auditors independent of managerial influence, experience more rigorous assessments, leading to a higher likelihood of irregularity detection (Maroun, 2015). Similarly, organisations adhering to regulatory requirements for mandatory audits demonstrate a higher level of effectiveness (Qazi & Syed, 2021). Regulatory oversight and compliance mandates motivate organisations to engage in thorough auditing practices, reducing the risk of financial irregularities (Yao, Yusheng & Bah, 2017). The effectiveness of auditing is often linked to the quality of communication between auditors and organisational management. Organizations that embraced auditors' recommendations and implement corrective actions demonstrate a commitment to financial integrity (Mandac, 2019).

Gyasi and Asare (2017) analyzed the impact of auditing on financial irregularities in Ghanaian secondary schools. Their study demonstrated that regular and comprehensive audits helped uncover financial mismanagement and reduce instances of fraud. Equally, Boakye and Osei (2019) investigated the effectiveness of auditing in controlling financial irregularities in educational institutions. They found that schools with frequent internal and external audits had better financial control and reported fewer irregularities. Again, Ankomah and Baffour-Awuah (2020) explored how auditing practices affected financial management in second-cycle institutions. The research indicated that strong audit procedures contributed significantly to reducing financial discrepancies and enhancing overall financial integrity.

Effect of account management procedures as financial control practices on financial irregularities among second-cycle institutions

Account management procedures including segregation of duties and regular reconciliation contribute to transparency and accountability (Turetken et al., 2020). Effective account management reduces information asymmetry, minimising the likelihood of financial irregularities (Abaasa-Ababio, 2015). Institutions with robust account management procedures experience a notable reduction in instances of fraud and misappropriation (Abimbola, Kolawole & Olufunke, 2017). Procedures such as segregation of duties and regular reconciliation acts as deterrents that help minimise opportunities for financial misconduct (Ehioghiren & Atu, 2016).

Empirically, organisations with effective account management procedures show enhanced accuracy in financial reporting (Fernandhytia & Muslichah, 2020). Regular reconciliation and verification processes also contribute to the prevention of misstatements and errors (Julie, 2019). Again, account management procedures facilitate the early detection of financial irregularities (Kari, 2015). Kılıç (2020) revealed that instances where anomalies in financial records are promptly identified through systematic reconciliation and monitoring, it is more likely for timely corrective action to be taken. Hence, implementing stringent account management procedures by organisations, particularly in payroll management may be less susceptible to ghost workers and payroll fraud (Rehman, 2022).

Clear verification processes and controls ensure the accuracy of personnel-related financial transactions (Kinyanzii, 2023). Furthermore, empirical evidence highlighted several factors contributing to the effectiveness of account management procedures in reducing financial irregularities (Uwaoma & Ordu, 2015). Thus, organizations with comprehensive internal controls, including detailed account management procedures demonstrate higher effectiveness (Uwaoma & Ordu, 2015). Also, integration with broader internal control frameworks enhanced the overall financial governance structure (Volosovych & Baraniuk, 2019). The effectiveness of account management procedures is often linked to employee training and awareness (Volosovych & Baraniuk, 2019).

Opoku and Danso (2015) examined account management practices in Ghanaian secondary schools and found that effective procedures were vital in minimizing financial irregularities. Their research highlighted that schools with well-established account management systems had better control over financial transactions. Kwame and Sarpong (2018) examined the impact of account management on financial irregularities. They noted that schools with robust account management practices, including regular reconciliations and accurate record-keeping, experienced fewer instances of financial mismanagement. Afriyie and Agyeman (2020) assessed the role of account management procedures in controlling financial irregularities in second-cycle institutions. Their study revealed that schools with stringent account management practices had improved financial transparency and reduced irregularities.

Conceptual Framework

The conceptual framework links budgeting, auditing and account management procedure to financial irregularities prevention.

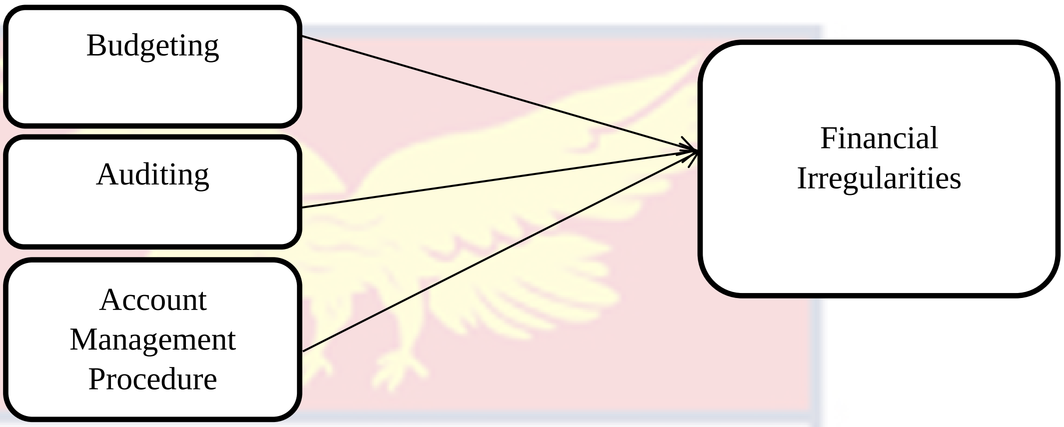

Figure 1: A conceptual framework linking budgeting, auditing and account management procedure to financial irregularities prevention.

Source: Author's Construct (2023).

Figure 1 present the relationship between budgeting, auditing and account management procedure and financial irregularities. This conceptual framework explains that organisations with robust budgeting practices, auditing, proper account management are more likely to exhibit lower instances of fraudulent activities.

Chapter Summary

The chapter presents conceptual review on financial control practices, financial irregularities, auditing, account management procedures, budgeting and theories underpinning the study. In addition, empirical review related to the form of financial irregularities in second-cycle institutions; budgeting as internal financial control practice on financial irregularities among second-cycle institutions; auditing impact on financial irregularities in second-cycle institutions; effect of account management procedures as financial control practices on financial irregularities among second-cycle institutions have been reviewed in this chapter. Also, the chapter developed a conceptual framework.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter aim to assess the nexus between financial control practices and financial irregularities. The chapter centres on the research methods such as research design, research approach, sampling techniques, sample size determination, analytical methods, research instruments and validity and reliability assessments used in this study.

Research Design

Sekaran and Bougie (2016) postulate that, research design serves as a strategic framework that guides researchers in the collection, measurement, analysis and presentation of research data. The scholars classify research designs into three main categories: exploratory, explanatory and descriptive designs. To unearth the influence financial control practices have financial irregularities, this study used an explanatory research design. The rationale for choosing the explanatory design stems from its suitability for determining and reporting relationship between construct under study (Decoteau, 2017; Saunders & Lewis, 2016). Moreover, researchers often regard the explanatory design as an effective means of conducting a comprehensive examination of research objectives using statistical tests of significance (Cantwell, 2020). The explanatory research design would provide a structured method for investigating the causal relationships between financial control practices and financial irregularities. Besides, it would enable a thorough examination of how different factors interact and influence one another which is essential for addressing the research questions and objectives.

Research Approach

Research approach includes three main methodologies: quantitative, qualitative and mixed methods (Neuman, 2014). Lewis (2015) argues that the use of a quantitative research approach allows researchers to conduct rigorous evaluation between study variables through statistical tests of significance. Bengtsson (2016) contends that employing a qualitative research approach is useful for clarifying certain aspects of social phenomena through observation. The mixed method approach as supported by Bengtsson (2016), Tenny, Brannan and Sharts-Hopko (2017) and Arifin (2018), combines elements of both quantitative and qualitative research methods. Following the study's specific objectives, a quantitative research approach was utilised. This approach proves suitable for research endeavours of this nature that intend to use with numerical data (Lewis, 2015; Creswell, 2014). Again, the quantitative approach enables researchers to gain a comprehensive understanding and knowledge of the study (Bloomfield & Fisher, 2019).

The choice of a quantitative research approach is justified by the need to analyze numerical data and perform statistical tests to determine the significance of relationships between variables. This approach would facilitate the rigorous evaluation of hypotheses and provides a comprehensive understanding of the impact of financial control practices on financial irregularities. By employing quantitative methods, the study would also ensure that the findings are based on objective data and can be generalized to similar contexts.

Study Area

The Central Region is one of the administrative regions in Ghana known for its significant focus on education. It is home to numerous senior high schools that cater to the educational needs of students in the region. These institutions are known for their academic excellence, infrastructure, and extracurricular activities. Several notable senior high schools in the Central Region include Wesley Girls' High School, Mfantsipim School, Holy Child School, Adisadel College, Aggrey Memorial A.M.E. Zion Senior High School, Ghana National College and St. Augustine's College.

Wesley Girls' High School, established in 1836, is one of the oldest and most prestigious girls' schools in Ghana known for its high academic standards. Besides, Mfantsipim School founded in 1876 is a renowned boys' school with a rich history of producing many prominent leaders and professionals. Equally, Holy Child School established in 1946, emphasizes academic excellence and moral values as a Catholic girls' school.

Adisadel College founded in 1910 is one of the leading boys' schools, known for its academic achievements and vibrant school life. Aggrey Memorial A.M.E. Zion Senior High School founded in 1940 is co-educational and named after the renowned African educationist James Emman Kwegyir Aggrey. Ghana National College established in 1948 by Dr. Kwame Nkrumah is known for its high academic standards and contributions to Ghana's educational landscape. St. Augustine's College founded in 1930 is a premier boys' school known for its academic rigor and strong Catholic values. The choice of using data from these second-cycle institutions (Senior High Schools) in the Central Region for this study was because of the region's consistent presence among the top regions with financial irregularities from 2018 to 2022 as highlighted in Auditor General's reports.

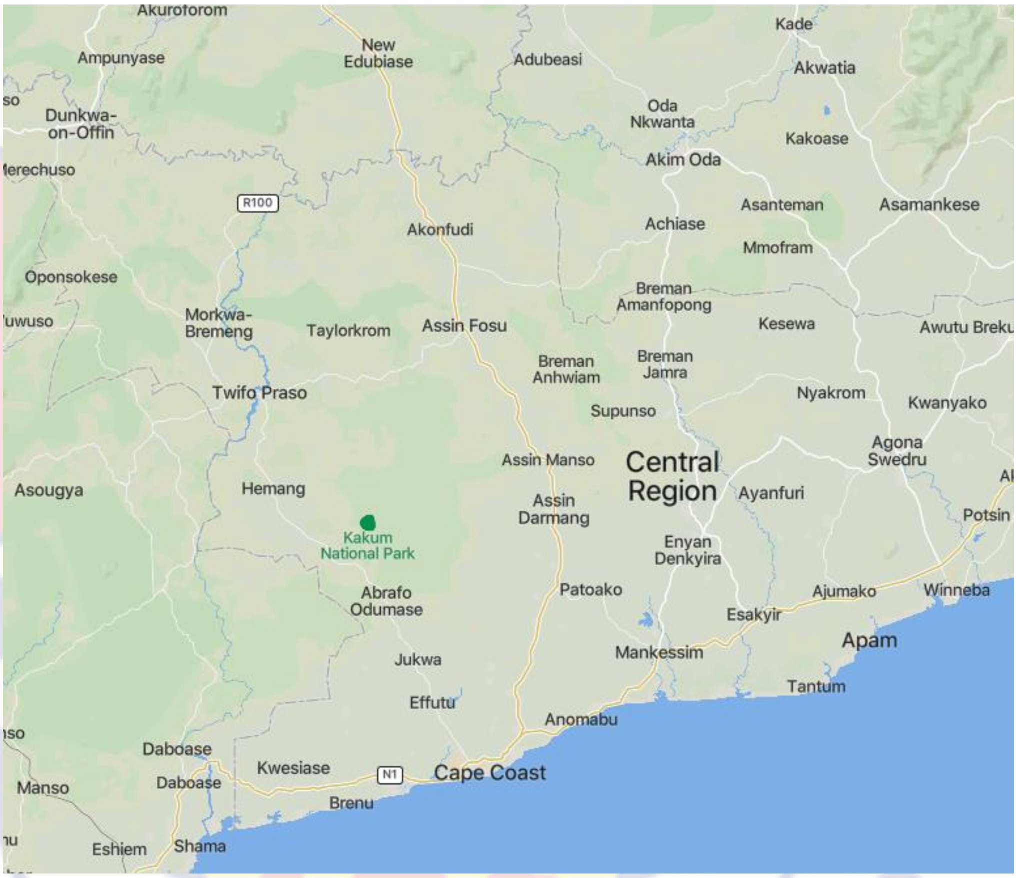

Figure 2: Map of Central Region, Ghana

Source: Geographic Information System (GIS) and Cartographic Unit of the Department of Geography and Regional Planning, University of Cape Coast (UCC), Cape Coast.

Population

According to Rockwood (2015), a well-defined population is essential to ensure that research outcomes are applicable and relevant to the group of interest. As a result, the population of the study is 200 Heads of school, Bursur/Accountant, Assistant Head and Metrons of SHS in the Central Region, Ghana.

Sampling Procedures

According to Sekaran and Bougie (2016), a sample represents a subset of the population chosen for a study. Hence, using sample surveys allows researchers to conduct studies more efficiently than considering the entire population (Saunders et al., 2016). It has been argued (Bujang, Omar & Baharum, 2018) that a minimum sample size of 100 or more is adequate for generalisation of study results. The selection of an appropriate sample size is crucial as it impacts the study's reliability and the extent to which findings can be generalized (Naing, Winn & Rusli, 2006). Therefore, the sample size for the study was determined using Yemane's (1970) proposed formula for sample size calculation which is also given as:

$$n = \frac{N}{1 + Ne^2}$$

Where, N represents the total number of Heads of school, Bursur/Accountant, Assistant Head and Metrons of SHS and *e* stands for the margin of error. To ensure a heightened level of precision in the sample, the confidence level of 95% was selected resulting in a corresponding 5% error margin. Assuming a margin of error of 0.05 and a total population of 200, the calculation for the estimated sample size is as follows.

$$n = \frac{200}{1 + 200(0.05)^2}$$

$$n = \frac{200}{1.5}$$

$$n = 133.33 \approx 133$$

Therefore, out of the total population of 200 Heads of school, Bursur/Accountant, Assistant Head and Metrons of SHS in the Central Region, a sample size of 133 was selected for the purpose of the study.

The study utilised a simple random sampling technique to select the respondents. This stem from the fact that, simple random sampling technique is a straightforward and unbiased approach to participant selection (Noor, Tajik & Golzar, 2022). With this technique, every individual in the population will have an equal chance of being chosen for the sample, ensuring that the sample is representative of the entire population (Siuly & Wen, 2011). Simple random sampling is also advantageous when the population is homogenous and researchers seek to draw conclusions that can be confidently extended to the entire population based on a well-defined and randomly selected subset (West, 2016).

Data Collection Instruments

The process of data collection for a study involves the utilisation of specific research instruments. As a result, a questionnaire served as the primary tool for gathering data from respondents. Using a questionnaire offers several advantages, including time efficiency for respondents as it can be completed independently without the presence of the researcher (Chang et al., 2020). Again, the use of questionnaire often helps respondents feel more comfortable and secure, allowing them to provide responses without apprehension (Northstone et al., 2020).

The questionnaire was made up of six (6) sections. Section A collected data on respondent's characteristics. Section B of the questionnaire also collected primary data on the forms of financial irregularities. Section C gathered data on budgeting. Section D captured data on auditing. Section E collected data on account management procedures. Section F gathered information on financial irregularities. All variables were measured on a continuous scale of 1-5. In view of that, frms of financial irregularities and financial irregularities was measured using Acquah's (2017) measurement indicators. Also, the budgeting construct was measured utilising Kenno, Lau and Sainty's (2018) research items. Further, following Alzeban (2022), auditing will be measured using six item scale. Finally, account management procedure was also measured using Abaasa-Ababio's (2015) measurement indicators.

Reliability and Validity of the Instrument

Myer, Karim, Joubert and Ehrlich (2007) discussed reliability as having the same results even if the measures were taken multiple times. Given this background, the instruments considered were derived from tested and standardized instruments to minimize random measurement error. Liu, Kuang, Yin and Hu (2017) emphasise that the purpose of assessing the reliability of a variable is to reduce errors and biases within a study. Thus, the study's variables were validated to confirm their internal consistency through Cronbach's Alpha coefficient. Henseler, Ringle and Sarstedt (2015) opined that measurement scales are considered reliable when their Cronbach's Alpha coefficient is 0.70 or higher. On the other hand, the validity of an instrument defines how research instrument measures variables it supposed to measure (Naik, Jandavath & Byram, 2016). Common sources of invalidity are selection, information and confounding bias (Myer et al., 2007). To reduce information bias, the researcher adapted survey instruments with study design with high validity levels. Again, the study also assessed validity by calculating the AVE.

Data Collection Procedure

A formal request was submitted to the administrators of SHS in the Central Region, Ghana seeking approval to conduct questionnaire administration among the staff for data collection. Following approval, a simple random sampling technique was employed to select respondents across different units and departments. A formal introduction preceded the distribution of self-administered questionnaires to the identified participants, wherein the study's purpose was explained. The questionnaire was personally handed out to on-duty staff and a mutually agreed-upon time frame was established for their submission.

Data Processing and Analysis

Evaluating the demographic characteristic of the respondents was done using Statistical Package for the Social Sciences (SPSS) version 20. Also, Partial Least Squares Structural Equation Modeling (PLS-SEM) was used to evaluate the research questions formulated. This is because PLS-SEM is flexible and effective in analysing complex relationships among variables (Ali et al., 2018; Sarstedt, Ringle & Hair, 2021). PLS-SEM is particularly suitable when dealing with small sample sizes, non-normal data distributions and when the emphasis is on predicting outcomes rather than testing complex theoretical models (Hair Jr et al., 2021).

This method allows researchers to assess both the measurement and structural models simultaneously, making it valuable for research where theoretical frameworks might not be well-established (Ramayah et al., 2018). PLS SEM's capability to handle latent variables and diverse data types along with its robustness in dealing with collinearity positions it as a preferred choice for studies seeking a powerful and adaptable analytical approach (Richter et al., 2016).

Ethical Considerations

Akaranga and Makau (2016) advanced that participants involved in research should be adequately informed about ethical considerations. This issue is crucial to enable them to respond to the questionnaire effectively. Accordingly, the researcher explained to respondents that their participation in the study is voluntary. Additionally, to safeguard their privacy, respondents will be explicitly informed not to disclose their personal information.

Chapter Summary

This chapter examines into the methodologies employed in this research. It provides a comprehensive overview of the research design, approach, study population, sampling techniques, determination of sample size, analytical methods, research instruments, considerations of validity and reliability and ethical considerations.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The study aims to assess the nexus between financial control practices and financial irregularities among second cycle institutions in the Central region of Ghana. The prior chapter provided information about the research methods employed in carrying out this empirical study. In this chapter, the results obtained demanded by the nature of the specific research objectives are first presented. The findings are then discussed and giving recognition to positions enshrined in some previous literary positions.

Demographics

The demographic characteristics of the respondents were measured descriptively via frequency and percentage. These statistical techniques were used because of the nominal level of measurement applied for the measure of these variables. The findings are presented in Table 1

Table 1: Demographic Characteristics of Respondents

Variable	Options	Frequency	Percentage
Gender	Male	77	57.9
	Female	66	42.1
Age	21-31 years	7	5.3
	32-41 years	62	46.6
	42-51 years	64	48.1
Educational Level	Diploma	10	7.5
	Bachelor's Degree	100	75.2
	Postgraduate Degree	23	17.3
Position/Rank	Headmaster	50	37.6
	Assistant	45	33.8

Table 1 Continued

	Headmaster		
	Administrator	20	15.1
	Matron	10	7.5
	Bursar	8	6.0
Years of Work	1- 10 years	16	12.0
	11 -20 years	42	31.6
	21 - 30 years	72	54.1
	31 years & above	3	2.3

Source: Field survey (2024)

The information about the demographic characteristics of respondents and their respective findings are provided in Table 1. The data reveals a predominant representation of males, constituting 57.6% of the study participants while female records 49.1%. Also, observation of the age ranges of respondents proves that most of the respondents (48.1%) are between 42-51 years. 46.6% of the respondents' falls within 32-41 years whilst 5.3% are within 21-31 years. Regarding the qualification of respondents, individuals holding Bachelor's Degrees dominate the study, comprising 72.2% of the sample. Moreover, the views held by respondents specify that Headmasters who participated in the study records 37.6%, Assistant Headmasters 33.8%, Administrators represent 15.1% Matrons denotes 7.5% and Bursars records 6.0%. Finally, the items measuring the number years respondents have worked with their respective schools revealed that 12.0% represent 1–10 years, 11–20 years signify 31.6%, 21–30 years indicate 54.1% and 31years and above denote 2.3 % (See Table 1).

Objective One: Forms of Financial Irregularities

The first aim of the study intends to identify the forms of financial irregularities in second cycle institutions. A 5-point Likert scale was used to examine the opinions of the respondents on the issues considered under the forms of financial irregularities. Based on the criteria proposed by Pimentel (2019), the interpretation of the mean scores as measures of central tendency and standard deviation was made as explained in Table 2.

Table 2: Interpretation of Rating Scale

Likert scale	Interval	Difference	Description
1	1.00-1.79	0.79	Not at all effective
2	1.80-2.59	0.79	Slightly effective
3	2.60-3.39	0.79	Moderately effective
4	3.40-4.19	0.79	Effective
5	4.20-5.00	0.80	Very effective

Source: Pimentel (2019)

The description of the mean scores for the measures of forms of financial irregularities are based on the criteria provided by Table 2 at the interval scales.

Table 3: Forms of Financial Irregularities

	Mean	Std. Deviation
Financial resources are occasionally misappropriated within my school.	3.9753	1.16165
Embezzlement of funds by staff is a concern in our institution.	3.7392	1.11769
Instances of financial mismanagement are promptly identified and addressed.	3.6606	0.94405
The school has experienced fraudulent activities related to financial transactions.	3.5794	0.95459
Our school faces challenges in maintaining accurate financial records.	3.5466	1.17373
The procurement processes in school are vulnerable to financial irregularities such as corruption and manipulation.	3.5306	1.09064

Source: Field survey (2024)

The mean of means was computed to assess the forms of financial irregularities in second cycle institutions that were surveyed in the context of the study. It was found that there are many financial irregularities in second cycle institutions (M=3.4516). This result indicates that head of schools, accountants, matrons and administrators engage in misappropriation of funds, fraudulent transactions or manipulation of financial records. The study confirms the views expressed by some earlier studies that there are financial irregularities in second cycle institutions (Abaasa-Ababio, 2015; Asare, Kong & Tampuri Jnr, 2020).

At the individual level, the findings in Table 3 show that respondents feels financial resources are occasionally misappropriated within second cycle institutions (M=3.9753; SD=1.16165). This high mean indicates that misappropriation of financial resources is a relatively frequent issue within the schools. The relatively high standard deviation suggests variability in the extent of this problem among different institutions. This finding indicates recognition that, at times, financial resources within second cycle institutions are not being used as intended, highlighting the need for vigilance, investigation and corrective actions to address these issues (Abaasa-Ababio, 2015). It has also been advanced that the misappropriation prompts a call for increased transparency, accountability and governance in the financial operations of second cycle institutions. This is because stakeholders may demand measures to ensure that financial resources are used appropriately and in accordance with established standards (Freeman, 2023).

Again, the respondents perceived embezzlement of funds by staff as a form of financial irregularities in schools (M=3.7392; SD=1.11769).

Embezzlement is a significant concern, as reflected by the high mean. The standard deviation indicates that while embezzlement is generally recognized as an issue, its impact varies across different institutions. This result suggests a heightened awareness of potential mismanagement and misuse of financial resources within these educational establishments. This finding supports the assertion that common forms of financial irregularities in second-cycle institutions include embezzlement (Abaasa-Ababio, 2015). Kumi (2015) argue that embezzlement and procurement fraud are common issues that affect second-cycle institutions and this impact their financial stability and educational quality.

Further, the study proves the respondents perceived that instances of financial mismanagement are promptly identified and addressed (M=3.6606; SD=0.94405). Schools are moderately effective in identifying and addressing financial mismanagement. The lower standard deviation suggests a more consistent experience in how swiftly issues are managed. This finding means that there is an effective and vigilant system in place to detect irregularities in the financial management of second-cycle institutions. This proactive approach indicates a commitment to transparency, accountability and sound financial governance which helps mitigate potential negative consequences and maintains the integrity of the institution's financial practices. This claim is supported by some empirical study that held that once financial mismanagement is identified, there are mechanisms in place to take swift and appropriate actions to rectify the issues, ensuring that corrective measures are implemented promptly (Acquah (2017). Boateng and Osei-Tutu (2020) noted that misreporting of expenditures and unauthorized use of funds often result from poor financial planning and inadequate auditing practices.

Additionally, the study shows that second-cycle institutions experience fraudulent activities linked to financial transactions (M=3.5794; SD=0.95459). Fraudulent activities are reported as a concern, though slightly less frequent compared to misappropriation and embezzlement. The standard deviation shows variability in the frequency and nature of such activities. This implies that there are irregularities, potentially including embezzlement, misappropriation or other fraudulent activities occurring in the handling of financial matters within these educational institutions (Akeem, 2016). The study's focus on such activities suggests a need for attention, investigation and corrective measures to address the identified issues and improve the financial integrity of the institutions (Akgün et al., 2021). Owusu-Antwi (2017) emphasized that weak financial management systems contribute significantly to these irregularities, highlighting the need for stronger internal controls.

Moreover, the study found that school faces challenges in maintaining accurate financial records (M=3.5466; SD=1.17373). Maintaining accurate financial records is a significant challenge for many schools. The high standard deviation indicates that the severity of this issue can vary widely among different schools. This result means that that the educational institution is encountering difficulties in effectively keeping and managing precise and reliable financial documentation. This could imply various issues such as errors in recording transactions, inadequate accounting practices, lack of financial transparency or challenges in implementing proper financial management systems. The phrase underscores the importance of addressing these challenges to ensure the school's financial records are accurate, transparent, and in compliance with accounting standards and regulations.

Also, the study found that the procurement processes in schools are vulnerable to financial irregularities such as corruption and manipulation (M=3.5306; SD=1.09064). Procurement processes are perceived as vulnerable to financial irregularities, including corruption and manipulation. The relatively high standard deviation suggests variability in the perceived vulnerability of procurement processes. The finding shows that there are weaknesses or susceptibilities in the way the school handles its procurement procedures. The vulnerabilities mentioned suggest that there may be instances where individuals exploit the procurement system for personal gain or to achieve improper objectives. This could involve bribery, kickbacks, favouritism or other unethical practices that deviate from fair and transparent procurement standards. The finding lends support to some prior studies that unethical practices in the procurement process such as bid rigging and favoritism are some of the financial irregularities in institutions (Asare, Kong & Tampuri Jnr, 2020). Some studies shows irregularities in procurement, compromising fair competition and resulting in inflated costs as financial irregularities (Datzer et al., 2018).

Measurement Model

The measurement model was assessed based on the criteria established by authorities in the field of PLS-SEM. Major issues considered under the measurement model include construct reliability and validity, discriminant validity and collinearity statistics.

Table 4: Measurement and Structural Model Evaluation Criteria

Structural Model	Indices
Indicator reliability	Indicator loading >0.7; p≤ 0.05 (Benitez et al., 2020)
Coefficients and effect size	Unstandardized beta f^2: Effect size values above 0.35, 0.15 and 0.02 are interpreted as strong, moderate and weak respectively (Benitez, et al., 2020)
Coefficient of determination	R^2: Results above 0.67 (Substantial), 0.33 (Moderate) and 0.19 (Weak) (Benitez, et al., 2020)

Source: Field survey (2024)

The findings are hereby presented based on the criteria established via these parameters for confirming the measurement model and the structural model in the structural model configuration.

Table 5: Construct Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Account Management Procedures	0.913	0.923	0.939	0.795
Auditing	0.869	0.871	0.910	0.717
Budgeting	0.906	0.908	0.935	0.781
Financial Irregularities	0.941	0.943	0.957	0.849

Source: Field survey (2024)

Reliability and Validity of the Structural Model

An indicator is deemed reliable if its outer loading equals or exceeds 0.7, following the criteria established by Henseler, Ringle and Sarstedt (2015). The reliability of the primary data collected via the structured questionnaire was measured with Cronbach's alpha and rho_a. The findings in Table 5 show that the primary data for the respective constructs were reliable (CA > 0.7; Rho_a > 0.7). This therefore proves the dataset used for the configuration of the model based on the manifest indicators are free from errors and are accurate for such analysis. Given this argument, the result from the analysed data as demanded by the specific research objective is deemed to be accurate and truly scientific.

Moreover, the observation of rho_c results proves composite reliability is achieved for all the respective latent constructs (Rho_c>0.07). This result signals that all the data points for the respective constructs as formed by their respective indicators are all working together to form the latent constructs considered in the study (Jumani & Muhamad, 2022). Convergent validity is equally achieved for all the respective latent constructs in the estimated model (AVE > 0.05). This basically means that the indicators for the respective latent constructs are collectively measuring such constructs succinctly.

In addition, the AVE values for each construct (latent variable) exceed the squared values of the correlations between the constructs as outlined in Table 4. This outcome underscores the achievement of discriminant validity. Notably, in Table 6, it becomes evident that each indicator is more strongly associated with its corresponding construct than with any other constructs in the model, providing additional support for the model's discriminant validity (Sarstedt, Ringle & Hair, 2021).

Table 6: Fornell–Larcker Criterion for Determining Discriminant Validity

	BUD	AUD	FI	AMP
BUD	0.689			
AUD	0.561	0.702		
FI	0.571	0.585	0.748	
AMP	0.567	0.617	0.745	0.747

Source: Field survey (2024)
Note: Budgeting (BUD), Auditing (AUD), Financial Irregularities (FI), Account Management Procedures (AMP).

Table 7: Outer loadings

Indicators	Budgeting	Auditing	Account Management procedures	Financial Irregularities
BUD1	0.866			
BUD2	0.927			
BUD3	0.896			
BUD4	0.844			
AUD1		0.843		
AUD2		0.852		
AUD3		0.857		
AUD4		0.835		
AMP1			0.794	
AMP3			0.934	
AMP4			0.943	
AMP6			0.888	
FI1				0.904
FI4				0.927
FI5				0.915
FI6				0.939

Source: Field survey (2024)

The findings in Table 7 show the indicator reliability of the configured model. Observation of the results proves all the indicators had loading > 0.7 that are equally significant (p-value < 0.05). These indicators are thus actual measures that collectively constitute the constructs that were considered in the context of this study.

Collinearity Statistics

Table 8: Outer VIF

	Outer VIF
AMP1	1.465
AMP3	1.775
AMP4	1.792
AMP6	1.65
AUD1	1.763
AUD2	1.649
AUD3	1.327
AUD4	2.393
BUD1	1.588
BUD3	1.523
BUD4	1.454
BUD6	1.832
FI1	2.077
FI4	1.459
FI5	1.272
FI6	1.979

Source: Field survey (2024)

The findings in respect of the multi-collinearity statistics are presented in Table 8. Observation of the outer VIF scores proves there is no threat of multi-collinearity in the configured and validated model (Outer VIF < 5). Hence, it is conclusive that there is no presence of more than one predictor in the estimated (Ersoy, Mahmood, Sharif, Ersoy & Ehtiyar, 2023).

Common Method Bias

Checking the common method bias was done via the VIFs. However, before the statistical test of the presence of common method bias, certain procedural steps were followed to mitigate the possibility of the occurrence of this systematic error that happens when a Likert type of scale is used for primary data collection (Becker, Cheah, Gholamzade, Ringle & Sarstedt, 2023). First, the study adopted some previously validated scales for measuring the constructs. The number of the items in the respective scales was reasonable and the items were framed with simple straight-forward statements (Aurigemma & Mattson, 2017).

The purpose of the study and the content of the scale were explained to the respondents, thereby helping to solve problems that might have arisen during the data collection process (Khoa, Hung & Hejsalem-Brahmi, 2023). Likewise, the scales were subjected to expert revision from the supervisor which essentially improved the quality of the items formulated for the scales. The results for the test of common method bias are presented in Table 9.

Table 9: Inner VIF

	VIF
Budgeting -> Financial Irregularities	1.526
Auditing -> Financial Irregularities	1.460
Account Mgt Procedures -> Financial Irregularities	1.000

Source: Field survey (2024)

The study assessed the presence of the common method bias in the estimated model. The results are presented in Table 9. The inner VIF score proves there is no threat of common method bias in the estimated model and that the respondents really read the scales thoroughly before responding to them (Inner VIF < 5). Therefore, the coefficient of determination results is free from being either understated or overstated (Abdelwahab, Wang, Parunov & Guedes Soares, 2023).

Evaluating the Research Questions

Table 10: Structural Model Results

Construct	Path coeff.	f-square	T-statistics	p-value	R^2	Q^2	VIF
BUD -> FI	0.073	0.032	3. 250	0.001	0.911	0.313	1.526
AUD -> FI	0.047	0.423	20. 735	0.000	0.911	0.313	1.460
AMP -> FI	0.856	0.410	22.113	0.000	0.911	0.313	1.000

Source: Field survey (2024)

The results in Table 10 indicate that the R^2 value in the structural model is 0.911, indicating that the model adeptly accounts for around 91% of the variances in the financial irregularities. The validation of the study's research questions was achieved through the examination of path coefficients with their associated p-values. As depicted in Table 10, the analysis reveals that there is a significant correlation between budgeting as a financial control mechanism and financial irregularities ($\beta = 0.073$, $p = 0.001$), consequently, supporting the argument that budgeting as a financial control mechanism help detect and control financial irregularities.

This finding suggests that institution that considers strengthening their budgeting processes as part of their overall strategy for financial control involve more rigorous budget planning, monitoring and evaluation to proactively address potential irregularities (Babalola, 2020). Also, the analysis implies that organisations or entities employing budgeting practices may be better equipped to identify and manage financial discrepancies or irregularities (Kagorora, 2018). The finding lends support to the position that institutions that implement better budgetary controls are better equipped to track financial transactions, minimise the risk of irregularities related to mismanagement or unethical practices (Kenno, Lau & Sainty, 2018).

Some empirical evidence stress that budgeting is an effective conduit for preventing misallocation of resources (Lee Jr, Johnson & Joyce, 2020). The scholars claimed that organisations that adhere to budgetary guidelines experience fewer instances of financial irregularities related to the misuse or diversion of funds. Also, a related study highlights that organisations with a strong commitment from top management to the budgeting process are more successful in preventing financial irregularities (Rafindadi & Olanrewaju, 2019). Other studies hold the opinion that organizations that involved relevant stakeholders in the budgeting process experienced enhanced effectiveness (Nikitina, Litovskaya & Ponomareva, 2018; Sitinjak, Johanna, Avinash & Bevoor, 2023). Thus, input from various departments and teams improved the accuracy of budgetary projections and increased ownership of financial targets. In the Ghanaian context, Adomako and Danso (2018) suggest that effective budgeting practices are essential for managing financial resources in educational institutions. Some studies show that these practices help addresses common issues like resource misallocation and financial mismanagement (Nkrumah & Acheampong, 2016; Tetteh & Nkrumah, 2018; Opoku & Danso, 2015; Kwame & Sarpong, 2018).

Again, the path coefficient ($\beta = 0.047$, $p = 0.000$) suggests a positive relationship between auditing as a financial control mechanism and financial irregularities. This outcome substantiates the position that auditing prevents financial irregularities, affirming the expected positive relationship between these variables. It can be argued that audits reduce information asymmetry, enhancing the monitoring of heads, matrons, accountants and administrators and deterring fraudulent activities (Alzeban, 2022; Aikins, Mensah & Kumi-Kyereme, 2022). Empirical studies consistently demonstrate that reduction in financial irregularities is attained through auditing (Akeem, 2016).

Prior studies in the auditing domain presents that organisations subject to regular audits exhibit a significant reduction in financial irregularities (Amoah, Bonaparte, Kelly & Makawwi, 2018). Denziana, (2015) affirm that auditing contribute to improved accuracy in financial reporting. The researcher concluded that organisations with a history of audits are less prone to misstatements, providing stakeholders with reliable and trustworthy financial information. In other arguments, auditing is noted for facilitating the timely detection of financial irregularities (Kwok, 2017).

Studies specific to Ghanaian institutions such as those by Owusu-Ansah and Ntim (2020), reveal that regular and rigorous auditing is essential for maintaining financial integrity in schools. Gyasi and Asare (2017), Boakye and Osei (2019) and Joseph (2022) emphasizes that auditing not only improves financial reporting accuracy but also strengthens accountability and transparency in financial management.

The path coefficient ($\beta = 0.856$, $p = 0.000$) indicates a positive and statistically significant correlation between account management procedures and financial irregularities. This result aligns with the study's fourth research question, proposing that an increased account management procedure is linked to detection and control of financial irregularities. The implication is this result is that a focus on enhancing account management procedures may contribute positively to the identification and prevention of financial irregularities

(Abaasa-Ababio, 2015). Thus, improved account management procedures may be viewed as a proactive approach to mitigating financial risks (Turetken et al., 2020). Agyei-Mensah and Osei (2019) results supports the finding that improved account management procedures enhance financial stability and compliance in educational institutions.

Institutions that prioritise robust account management could potentially reduce the likelihood of irregularities, enhancing financial stability and compliance. Additionally, institutions with robust account management procedures experience a notable reduction in instances of fraud and misappropriation (Abimbola, Kolawole & Olufunke, 2017). Procedures such as segregation of duties and regular reconciliation acts as deterrents that help minimise opportunities for financial misconduct (Ehioghiren & Atu, 2016). The study finding resonates with Fernandhytia and Muslichah's (2020) that organisations with effective account management procedures show enhanced accuracy in financial reporting.

Regular reconciliation and verification processes also contribute to the prevention of misstatements and errors (Julie, 2019). Again, account management procedures facilitate the early detection of financial irregularities (Kari, 2015). Kılıç (2020) revealed that instances where anomalies in financial records are promptly identified through systematic reconciliation and monitoring, it is more likely for timely corrective action to be taken. Hence, implementing stringent account management procedures by organisations, particularly in payroll management may be less susceptible to ghost workers and payroll fraud (Rehman, 2022).

Further, empirical evidence highlighted several factors contributing to the effectiveness of account management procedures in reducing financial irregularities (Uwaoma & Ordu, 2015). Thus, organisations with comprehensive internal controls including detailed account management procedures demonstrate higher effectiveness (Uwaoma & Ordu, 2015). Also, integration with broader internal control frameworks enhanced the overall financial governance structure (Volosovych & Baraniuk, 2019). The effectiveness of account management procedures is often linked to employee training and awareness (Volosovych & Baraniuk, 2019).

Opoku and Danso (2015) highlighted that schools with well-established account management systems have better control over financial transactions. Moreover, Kwame and Sarpong (2018) noted that schools with robust account management practices, including regular reconciliations and accurate record-keeping, experience fewer instances of financial mismanagement. Afriyie and Agyeman (2020) revealed that schools with stringent account management practices had improved financial transparency and reduced irregularities.

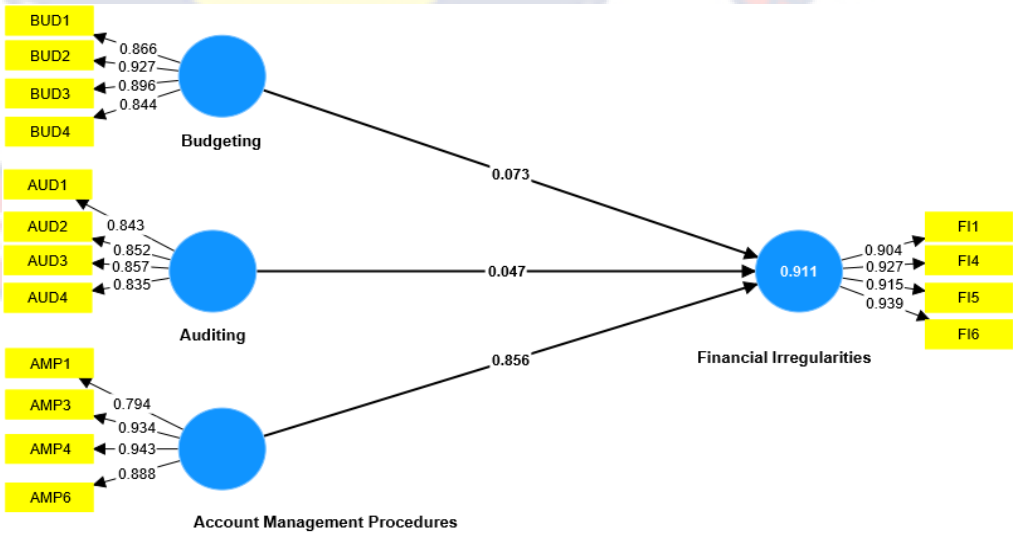

Figure 3: Path modeling and factor loading results

Source: Field survey (2024)

Chapter Summary

This chapter began by presenting the characteristics of the study participants. Furthermore, the presented on the discussions the findings regarding the study objectives and contextualizes them by comparing them with previous research.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the findings obtained from the data analysis conducted in chapter four. It then draws conclusions based on these findings and provides practical recommendations for Government, Head of Schools, Accountants, Matrons, Bursars and Administrators of second-cycle institutions in the Central Region.

Summary of the Study

The aim of this study was to assess the nexus between financial control practices and financial irregularities among second-cycle institutions in the Central Region. To achieve this principal goal, four specific objectives were formulated. Data regarding form of financial irregularities, budgeting as internal financial control, budgeting as internal financial control and account management procedures as financial control practices among second-cycle institutions were gathered in the Central Region. A sample of 133 Head of Schools, Accountants, Matrons and Administrators were selected using a simple random sampling method and they were surveyed through a structured questionnaire. This study use primary data and the analysis were conducted using PLS-SEM 4 to evaluate the research questions.

Summary of Key Findings

The findings pertaining to the specific study objectives are outlined as follows:

1. The study discovered that misappropriation of funds, embezzlement, fraudulent activities related to financial transactions, challenges in maintaining accurate financial records and procurement processes in

school are vulnerable to financial irregularities such as corruption and manipulation are the common form of financial irregularities in second-cycle institutions.

2. The study revealed that budgeting as a financial control mechanism help detect and control financial irregularities.
3. The study discovered that auditing is an important conduit in identifying and preventing financial irregularities.
4. The study found that an increased account management procedure is linked to detection and control of financial irregularities.

Conclusions

This study investigated into the relationship between financial control practices and financial irregularities among second-cycle institutions in the Central Region of Ghana. The investigation revealed several significant findings and implications. Firstly, the study identified a range of financial irregularities prevalent in second-cycle schools. These included misappropriation of funds, embezzlement, fraudulent financial activities, challenges in maintaining accurate financial records and issues in procurement processes. Corruption and manipulation emerged as the most common forms of irregularities. Empirical evidence from the study highlighted that these financial irregularities are often exacerbated by weak internal controls and inadequate oversight mechanisms

Secondly, the findings underscore the positive role of budgeting as a financial control mechanism. Schools that implemented robust budgeting practices were better equipped to detect and manage financial irregularities. Quantitative analysis showed a significant association between effective budgeting and the reduction of financial mismanagement. Institutions that prioritize comprehensive budgeting processes can enhance financial stability and integrity, demonstrating the effectiveness of budgeting in controlling financial irregularities.

Furthermore, the study confirmed that auditing plays a vital role in identifying and preventing financial irregularities. Schools with regular internal and external audits were found to have more effective financial controls and fewer instances of financial mismanagement. The empirical evidence highlights the importance of consistent auditing practices in maintaining financial accountability and transparency.

Finally, the study established a positive connection between account management procedures and the control of financial irregularities. Enhanced account management practices such as accurate record-keeping and regular reconciliations were associated with better detection and management of financial discrepancies. The study suggests that strengthening account management procedures can significantly improve financial control frameworks in second-cycle institutions.

Generally, this study provides valuable understandings into the specific forms of financial irregularities in second-cycle institutions and emphasizes the effectiveness of budgeting, auditing and account management procedures in detecting and controlling these irregularities. The findings suggest that a comprehensive approach integrating robust budgeting practices, regular auditing and stringent account management can effectively address financial irregularities and enhance the financial integrity of educational institutions.

Contribution to Knowledge, Theory, Practice and Policy

This study makes significant contributions to the understanding of financial control practices and their impact on financial irregularities in second-cycle institutions. By analysing the influence of budgeting, auditing and account management procedures, the study offers valuable insights into how these financial control mechanisms can be used to address and mitigate financial irregularities.

Contribution to theory

The findings of this study align with agency theory which posits that conflicts of interest between principals (e.g., stakeholders or administrators) and agents (e.g., financial managers or accountants) can lead to financial mismanagement. The significant correlation between budgeting and financial irregularities suggests that rigorous budgeting processes can align the interests of agents with those of principals by creating a structured framework for financial oversight and accountability. Enhanced budgeting practices reduce the opportunities for agents to deviate from prescribed financial controls, thus minimizing agency costs and improving financial integrity.

Secondly, stakeholder theory emphasizes the importance of considering the interests of all stakeholders in organizational decision-making. The study's findings that involving relevant stakeholders in budgeting processes enhances financial control effectiveness highlight the value of stakeholder involvement in reducing financial irregularities. This study highlights how engaging various stakeholders in financial planning and oversight can lead to better financial management outcomes and increased transparency.

Contribution to practice

The study underscores the importance of rigorous budgeting processes in controlling financial irregularities. Institutions that adopt comprehensive budgeting practices are better positioned to detect and address financial discrepancies. This practical insight can guide institutions in developing and implementing robust budgeting procedures that enhance financial stability and accountability. Similarly, the study's findings suggest that institutions should prioritize regular auditing to improve financial oversight and reduce instances of fraud and misstatement. This contribution to practice can help institutions design more effective audit programs that enhance financial integrity. Equally, institutions can benefit from implementing procedures such as segregation of duties, regular reconciliations and systematic monitoring to mitigate financial risks and prevent fraud. The study's practical implications provide a framework for institutions to strengthen their account management practices and improve financial control.

Contribution to policy

The findings of this study have implications for policy formulation in the education sector. Thus, policymakers can use the insights from this study to develop and enforce policies that mandate rigorous budgeting, auditing and account management practices in second-cycle institutions. By incorporating these practices into policy frameworks, governments and educational authorities can enhance financial accountability and reduce financial irregularities in schools. Likewise, the study highlights the importance of employee training and awareness in effective account management and financial control. Policymakers should consider integrating financial management training into professional development programs for school administrators and financial staff.

Such training can improve the implementation of financial control practices and support the overall financial health of educational institutions. The positive impact of stakeholder involvement in budgeting processes suggests that policies encouraging stakeholder engagement in financial planning and oversight can enhance financial control. Policymakers can promote practices that involve various stakeholders in financial decision-making to improve transparency and accountability in second-cycle institutions.

Recommendations

The study offers recommendations tailored for Government, Head of Schools, Accountants, Matrons, Bursars and Administrators of second-cycle institutions.

1. The government should develop and implement robust internal controls and oversight mechanisms to address vulnerabilities identified in the study, particularly in areas prone to misappropriation of funds, embezzlement, fraudulent activities and challenges in financial records and procurement processes. Equally, decision makers should establish and communicate clear ethical guidelines for financial practices within second-cycle institutions to foster a culture of transparency, integrity and accountability.
2. Given that budgeting practices are associated with the detection and control of financial irregularities in second-cycle institutions, the head of schools should strengthen budgeting processes by ensuring they are

comprehensive, transparent and aligned with the institution's goals and priorities. They should also implement regular monitoring and evaluation of budget performance to identify any deviations or irregularities promptly.

3. The authorities of second-cycle institutions and government should always conduct a thorough review of auditing protocols and procedures to ensure they are effective in identifying and preventing financial irregularities.
4. The authorities of second-cycle institutions and government should invest in technology and systems that facilitate efficient account management procedures including robust financial software, automation and data analytics tools. They are also entreated to conduct regular training for staff involved in account management to ensure they are well-equipped to detect and respond to financial irregularities. Finally, they should implement regular monitoring mechanisms to assess the effectiveness of increased account management procedures in detecting and controlling financial irregularities.

Suggestions for Further Research

Future study should extend to compare financial control practices and irregularities across different sectors (public and private) within the Central Region. It should assess whether sector-specific challenges or opportunities influence financial management outcomes.

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APPENDIX A: QUESTIONNAIRE FOR STAFF

Dear Respondent,

I am Stella Amoah, conducting a research on the *Nexus between Financial Control Practices and Financial Irregularities among Second-Cycle Institutions in the Central Region, Ghana*. Your valuable insights are greatly appreciated. Please be informed that your participation in this research is entirely voluntary and I will ensure the full protection of your privacy. There is no need to disclose your name, phone number, email address or any other identifying information. Rest assured that all your responses will be handled with the utmost confidentiality. Thank you for your participation.

Section A: Demographic Data

1. Gender
   - Male ☐
   - Female ☐

2. Age
   - 21-31 years ☐
   - 32-41 years ☐
   - 42-51 years ☐
   - 52 years above ☐

3. Educational Level:
   - Certificate ☐
   - Diploma ☐
   - Bachelor's degree ☐
   - Postgraduate Degree ☐

4. Position / Rank
   - Headmaster ☐
   - Assistant Headmaster ☐
   - Administrator ☐
   - Matron ☐
   - Bursar ☐

5. Please indicate the number of years you have been working with the School:
   - 1- 10 years ☐
   - 11 -20 years ☐
   - 21 - 30 years ☐
   - 31 years & above ☐

Section B: Forms of Financial Irregularities

Please rate your level of agreement with the following statements on a scale of 1 to 5, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

Items	1	2	3	4	5
Financial resources are occasionally misappropriated within my school.					
Embezzlement of funds by staff is a concern in our institution.					
Instances of financial mismanagement are promptly identified and addressed.					
The school has experienced fraudulent activities related to financial transactions.					
Our school faces challenges in maintaining accurate financial records.					
The procurement processes in school are vulnerable to financial irregularities such as corruption and manipulation.					

Section C: Budgeting as Financial Control Mechanism

Please rate your level of agreement with the following statements on a scale of 1 to 5, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

Items	1	2	3	4	5
Budgeting is an effective tool for planning financial activities in our institution.					
Regular monitoring of budgetary performance helps in preventing financial irregularities.					
Adequate resources are allocated based on the budgetary needs of different departments.					
Budgeting promotes accountability among staff regarding financial matters.					
Transparency in financial operations is a priority in our school.					
Budget reviews are conducted periodically to ensure alignment with the institutional goals.					

Section D: Auditing as Financial Control Mechanism

Please rate your level of agreement with the following statements on a scale of 1 to 5, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

Items	1	2	3	4	5
Internal audits are conducted regularly to identify potential financial irregularities in the school.					
Internal auditors have the necessary expertise to assess financial practices effectively.					
Recommendations from internal audits are promptly implemented to enhance financial controls.					
External audits provide an objective evaluation of our school's financial practices.					
The school administration actively cooperates with external auditors during the auditing process.					
External audit reports contribute significantly to improving financial control measures.					

Section E: Account Management Procedures

Please rate your level of agreement with the following statements on a scale of 1 to 5, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

Items	1	2	3	4	5
The institution strictly adheres to established account management procedures.					
Adequate oversight is exercised to ensure compliance with account management protocols.					
Training programs are conducted to enhance staff proficiency in account management.					
Financial transactions are processed in a timely manner according to account management procedures.					
Measures are in place to minimize errors and inaccuracies in financial records.					
Regular audits of account management procedures contribute to their continuous improvement.					

Section F: Financial Irregularities

Please rate your level of agreement with the following statements on a scale of 1 to 5, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

Items	1	2	3	4	5
The occurrence of embezzlement and misappropriation of funds is a significant concern in our school.					
Staff members are aware of the potential consequences of embezzling or misusing financial resources.					
The school has effective measures in place to detect and prevent embezzlement and misappropriation.					
There is a risk of fraudulent activities such as false financial reporting within our institution.					
Staff understands the importance of reporting any suspicious financial activities promptly.					
The school has implemented preventive measures to mitigate the risk of fraudulent activities.					
Financial controls such as internal audits and budgetary oversight are not consistently enforced in our school.					
Strengthening financial controls would significantly reduce the occurrence of financial irregularities in our institution.					

Thank you.