UNIVERSITY OF CAPE COAST

GOVERNANCE, FINANCIAL CONTROL AND FINANCIAL IRREGULARITIES IN SENIOR HIGH SCHOOLS IN GHANA

BY

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DECLARATION

Candidate's Declaration

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

Candidate's Signature:…….. Date…….

Name: Tony Nketiah Acquah

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

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

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ABSTRACT

The Attorney General (AG)'s report on pre-university educational institutions for the years 2010 to 2014 indicates that there is increase in financial irregularities in secondary schools in Ghana. Hence, this study sought to establish the relationship between governance, financial controls, and financial irregularity in Senior High Schools in Ghana. The study employed correlational survey design. The study population consisted of 93 Senior High/ Technical Schools in the Eastern Region of Ghana. A census of 93 schools was conducted to gather data for the analysis. In addition, secondary data from published AG's reports on pre-university eductional institutions for the years 2010 to 2013 was used as the dependent variable (financial irregularities). Correlation analysis, and ordinary least squares regression (OLS) analysis were employed as analysis techniques. The results showed that there was significant correlation between school governance (board size, r=.181; sex ratio on board, r=-.202; religiosity of board chair, r_{bi} =-.153, existence of implementation committee, r_{bi} =-.321 and experience of head teacher, r=-.131) and financial irregularities. Similarly, there were significant correlations between three aspects of financial control (use of accounting software, r_{bi} =-.222; who is responsible for budget preparation, r_{bi}=-.162 and stakeholders' involvement in budget preparation, r_{bi} = -.292) and financial irregularities. The regression analysis showed that two aspects of school governance (gender of headmaster and board size) and financial controls (accounting software) accounted for 30.3% of cash irregularities. Also, the OLS regression model showed that only one aspect of school governance (board size) explained 25% of the variance in the overall financial irregularities. It is recommended among other things, that more matured and experienced ones should be appointed as heads of institutions.

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DEDICATION

To my mother, Mrs. Anna Kwakyewa Acquah, my wife Mrs. Rosina Nketiah Acquah, and my children Vanessa, Vanel, and Vanelisa.

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LISTS OF ACRONYMS

AG	Auditor General
CDD	Centre for Democratic Development
CEO	Chief Executive Officer
COSO	Committee of Sponsoring Organisations of the Threadway Commission
DEECD	Department of Education and Early Childhood Development
GES	Ghana Education Service
GII	Ghana Integrity Initiative
GNAT	Ghana National Association of Teachers
GDP	Gross Domestic Product
GoG	Government of Ghana
IFAC	International Federation of Accountants
IIEP	International Institute for Education Planning
NAGRAT	National Association of Graduate Teachers
PTA	Parent Teachers Association
SOCPA	Saudi Organisation for Certified Public Accountants

CHAPTER ONE

INTRODUCTION

Introduction

This chapter sets the background for the study. It discusses the relationship between school governance and financial controls on one hand, and financial irregularities on the other hand, in Senior High Schools in Ghana, and advances six research objectives to determine magnitude of this relationship, and the effect of these two variables on financial irregularities.

Background to the Study

The 2006 United Nations Educational, Cultural and Scientific Organisation (UNESCO) and the International Institute for Education Planning (IIEP)'s report on governance in education shows that ensuring transparency and accountability in the conduct of both public and private affairs is a necessity in any society. In the view of UNESCO and IIEP (2006), this is mainly so for the purposes of utilizing scarce resources equitably, efficiently and effectively. Hence, 'probity and accountability' has become a common household term in Ghana. It was supposed to be the anchor on which the 1992 constitution of the Republic of Ghana was built.

The level of financial irregularities (and to some extent, corruption) is a reflection of the effectiveness of any governance system (Agezo, 2010). This is the case because those who govern an institution are the ones that set control measures which are aimed at controlling financial irregularities. Thus, an effective governance system will be reflected in effective financial controls, which is indicated by reduced financial irregularities. Therefore, high degree of financial irregularities in an institution suggest that there are weak or

nonexistent financial controls. This in turn shows that the governance system in place may not be effective. (DiNapoli, 2010). Since effective governance leads to reduced financial irregularities, and effective financial control system is due to effective governance, it follows then that the three themes (governance, financial controls and accountability) are intertwined. That is, effective governance leads to effective financial controls, which in turn results in reduced financial irregularities.

In Ghana, the government has identified investments in human capital (education and health) as an important means of achieving broad-based growth resulting in effective poverty reduction (Government of Ghana (GOG), 2005; Canagarajah & Ye, 2001, both cited by Gaddah, Munro & Quartey, 2015). In line with this, public education expenditures have increased consistently, reaching about 20 per cent of total expenditures (about 5.0 per cent of GDP) and 74.0 per cent of social spending in 2005 (Osei, Osei – Akoto, Quarmine, George., 2007, cited by (Gaddah, Munro, Quartey, 2015). How this money is spent and the quality of services it provides is critically important to us all as users of services and as taxpayers (CIPFA & OPM, 2010). Because of this we all need governance of our schools to be of a high standard. Good governance leads to good management, good performance, good stewardship of public money, good public engagement and, ultimately, good outcomes (Gaddah, Munro, Quartey, 2015).

Good governance is a set of responsibilities, practices, policies, and procedures exercised by an institution to provide strategic direction to ensure objectives are achieved and resources are used responsibly and with accountability (World Bank, 2009). Good governance practices support

schools by helping them manage their resources so they can deliver quality education. Literature has suggested that the success (effectiveness) of any school depends by and large, on strong leadership of governance (Harris, Hopkins, Hadfield, Hargreaves, Chapman, 2003 cited by Agezo, 2010). This is the case because good governance (by management) in schools provide internal control over both administrative and financial reporting by setting a standard for ethical behavior (Agezo, 2010). In contrast, poor governance gives rise to many problems (see Crouch, Winkler, & RTI International, 2009) including [a] failure of resources—books, instructional materials, construction materials—to reach the school; [b] ghost teachers; [c] high rates of absenteeism among teachers and headmasters; [d] poor teacher deployment with large differences in class size between schools; [e] low attention by teachers to students whom they are not paid to tutor; [f] wastage of resources within schools, as has been enumerated by Crouch, Winkler, and RTI International, (2009). In addition, financial misappropriation becomes very rife as a result of poor governance (World Bank, 2009).

Despite the ill-effects of poor governance in any institution, current trends indicate that governance in the public sector has been problematic not only in Africa, but even in the developed world (Prowle & Harradine, 2014). The current financial crisis in the western world attests to the failure of governance systems (Prowle & Harradine, 2014) in the various public sectors the world over. The ineffectiveness of the various governance systems employed in the public sector has resulted in a period described as financial austerity (Prowle & Harradine, 2014). Financial austerity is thought of as a financial environment where the public sectors has to operate in a situation

where the annual growth in financial resources is sometimes nil or even negative, whilst the Government attempts to enable growth in the economy at the same time. (Gaddah, Munro, Quartey, 2015)

Although the Ghanaian Public sector has almost all the governance principles and mechanisms, in terms of organizations, structures, policies, legislations, values and systems, that ensure citizens' participation and the operation of the rule of law (Katsriku, 2012), the essential conditions for public governance to produce results are weak. Many public service organizations still do not have well-designed organizational structures depicting clearly-defined roles and responsibilities based on their mandate and specific functions (Katsriku, 2012). This has often led to overlapping functions between two or more organizations (Katsriku, 2012), and the overlapping of roles amongst different staff members of the same organization. Hence, it is very difficult to hold any one person responsible for irregularities occurring as a result of weakened governance and control systems. Therefore, financial irregularities have been and continues to be a major issue in the Ghanaian public sector.

The situation is same in the Public secondary schools. This is apparent from the various financial malfeasance reported by the Auditor-General in recent years. For example, the Auditor-General's report on pre-university schools in Ghana has indicated massive financial misappropriations in several aspects over the past years (see Auditor-General, 2008, 2010, 2011). There have been reported cases where some heads of senior high schools in Ghana have been indicted and investigated by the Economic Organization on Organized crime (EOCO), such as the case of the Adisadel college in Cape

Coast in 2014 (myjoyonline, 2014). The flourishing nature of financial mismanagement may indicate ineffective financial controls, which in turn indicates poor governance of secondary schools. To function effectively and efficiently, all institutions need sound and effective systems of financial controls (Jones & Jones, 2008). This is so because despite the best of intentions, most people make mistakes. The mistakes may be errors in the end results of their work, needless inefficiencies in achieving those end results, or both (Anderson, 1977 cited by Jones & Jones, 2008). Sometimes, without the best of intentions, a few people deliberately falsify. Any organization wishing to conduct its business in an orderly and efficient manner and to produce reliable financial accounting information, both for its own and for others' use, needs some controls to minimize the effects of these endemic human failings. The purpose of financial controls therefore is to ensure that people involved in school decision making and stakeholders generally could use the information obtained from a school's accounting system with confidence. Without adequate financial controls, management has little assurance that its goals and objectives will be achieved (DiNapoli, 2010). Properly designed and functioning financial controls reduce the likelihood that significant errors or fraud will occur and remain undetected (DiNapoli, 2010). Financial controls also help ensure that departments (other than the main finance office) are performing as expected.

Despite Ghana's effort to fight abuse of public office for personal gains, financial embezzlement (corruption) has bedeviled the public sector (Pabia, 2013) including secondary schools. This has been evident from several surveys (e.g. CDD, 2000; GII, 2011 both cited by Pabia, 2013) and reports

(e.g. the AG's reports). For example, a careful review of the Auditor-General's report on pre-university education from 2010 to 2013 gives some interesting revelations. In 2010 alone, the Auditor-General's report on pre-university schools revealed that there was approximately about GH₵7,000,000.00 misappropriated funds in senior high schools. The Eastern region alone accounted for nearly GH₵2,000,000.00 of this amount (over 28% of total amount misappropriated). In 2011, the same report revealed that nearly GH₵13,000,000.00 was unaccounted for, with the Eastern region accounting for over GH₵4,000,000.00 of this figure (over 31% of the total, and almost 100% increase over the previous year's). This represented an increase of over 85% over the previous year (2010). In 2012, some GH₵25, 000, 000.00 (almost 100% increment over the preceding year's) could not be accounted for, with the Eastern region once again accounting for the largest portion (GH₵6,300, 000.00 representing over 25% of the total, and and increase of over 57% of the preceding year's). Finally, nearly GH₵16,000,000.00 was mismanaged in 2013, with the Eastern region accounting for GH₵6, 300, 000.00 (over 39%; no increment) (see Appendix A for the Auditor-General, 2010, 2011, 2012, 2013). Table 1 gives a snapshot of percentage increments of irregularities in each of the ten regions over the four year period under consideration.

Table 1: Percent Increment in Financial Irregularities

2010	REGION	AMOUNT (GH¢)	% OF NAT. TOTAL	2011	REGION	AMOUNT (GH¢)	% OF NAT. TOTAL
1	**ER**	**1,919,791.53**	**28.65**	**1**	**ER**	**4,067,676.92**	**31.81**
2	AR	1,247,444.20	18.62	2	AR	2,619,403.74	20.49
3	CR	1,180,479.82	17.62	3	VR	1,699,171.25	13.29
4	WR	558,970.97	8.34	4	WR	1,031,782.78	8.07
5	UWR	468,442.44	6.99	5	BR	794,358.13	6.21
6	BR	418,805.45	6.25	6	CR	709,592.33	5.55
7	VR	355,663.61	5.31	7	UWR	607,572.13	4.75
8	GR	221,108.02	3.30	8	NR	493,417.60	3.86
9	UER	198,213.80	2.96	9	GR	444,092.38	3.47
10	NR	120,873.98	1.95	10	UER	319,559.10	2.50
	TOTALS	**6,699,793.32**				**12,786,626.36**	

2012	REGION	AMOUNT (GH¢)	% OF NAT. TOTAL	2013	REGION	AMOUNT (GH¢)	% OF NAT. TOTAL
1	**ER**	**6,276,108.50**	**25.43**	**1**	**ER**	**6,248,854.58**	**39.08**
2	GA	2,876,925.75	11.65	2	AR	2,901,330.04	18.15
3	NR	2,558,965.27	10.37	3	WR	1,236,419.32	7.73
4	VR	2,432,787.90	9.86	4	CR	1,048,878.58	6.56
5	UWR	2,213,336.55	8.97	5	NR	1,029,662.87	6.44
6	AR	2,198,227.68	8.91	6	GA	989,254.30	6.19
7	BR	1,919,927.02	7.77	7	BR	930,132.24	5.82
8	WR	1,518,183.44	6.15	8	VR	749,908.88	4.69
9	CR	1,359,004.88	5.51	9	UWR	449,237.46	2.81
10	UER	1,327,048.11	5.38	10	UER	404,036.44	2.53
	TOTALS	**24,680,515.09**				**15,987,714.75**	

Statement of the Problem

The AG's report indicates that generally, there is increase in the amount of misappropriated funds in secondary schools in Ghana. In addition, Eastern region tops the list in all the four years under review. The situation is the case despite the fact that there is existence of internal financial controls regulated by the Financial Administration Act, Procurement, Internal Audit Agency Acts, which is an indirect application of financial control frameworks such as the COSO Framework. The increase in amount of misappropriated funds in the schools suggests weak financial controls, which is a reflection of the ineffectiveness of some aspects of governance in the schools. However, to the best of the knowledge of the researcher, there is no known literature which has discussed the relationship between these three variables (governance, financial controls, accountability) in the context of secondary schools in Ghana. Several of the research have either focused on just one aspect of these three variables in relation to schools. For example Agezo, (2010) considered the governance aspect in junior high schools (see also Bush & Oduro, 2006) , whiles Prempeh, Twumasi, & Kyeremeh, (2015) considered financial controls in Polytechnics. However, since the three components (governance, financial controls and accountability) are interwoven and one area affects the other, any study which considers just one aspects of these without controlling for the effects of the others may not present a holistic picture of the trends and causes of misappropriation. In several other cases, the studies have focused on institutions other than schools such as NGOs (e.g. Fiador, 2015) and Metropolitan, Municipal and District Assemblies (e.g. Prempeh et al., 2015)Yet, available data indicates that the public expenditure on education is

the largest of all public expenditures year on year. For example, in 2012 and 2013 (two of the years under review), government expenditure on education (% of government expenditure), was 21.70 and 37.69 respectively (UNESCO, 2013). The Ministry of Education alone consumed 30 percent of the 2015 budget (equivalent to 6% of GDP), leaving 70 percent of the total budget for 22 remaining ministries (Business & Financial Times, 2015). The public expenditure on education is the highest compared to all other sectors within the economy of Ghana. In studies that might have touched on the all three variables, the setting has always been outside of Ghana. For example, Mestry, (2006) considered financial accountability in relation to school governance and financial controls in public schools in South Africa. These studies did not attempt to establish how the various components of school governance is related financial controls and financial irregularities. It is opined here that, for any meaningful policies to be drawn which will be effective in dealing with financial malfeasance in senior high schools in Ghana, the key factors which contributes to explaining the observed misappropriations must be established. It is against this background that this study sought to examine the relationship between governance, internal controls and financial irregularities in SHS in Ghana.

Purpose of the Study

The purpose of this study is to examine the effects of governance and financial control on financial irregularities in Senior high schools in Ghana.

Specific objectives

In order to achieve the above general objective, several specific objectives will be considered. These are:

1. Examine the relationship between aspects of governance (gender and experience of head and bursar, board characteristics, existence of implementation committee) and financial irregularities.
2. Determine the relationship between financial controls (use of accounting software, presence of internal auditor, who is responsible for reviewing the internal auditor's report, who is responsible for budget preparation, whether all stakeholders are involved in the budget preparation, and whether or not financial information is provided to parents during PTA meetings) and financial irregularities.
3. Determine the best predictors of financial irregularities (cash, payroll, procurement, or tax).

Hypotheses of the Study

The following two main hypotheses were set to guide the study. These hypotheses were tested at 0.05 alpha levels. The hypotheses were**:**

1. Hypothesis 1

   H_o: there is no significant correlation between all aspects of governance and financial irregularities

   H_1: there is significant correlation between aspects of governance and financial irregularities

2. Hypothesis 2:

   H_o: there is no significant correlation between all aspects of financial control and financial irregularities

   H_1: there is significant correlation between aspects of financial controls and financial irregularities

Significance of the Study

Financial irregularities is known to be influenced by several determinants. In the Ghanaian context, however, there is no known literature that estimates the most influencial determinant of financial irregularities in SHS. Therefore, this study will fill this information gap by predicting the best determinants of financial irregularities in the SHS. This will help the Ghana Education Service, the agency responsible for SHS management, to develop effective strategies to control financial irregularities in the schools in Ghana. For example, the study will help to determine which gender of headteacher is effective in controlling financial irregularities.

Organisation of the Study

This thesis is organized into five chapters. Chapter one consists of the background to the study, the statement of the problem, the objectives of the study, hypotheses, and the significance of the study. Chapter two provides a reviewed of relevant literature including financial controls as a component of internal controls, school governance, and financial irregularities. The fraud theory, and the agencification theory, as related to the objectives of this study are also discussed. Finally, a conceptual framework was developed to guide the study. Chapter three presents the research methodology which includes the study areas, research design, population, sample and sampling techniques, research instruments used, data collection and analysis procedures. Chapter four presents the results and discussion of the analyzed data based on the specific objectives of the study

Finally, the chapter five provides summary, conclusions and the recommendations based on the findings of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

This chapter reviews guiding principles of financial controls, governance, and financial irregularities in senior high schools in Ghana. Theoretical backgrounds are discussed and empirical evidence provided where appropriate to put the review in perspective.

Theoretical Review

The foundation of internal control systems of organizations and institutions

In order to measure effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations in any school, a proper benchmark is required. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) is a voluntary private-sector organization dedicated to providing guidance on organizational governance, business ethics, internal control, enterprise risk management, fraud and financial reporting (Larry, 2014). COSO established a common internal control model that is used by large and small reporting entities. Hence, in this review, the guiding principles designed by COSO was used to measure the reliability of financial reporting, compliance with applicable laws and regulations and effectiveness and efficiency of operations of the internal control systems of Senior High Schools (SHS) in Ghana.

Internal Control

The framework of checks and balances to ensure that the assets of a school are safeguarded, that the accounting information produced is accurate

and complete, and the information obtained from the school's accounting system can be relied upon is the idea of internal control system of a school (Stagl, 2006). Internal control system is the whole system of control, financial or otherwise, established by the management in order to carry on the business of the enterprises in an orderly and efficient manner, adherence to management's policies, safeguard the asset and secure as far as possible the completeness and accuracy of the records (Jokomba, 2006).

In other words, internal controls are activities or procedures designed to provide reasonable assurance that operations (whether financial or otherwise) are going according to plan (DiNapoli, 2010). Internal control system is an accounting function and responsibility (Lunenburg, 2010). It is to ensure that people involved in school decision making and stakeholders generally could use the information obtained from a school's accounting system with confidence. Without adequate internal controls, management has little assurance that its goals and objectives will be achieved (DiNapoli, 2010). Properly designed and functioning internal controls reduce the likelihood that significant errors or fraud will occur and remain undetected (DiNapoli, 2010). Internal controls also help ensure that departments (other than the main finance office) are performing as expected.

Internal controls (of a school) is divided into three areas: administrative controls, accounting controls, and operational controls (Jokomba, 2006; Kurz & Rhodes, 2003). Administrative controls deal with the operations of the school, whereas accounting (financial) controls deal with (financial) accounting for such operations (Jokomba, 2006; Kurz & Rhodes, 2003). Operational controls in addition, is directed at day-to-day operations,

functions and activities to ensure that the operation is meeting the business objectives (Jokomba, 2006). Nevertheless, financial control may (and does) overlap with administrative controls. Financial control is therefore a subset of internal control system. In each of these three areas, there are both formal and informal forms of control (Tsamenyi, Noormansyah, & Uddin, 2008). Whiles the formal form consist of high levels of output and process controls such as budgeting, performance measurement, incentive systems and other administrative roles, the informal controls consist of high levels of professional and cultural controls such as laws, norms, ethics, etiquette, and customs, which define behavior (Tsamenyi et al., 2008). It has been shown that in developing countries such as Ghana, the use of informal controls have been found to be more prevalent (Tsamenyi et al., 2008). It appears that such societies that still cling to strong social norms such as honesty still have strong internal controls within the schools. On the other hand, societies that have weaken their defenses of morals have sort to find loopholes even in the most stringent formal internal control mechanisms.

Different authors identify seemingly different types of a good internal control mechanism (e.g. Lunenburg, 2010; Smith, 2006; Stagl, 2006). Generally, however, there are about eight types of a good internal control system. These include organization, segregation, personnel, management controls, and supervision (Lunenburg, 2010; Stagl, 2006). In addition, there is physical control, arithmetical accounting controls, and delegation, authentication, and approval control mechanisms (Stagl, 2006).

Types of internal control system

There are about eight major types of a good internal control mechanism. These are reviewed below.

Organization

Formal organization should be clear and should include clear definitions of job responsibilities (Lunenburg, 2010; Stagl, 2006). Definitions of job responsibilities must be in a written format (Stagl, 2006). These should define unambiguously to whom the holder of each position reports and the inter-relationships between job functions (Stagl, 2006). This is to prevent both inefficient overlapping of functions and the avoidance of responsibility in some areas. The organization of functions is the responsibility of the schools' administration (Lunenburg, 2010). This demonstrates the overlap of administrative control with financial controls.

Segregation of duties

No one person or department should control all phases of a transaction cycle such as the functions of authorizing transactions, recording transactions and maintaining custody over assets (Akyaa, 2011; DiNapoli, 2010; Stagl, 2006). The idea is to reduce the risk of intentional manipulation or accidental error. In addition, segregation of duties increases the element of checking of work.

Personnel

Recruitment of all potential employees should include interviewing, obtaining and confirming all their references (Akyaa, 2011). In addition, heads of institution should ensure administrative staff are fully informed and have sufficient knowledge and expertise to follow the approved policies and

position descriptions (DEECD, 2013). This objective could be obtained through training programs, professional development courses and rotation of duties in larger schools (DEECD, 2013).

Management control

These are the controls exercised outside the day-to-day system routine, which includes overall supervisory controls, review of management accounts, comparisons with budgets, internal audit and any other special review procedures (Akyaa, 2011; Stagl, 2006).

Supervision

A good system of internal control must include provision for supervision of transactions and record keeping (Stagl, 2006). This means that all members of staff should be supervised and their work reviewed to ensure that work done is of required standard and procedures being adhered to (Akyaa, 2011). A good system of supervision can be facilitated by an internal checking system, where the work of one person automatically checks that of another (DEECD, 2013). For example, the check drawn to pay for supplies and materials should be co-signed by a second employee who verifies the accuracy and legitimacy of the transaction (Lunenburg, 2010). Proper supervision could be strengthened by a system of spot checking random areas at regular intervals to ensure correct compliance with the control system (Stagl, 2006). Ultimately, however, the responsibility that controls are in place and compliance is being achieved rests with the headmaster (Stagl, 2006). Hence, any monetary malfeasance that results from failure on the part of the headmaster to play his supervisory role efficiently and effectively will be his responsibility.

Physical Control

These are measures that are taken to safeguard assets, including property, stores, cash and buildings (Stagl, 2006). The aim is to limit access to physical assets to authorised persons only (Akyaa, 2011). Physical control includes safeguarding records such as ledgers, computer programs, and data files.

Arithmetical accounting controls

These are the controls within the record keeping function and are designed to provide reasonable assurance that all transactions have been properly authorised, all data is accurately recorded ensuring no transactions are omitted, and accounting records are reconciled with independently provided information, such as the bank statement (DEECD, 2013). The financial security of the school is dependent upon the safe collection and banking of money, and best practice procedures must be in place to safeguard receipts and ensure that all money collected is recorded on the bank deposit slip and banked promptly (DEECD, 2013).

Delegation, Authorisation and Approval

There should be a School Council (student representative council) that provides the delegation of authority to incur and to authorise expenditure (DEECD, 2013). All transactions should be authorised or approved by a responsible person who is familiar with the program budget requirements. Limits to amounts that may be authorised should be set and observed after approval by School Council (DEECD, 2013)

Components of Internal Control System

The Internal Control—Integrated Framework developed by COSO in 2013 defines the components of internal control systems and provides criteria for evaluating internal controls of an institution (Larry, 2014).

There are five components of an effective internal control system, which serve as benchmarks for evaluation of the effectiveness of any internal control mechanism. These are the control environment, risk assessment, control activities, information & communication, and monitoring (DiNapoli, 2010; Larry, 2014). Each of these components is interrelated. Yet, each component is unique. However, the overall success of a system of internal controls is dependent on how effectively each of these elements functions, and how well they are coordinated and integrated with each other (DiNapoli, 2010).

The control environment

The control environment is the medium that spreads the organization's commitment to ethical and honest behavior (DiNapoli, 2010). In addition, it shows the commitment of an institution towards effective internal controls and proper financial reporting (DiNapoli, 2010; Larry, 2014). It affects (either positively or negatively) the entire organization and all other elements in the framework (DiNapoli, 2010; Larry, 2014). The governing board, chief executive officer and the entire management team all contribute to creating a positive control environment (DiNapoli, 2010). Hence, in Senior High Schools, "the tone" of the schools' board of directors and the school's management (the head and assistants) provides the control environment for other employees. That is, the schools' boards of directors, and managements'

(school heads) attitudes, values and behaviours set the tone, or provides control environment for other employees. However, an internal control is created at virtually every departmental level by the heads of such departments. Each higher ranked official in turn provides a control for the subordinate. Thus, the idea of an internal control system is to some degree, everyone's responsibility as has been opined by (Smith, 2006).

The control environment is a high-level indicator of how seriously management takes its responsibility for internal controls and how well management is meeting this responsibility (DiNapoli, 2010). It has been shown to have a pervasive influence, which affects all the school's business decisions and activities.

Risk assessment

The central theme of internal control is (1) to identify risks to the achievement of an organization's objectives and (2) to do what is necessary to manage those risks (Smith, 2006). In other words, risk assessment is the identification of points in the company's business processes where internal control is important (Freedman, 2015). This includes the actions taken by a school to determine any situations that may pose legal or financial risk to the firm (Henderson, 2015). For example, an accountant may audit the financial records of the business (school) to ensure that all accounting practices are sound (Henderson, 2015). In addition, risk assessment involves identifying risks to the effectiveness and efficiency of financial and service operations, to the reliability of financial reporting, and to compliance with laws and regulations (Akyaa, 2011; DiNapoli, 2010).

Types of risk assessment

Risk assessment of an organization could be classified as inherent risk (IR) assessment, control risk assessment (CR), or detection risk (DR). The nature of IR and CR has to do with the institution's internal and external aspects. They are also linked to the overlapping areas whereby a distinction of both aspects is difficult to be made by the firms' organizational boundaries. All these aspects are also crucially affecting the firms' strategy making process. Therefore, they provide intersection points between the audit processes and the firms' strategic management agendas.

Inherent risk (IR) assessment

An IR is the risk posed by an error or omission in a financial statement due to a factor other than a failure of control. In a financial audit, inherent risk is most likely to occur when transactions are complex, or in situations that require a high degree of judgment in regards to financial estimates (Hui & Fatt, 2007).

The IR assessments is considered at two levels: (i) the financial statement level when the auditors develop over- all audit plan and (ii) The account balance and the class of transactions level as the auditors develop audit programs (Hui & Fatt, 2007). At the financial statement level, the auditors examine the macro aspects of the firms (schools) such as management integrity, knowledge and competences to sustain corporate earnings that affect the preparation of financial statements (Hui & Fatt, 2007). The management could be under-pressured to manipulate the financial statements if the earning results do not live up to stakeholders' expectations or the firms' do not have sufficient capital to fulfil obligations falling due (Hui & Fatt, 2007).

On the organizational external ends, the nature of the firms' business and the industry in which they operate are of interests to the auditors. The interactive forces of technological advancement, power of suppliers and buyers, threat of new entrants, products substitution, and rivalries intensity collectively shape the industrial competitive structures and the firms' corporate earnings (Hui & Fatt, 2007). At the account balance and the class of transactions level, the individual components of the financial statements susceptible to misstatements are the key items that the auditors would like to consider in the IR assessments. Certain accounts balances and transactions are complex. The determination of their final acceptable figures in the financial statements requires professional judgments and organizational internal sources. Often, external expertise from solicitors and surveyors are required to establish the value of some specialized yet subjective assets, liabilities and complex transactions. Adequate assessments of the IR are beneficial to both auditors and their clients. If the IR is low, then less substantive testing is required on the organizational systems and controls of the clients' entities. The auditors can then direct audit attentions to more risky areas. The clients could be informed earlier where the duly corrective actions are required on the risky operations through an interim management letter

Control risk assessment

Control Risk (CR) is the risk of a material misstatement in the financial statements arising due to absence or failure in the operation of relevant controls of the entity. Control risk is considered high where the audit entity does not have adequate internal controls to prevent and detect instances of fraud and error in the financial statements. Assessment of control risk may be

higher for example in case of a small sized entity in which segregation of duties is not well defined and individuals who do not have the necessary technical knowledge of accounting and finance prepare the financial statements. The CR assessments entail the auditors to obtain an understanding of, and perform a manipulation check on, their clients' accounting systems and internal control mechanisms (Hui & Fatt, 2007). The ability to recognize and select relevant information in a complex judgment process is a hallmark of superior performance achieved by experienced auditors (Hui & Fatt, 2007). The complexity of accounting systems varies from one organization to another. The systems can play a crucial role in formulating teamwork strategies and tailoring organizational internal reporting and external disclosure mechanisms to the needs of the firms and markets (Rahman, 2002). In the CR assessments, the auditors will seek to identify their clients' accounting and corporate financial reporting processes from the transaction initiation to the inclusion of the transaction in financial statements (Hui & Fatt, 2007). Proper accounting systems should provide orderly assembly of accounting information for timely and accurate preparation of the financial statements while aligning both interests of the firms' internal and external stakeholders (Hui & Fatt, 2007).

Detection risk (DR)

Detection Risk is the risk that the auditors fail to detect a material misstatement in the financial statements (Ali, 2013). An auditor must apply audit procedures to detect material misstatements in the financial statements whether due to fraud or error (Ali, 2013). Misapplication or omission of critical audit procedures may result in a material misstatement remaining

undetected by the auditor (Ali, 2013). Some detection risk is always present due to the inherent limitations of the audit such as the use of sampling for the selection of transactions (Ali, 2013). Auditors can reduce detection risk by increasing the number of sampled transactions for detailed testing.

Control activities

The third component of an internal control system is the control activities. Control activities are the policies and procedures designed by management to help ensure that the organization's objectives and goals are not negatively impacted by internal or external risks (DiNapoli, 2010). In other words, Control activities are those actions that are taken to address risks that threaten the entity's ability to achieve its objectives, one of which is reliable financial reporting (Smith, 2006). Control activities are usually supported by (1) a policy that established what should be done, and (2) the procedure that implements the policy (Smith, 2006).

Some common and important control procedures are bank reconciliations and the review of those reconciliations by supervisory personnel; segregation of duties so that no one person controls all phases of a transaction cycle; daily deposit of cash receipts; frequent password changes; and limiting access to check stock, signature plates and wire transfer software. Control procedures can also be used to keep costs as low as possible (DiNapoli, 2010). A common procurement control procedure is to require oral or written quotes for purchases not subject to competitive bidding (Rubino & Vitolla, 2014). This procedure is used to lower the risk that cost conscious purchases will not be made. Control activities are performed at all levels of the entity, at various stages within business processes and must also include the IT

(Rubino & Vitolla, 2014). They may be preventive or detective in nature and may encompass a range of manual and automated activities such as authorizations and approvals, verifications, reconciliations and business performance reviews. Segregation of duties is typically built into the selection and development of control activities. Where segregation of duties is not practical, management selects and develops alternative control activities (COSO, 2013). The framework, which associates three principles to this component (Principles 10-12), requires a clear cut management to determine the relevant business process and to considers at what level control activities are applied and how they address the issue of segregation of duties. At the same time, management must determine whether duplicates of control activities can be eliminated and must identify opportunities to implement preventive control activities earlier in the business process. In addition, the framework considers relevant the account reconciliations, which are a part of the financial reporting process. These reconciliations require a critical control activity for reducing the risk of material misstatement in the financial statements; management should decide, then, to implement a partial automated process. According to COSO, the organization must take into account general control activities over technology. In this context, activities related to the understanding of technology dependencies are considered relevant, whereas they evaluate end-user computing processes, as well as those relative to period-end reporting. Management must also take an interest in the IT infrastructure configuration to support restricted access and segregation of duties and to define appropriate access rights for financially significant applications and processes. Last but not least, the development and

documentation of policies and procedures and their reassessment, as well as the establishment of responsibility and accountability, which become important elements for the control activities.

Information and Communication

For the component related to Information and Communication, COSO associates three principles (Principles 13-15) that highlight the importance of the quality of information and adequacy of communication processes (Rubino & Vitolla, 2014). Since controlling risk is the responsibility of all managers and department heads, information about identified risks and the means of controlling those risks needs to be communicated to all who are responsible for mitigating those risks (DiNapoli, 2010). Management obtains or generates and uses these relevant quality information from both internal and external sources (such as auditors, customers and vendors) to support the functioning of other components of internal control (Larry, 2014; Rubino & Vitolla, 2014). Communication is that continual and iterative process of providing, sharing and obtaining the necessary information. Communication may take the form of policy and procedure manuals, instructional memos and oral communications (Larry, 2014). For smaller entities, communication will often be verbal, face to face and directed by the owner or a manager. Internal communication is the means by which information is disseminated throughout the organization, flowing up, down and across the entity (Rubino & Vitolla, 2014). Thus, the three identified principles require attention to the following aspects.

Management should evaluate business activities to identify information requirements and should enhance information quality through a data

governance program (Rubino & Vitolla, 2014). In this component, a crucial role is played by the Chief Information Officer (CIO) who, through data and information life cycle (input, processing, output and storage), must be able to identify, protect, retain and validate financial data and information. At the same time, the framework shows that in addition to the quality of the information, there is the need to develop an appropriate process of communication. Senior management should communicate information about the company's financial reporting objectives, financial control requirements and internal control policies and procedures. In addition, management should communicate how they support individual responsibilities through a variety of communication channels (COSO, 2013).

For an effective communication, the communication system should allow information to flow in all directions throughout the organization to lessen the chance of misunderstandings (DiNapoli, 2010). Information about daily activities may flow across the organization (DiNapoli, 2010; Rubino & Vitolla, 2014) from employees who develop the information to those who need the information. The rank-and-file employees may identify problems at the lower levels of the organization, if the information is not allowed to flow back up to those who are responsible for making corrections, managers will not receive needed information on time (DiNapoli, 2010).

As part of the information and communication system, it is important to inform all employees that control responsibilities are to be taken seriously (DiNapoli, 2010). Each employee should understand his or her role in the internal control system, as well as how their individual activities relate to the work of others (DiNapoli, 2010). Employees also need to know that they have

a responsibility to communicate problems they notice in the performance of their duties.

Monitoring of controls

Monitoring of controls is a process to assess the effectiveness of internal control performance over time (Al-Thuneibat, Al-Rehaily, & Yousef, 2015). It involves measuring the effectiveness of controls on a timely basis and taking necessary corrective actions (IFAC, 2012b; COSO, 2011; SOCPA, 2010). Management's monitoring of controls includes considering whether they are operating as intended and that they are modified as appropriate for changes in conditions (Al-Thuneibat et al., 2015). Monitoring is important because internal controls are processes, thus may need modifications over time (Affum, 2011). This could be achieved through regular supervision and management activities such as monitoring of customer complaints as well as periodic audits by internal auditors (Affum, 2011). Several previous research has discussed many monitoring techniques that provide reasonable assurance regarding the role of monitoring in prompting performance (e.g. Kiabel, 2012; Aigbe & James, 2011; Bejide, 2006). Monitoring of controls may include internal auditors' evaluation of sales personnel's compliance with the entity's policies on terms of sales contracts, and the legal department's oversight of compliance with the entity's ethical and legal requirements (IFAC, 2012a; 2012b; Aigbe & James, 2011). Monitoring has been argued by some authors to be a key technology in the commercial lending business model (e.g. Aigbe & James, 2011), and the theoretical literature in finance suggests that monitoring is value enhancing (Al-Thuneibat et al., 2015). For example, Aigbe and James (2011) have indicated that banks, which devote more resources to monitoring,

are more profit efficient and the effect is large. In parallel, Bejide (2006) argued that an effective internal audit service in particular could help reduce overhead, identify ways to improve efficiency and maximize exposure to possible losses from inadequately safeguarded company assets, all of which can have a significant effect on the bottom line. Most internal audit professionals argue that an effective internal audit function correlates with improved financial performance (Kiable, 2012).

However, Kiable (2012) found no strong association between internal auditing practices and financial performance. In addition, he found that political influences do not significantly affect this relationship. The weak association between internal auditing practices and financial performance had been attributed to these enterprises' inadequacy and poor implementation of internal auditing practices. Where internal auditing is de-emphasized, it cannot impact positively on performance (Al-Thuneibat et al., 2015).

Financial controls

Financial control is a subset and the second arm of internal control system, (administrative controls is the other) (Kurz & Rhodes, 2003). Financial control measures are those measures that is put in place to ensure that financial related assets or properties of an organization are safeguarded, either from externals or employees of an organization from any threat whatsoever, whether by theft, loss or misappropriation (intentional or otherwise) (Jokomba, 2006). Simply put, financial controls are those policies, procedures practices and organizational structures which are implemented to reduce financial risk to the organization (Jokomba, 2006). Financial controls are developed to provide reasonable assurance to management that the

organization business objectives will be achieved and risk prevented, or detected and corrected.

According to the Financial & Accounting Instruction for Secondary Schools, Training Colleges and Educational Units (FAI), section 15, an effective controls must include daily reconciliation of cash with cash book balance, monthly balance of cash book and bank reconciliation (Akyaa, 2011). Ensuring compliance of this policy is the duty of the headmaster and the bursar (Akyaa, 2011). These control measures are in line with principles of effective financial controls of any institution (Shapiro, 2008). In all however, there are five basic principles for evaluating effective financial control system of an organization (Shapiro, 2008). These are

1. Setting up a bookkeeping system
2. Designing Financial Policies
3. Keeping the books
4. Defining roles in financial control & accountability and
5. Auditing

Setting up a bookkeeping system

Bookkeeping is the system for keeping the records, or books, of all the money that comes into your organization (school) and all the money that goes out of it (Shapiro, 2008). Senior high schools need proper bookkeeping system so that key stakeholders can understand exactly what the financial position of the organization is, monitor income and expenditure against budget, and for accountability and transparency (Shapiro, 2008). In addition, bookkeeping helps to plan financially and for security (prevent loss of money because of mismanagement, corruption or theft) (Shapiro, 2008).

A competent bookkeeper or accountant employed by the organization should set up the bookkeeping system (Shapiro, 2008). Hence, in line with the FAI policies, this should be the responsibility of a qualified accountant (bursar) of the school. Nevertheless, a bookkeeping system could be set up by someone who offers a bookkeeping service to a number of organizations (Shapiro, 2008).

Every effective bookkeeping system must have a bank account with a cheque book, and a daily record system with receipts and petty cash vouchers (Shapiro, 2008). In addition, a monthly record system with a petty cash book and a cashbook (manual or computer) for recording and analysing income and expenditure, and a format for annual financial statements (Shapiro, 2008) must be captured in the bookkeeping system.

In addition, a framework for the bookkeeping system (Shapiro, 2008) must be developed and adhered to. This includes determining the headings under which the financial information is summarized (the chart of accounts), and the way in which expenditure and income are allocated (Shapiro, 2008).

In order to simplify the processes of entering and adding up of data in a bookkeeping system, a computerized bookkeeping system could be adopted (Shapiro, 2008). Hence, it has been indicated by certain experts (e.g. Shapiro, 2008) that computerization is probably the best route to go, unless an institution's books are very simple and your transactions very few.

This suggestion could be a serious cause for concern because several accountants in the various secondary schools in Ghana have no or little computer skills. In addition, several less-endowed schools have no computers for keeping their institutions' books.

Finally, every good bookkeeping system must be coupled with a good filing system (record keeping). Proper record keeping must include Bank statements, filed in date order, Deposit slips, filed in date order, and Cheque requisitions, filed in number order. Cheque requisitions must be filed together with invoice, the paid cheque, and other relevant documents such as a travel voucher. Further, Cash receipts in pre-numbered carbonized books should be used, and current and used receipt books should be kept in a safe and convenient place.

After setting up a proper bookkeeping system, what is done with that system is an entirely different benchmark for measuring efficiency of the system. Keeping the books must be done on daily, monthly and annual basis (Shapiro, 2008). Daily bookkeeping activities include receipting incoming money, maintaining a petty cash system with petty cash vouchers, and banking (depositing the money that has come in). In addition, writing cheques based on approved cheque requisition forms must be performed on daily basis. Monthly bookkeeping tasks include managing petty cash inventories for the past month, drawing up receipts and payment schedules for current accounts, and managing other records (such as writing up the cash book, and entries made on a computer). In addition, bank reconciliation and reporting activities must be carried out. On annual basis, financial statements must be prepared, auditing, and preparation of balance sheet.

Designing Financial Policies

A policy expresses how an organization goes about its work and how it conducts itself (Shapiro, 2008). It is not a legal document, such as the various

acts of parliament, which stipulates what the responsibilities of the various staff members are.

The idea of financial policies is to ensure that the project or organization runs in a smooth and accountable way (Shapiro, 2008). Financial policy enables an organization to decentralize decision-making (Shapiro, 2008). For example, once the policy is clear that no one can borrow money from petty cash, the administrator who runs the petty cash system can say "no" to anyone, even the headmaster, when asked for such a loan. Because people are more likely to implement and abide by policies if they had a say in making them, and they agree that they are "good" policies, formulating such financial policies should involve staff responsible for controlling the accounts of the school. In this regard, there seem to be a yawning gap because a thorough such on the internet produced no such financial policies for secondary schools. The only available ones were acts (legal documents) which defines roles, but which does not indicate how such roles should be accomplished. The apparent lack of such financial policies may account for the financial misappropriation in various schools. For example, according to the Auditor-General's report (2008), a total of GH⊄14,618,188.67 was lost due to irregularities in the financial management nationwide in the pre-university education sector.

Governance

Governance is about the way we manage our schools, the way we deal with stakeholders and the procedures and processes we put in place to meet accountability and stewardship obligations (Stagl, 2006). In other words, governance in secondary schools is the system by which these schools are directed and controlled (Brown, Beekes, & Verhoeven, 2011). Good

governance in education systems promotes effective delivery of education services (Maureen & Pettersson, 2009). It includes the way we identify the risks that may prevent a school from achieving its desired targets. Importantly, the identification of risk allows a school to integrate its risk profile with an appropriate internal control environment, which takes into account the consequences of failure.

The components of good governance in secondary schools hung on the principles of corporate governance, bearing in mind the complex nature of the school environment compared to traditional corporations. The components of good governance in educational systems could thus be classified into two, for convenience, as either internal or external (Brown et al., 2011).

The internal components of good governance in schools are those that are associated with decisions and actions of shareholders and the board, such as the constitution and membership of the board of directors and its committees, the structure of share ownership, financing arrangements, and the form of executive compensation (Brown et al., 2011). The external components on the other hand include monitoring by outside parties such as block holders and institutional investors, activists and external auditors.

The internal components of good governance in schools includes the existence of a board of directors (BoD). The BoD is responsible for setting objectives, monitoring, and controlling the school's activities (Brown et al., 2011). Boards are responsible for monitoring the quality of information contained in financial statements and thus controlling the behaviour of managers of schools (head, bursar/accountant) to ensure that their actions are aligned with the interests of stakeholders (Mansi & Reeb, 2004). The

characteristics of the board of directors has been opined to influence the ability to function effectively. For example, the board's size and composition has been opined to influence its ability to function effectively (Brown et al., 2011). Yet, empirical evidence to establish the relationship between board size and the board's performance has been ambiguous. For example, Coles, McWilliams, and Sen. (2008) in the USA, and Guest (2008) in the UK, found a positive relationship between board size and the board's performance (measured by proxies such as the firm's market value). On the other hand, Randoy and Jenssen (2004) in Sweden, found that board size was not significantly associated with financial performance, whereas Singh and Davidson III (2003) in the USA, found out that larger boards are inversely related to firm's performance.

The management of SHS on day to day basis is by the school management team, which is headed by the head teacher. Since the school management is set up by the board of directors of the school, the characteristics of the board has been extended to include the characteristics of key components of the school management team. Hence, the gender of the head teacher, and the bursar, as well as their experiences on the job, have been included as measure of good governance.

In addition, the boards' composition is another characteristic that influences the board's performance. The composition of the board basically refers to the distinction between inside and outside directors (Ogbechie, 2012). Inside directors are employee directors (directors who are employed by the school) whereas outside directors are non-employee directors with or without personal or business relationship with the school while independent directors

are those that have neither personal nor business relationships with the company (see Ogbechie, 2012). Several empirical evidence from countries such as Pakistan, the US, Germany, Bangladesh, China, Nigeria, Hon Kong, and India, have indicated outside directors provide superior performance benefits to the firm as a result of their independence from firm's management (see Khan & Awan, 2012; Dey & Liu, 2011; Bermig & Frick, 2010; Rashid et al, 2010; Bhabra & Li, 2009; Jagg et al, 2009; Kajola, 2008;). In addition, institutions with directors on the board and audit committee who have social and professional connections to the CEO are associated with lower operating performance, lower value relevance, lower accruals quality and higher probability of restatements.

Another vital internal component of good governance in educational systems (and any other institution for that matter) is record keeping. This is the case because the effectiveness and efficiency of the public service including schools depends upon the availability and access to information held in records (Otu, Bempah, & Amoako-Ohene, 2014). According to the World Bank, (2000b), badly managed records adversely affect accountability and governance. An effective record keeping should have policy and regulatory framework to guide the management of student records. Yet, record keeping is a major challenge for schools in Ghana, even at the tertiary level (Sebastian, Azameti, & Adjei, 2013)

The third component of good governance in schools is the existence of an internal audit committee, whose role is to check the spending rate of the school in order to make sure that the school spends within it budgeted estimates (Akyaa, 2011). The audit committee bears the power (and

responsibility) over the school's auditor relationship and audit policies (Biondi & Rebérioux, 2012). Internal auditors and audit committees enhance the effectiveness of the control framework and assist the governing board in meeting its oversight responsibilities for internal controls (DiNapoli, 2010).

The external components of good governance applicable to publicly owned schools are the need for external auditors. External auditors are needed to check on the work of the Internal Auditor to ensure complete compliance on procedures, rules and regulations. Sadly however, it has been opined by some authors that external auditors are irregular at the institutions and even when they visit, the internal accounts are not properly examined (Akyaa, 2011). Hence, their report on control performance and recommendations for improvement lack reliability.

Accountability

Accountability may be defined as holding elected or appointed officials (charged with a mandate) responsible and answerable for their actions and decisions (Bambangi, 2014), and imposing sanctions if specified outputs and outcomes are not delivered (Lewis & Pettersson, 2009). Accountability requires that public servants have clear responsibilities and are held answerable in exercising those responsibilities, and if they do not, face predetermined sanctions because without sanctions there cannot be any real accountability (Lewis et al., 2009). It may be tackled from either performance perspective or financial auditing perspective. Lack of accountability among public officials can be seen as a major contributing factor to the rise in financial irregularities in the public sector.

Financial Irregularity

In order to avoid ambiguity of the meaning of the term 'financial irregularities' as used in this work, an operational definition has been proffered. According to the American Institute of Certified Public Accountants (1997), the term irregularities refers to intentional misstatements or omissions in financial statements. Irregularities include fraudulent financial reporting undertaken to render financial statements misleading, sometimes called management fraud, and misappropriation of assets, sometimes called defalcations. Irregularities may involve the following:

1. Manipulation, falsification, or alteration of accounting records or supporting documents from which financial statements are prepared.
2. Misrepresentation or intentional omission of events, transactions, or other significant information.
3. Intentional misapplication of accounting principles relating to amounts, classification, manner of presentation, or disclosure. Therefore, the financial irregularities, as used in this context, do not imply unintentional errors. Hence, the term is closely associated with fraud.

In Ghana, the Financial Administrative Act (FAA), 2003 and Amendment, 2008 (Act 760) stipulates that every MDA is required to prepare and present monthly and yearly financial statements to the Auditor General and the Minister for Finance and Economic Planning (Certan, Ronsholt, Mackie, & Hegbor, 2013a). These financial statements are to be presented by the fifteenth day of the following month for monthly financial reports, and three months after the end of the financial year for annual accounts (Certan et al., 2013) These financial statements are required by law to reflect the assets

and liabilities, a statement of revenue and expenditure as well as a cash flow statement. Hence, the FAA provides a legal framework to ensure financial accountability in the public service. Nevertheless, evidence shows lapses in reconciliation and its regularity among public services. For example, the Public Expenditure & Financial Accountability (PEFA) Performance Review for 2012 scored the ministries and its various agencies D+ in the area of timeliness and regularity of accounts reconciliation (Certan et al., 2013). The same report gave a score of C in 2009, indicating deterioration in financial accountability in the public service. In addition, the performance of the ministries and its agencies in the area of bank reconciliation and clearance of suspense accounts graded fairly (grade C) in both 2009 and 2012. Other reports clearly indicate that financial accountability is irregular in the various public services, (including the Ghana Education Service) in Ghana.

For example, the Public Expenditure Tracking Survey (PETS) carried out in 2008 for 2007 expenditures for the Ministry of Education indicated that there was no information on resources received by service delivery units (Certan et al., 2013). Although transcripts are produced that provide information on cash expenses made on education, such reports do not provide detailed spending on each school (Certan et al., 2013). In addition, In terms of funds dispatched to the Regional Education Offices, only one third of funds were accounted for in their expenditure returns (Republic of Ghana, 2011).

The financial irregularities in the public service is so prevalent that the PETS called for the district assembly common fund to be put under public scrutiny.

Financial irregularities in senior high schools in Ghana is a major challenge. This is apparent from the high level of corruption in the secondary

schools in Ghana. It was estimated that Ghana's Education sector is the third corrupt out of the twenty-six (26) countries assessed by the Transparency International (2013). In addition, several of the AG's reports indicate that there has been continuous increase in misappropriation of funds allocated for Senior High Schools. For example, close to GH¢7,000,000 was unaccounted for in 2010 alone. This figure generally doubled each year over the preceding year's since 2010 to 2012. Although in 2013, the amount misappropriated was reduced compared to the preceding year's, the amount was still very huge (almost GH¢16,000,000). The misappropriated funds covered financial irregularities, procurement irregularities, stores irregularities, tax irregularities, payroll irregularities, among others. The financial accounting lapses in these schools concerning financial irregularities included payments without expenditure supporting documents, Payments without authorization, and Misappropriation/Losses. Other financial irregularities included Un-retired accountable impress, direct use of school fees on cash transactions, and unrecovered overpayments. These six factors alone accounted for GH¢1,083,032.00 (Auditor-General, 2008). In addition, procurement irregularities accounted for GH¢541,447.00. The report also singled out some senior high schools and provided report on financial irregularities in the school. For example, the report indicated that at the Obuasi Senior High School, a staff member who left the school owed the Institution GH¢161.91 (Auditor-General, 2008) as a result of the overpayment of his entitlements. In parallel, at the Tweneboa Kodua Senior High School, the Agricultural Science tutor misappropriated GH¢400.00 from the proceeds accruing out of the sale of poultry products (Auditor-General, 2008). The Nkawie Senior

Technical School was also reported to have failed to deal with VAT registered suppliers in respect of the procurement of store items worth GH¢14,915.00, resulting in the loss of tax revenue of GH¢1,864.37 (Auditor-General, 2008). In the central region, payments totaling GH¢213,212.17 (Auditor-General, 2008) made by 12 Institutions were not supported by official receipts from the payees. Imprests not accounted for was as much as GH¢23,391.94. As a result of accountability issues in the various senior high schools, as much as 47 schools, for example, did not submit their 2008 financial statements in the Central region alone. These irregularities and failure to comply by the provisions of the FAA in these two regions described above (Ashanti and Central) serves as a window to the financial irregularities in the various secondary schools in Ghana.

Best practices in ensuring financial regularity – any improvement over existing systems for reducing misapplication and misappropriation of funds covers a host of areas in accounting. It includes practices in, but not limited to, accounts payable, billing, credit, cash management, financial statements, general ledger, internal auditing, inventory, and payroll. Concerning accounts payable, the most important best practice is that of paying upon receiving approval—the receiving staff authorizes payment simply by looking up all items received in an online database of open purchase orders (Bragg, 2013). The only drawback to this best practice is that it requires new computer systems, as well as a complete retraining of the receiving staff regarding their role in paying suppliers (Bragg, 2013). In order to improve the billing process in schools and other organizations, the best practice involves using new technologies which allow you to do so electronically or at the point of delivery

so that customers receive more accurate invoices more quickly than ever before (Bragg, 2013). In addition, invoices can be completely eliminated in a limited number of cases, resulting in direct cash transfers from customer bank accounts to the company. Best practices in cash management include having zero-balance accounts to handle cashed payroll checks, and a controlled-disbursement account for paying suppliers (Bragg, 2013). In order to improve the speed with which financial statements are distributed, Bragg (2013) opines that the work of the closing process be shifted to before the end of a reporting period to avoid some of the closing work entirely. Finally, on the issue of inventory, Bragg (2013) suggests organizing the warehouse by storage zones, auditing bills of material, reviewing inventory returned to the warehouse, and comparing recorded inventory activity to on-hand inventories.

Budgeting

A budget can be regarded as an expression of the school's plan in monetary terms. It provides information that facilitates a more effective cost benefit analysis and the head's control over school expenditure (Education Bureau, 2014). The principles behind budgeting in any school are to match the school activities with the available resources, including finance, staff time and space. In addition, the objectives of the school will determine which proposals should be given priority, for which reason all those involved in the planning process should know the criteria, targets and assumptions as well as the constraints in considering the competing priorities (Education Bureau, 2014). Traditional budgets are prepared such that items as listed in the audited accounts classify the income and expenditure. On the other hand, program budgeting attempts to link all the resources needed to support a particular

program, such as an individual subject (Education Bureau, 2014). The principal features of program budgeting are that it relates to objectives and outputs, and emphasizes the future and choice. In the school context, program budgeting reflects an educational plan. It attempts to enable a school to identify its goals and to channel the resources into the individual programs that meet its goals. Whilst every school has its own priorities and program structure, the following programs should be included in the school budget: Programs related to the learning of languages, support services for students to cope with their diverse needs, staff training and development programs.

Budgeting has the fundamental importance of controlling the financial behaviour of the administrators in the school system by preventing wastage or reckless spending of funds provided for various educational services (Oboegbulem & Kalu, 2013). The reason is that the operators of budget are compelled to follow the appropriate estimate in spending funds. Budgeting has the technical function of authorizing expenditure and serves as a microscope in analysis of details.

The budgeting practices in educational institutions should follow a systematic procedure. This includes budget planning, budget defense, budget approval and adoption, budget implementation and budget evaluation.

Among the best practices in budgeting, three of them requires considerable amount of implementation effort. The first is linking the budget to a purchase order system (Bragg, 2013). This is necessary because in many institutions managers push very hard to ensure that their capital and department budget requests are approved before those of other managers. Thus, it appears that the budget is driven by the most politically astute and

well-connected managers. Hence, by linking the budget to a purchase order system, it is much more difficult for managers (heads of departments) to twist the budget in their favor, when doing so clearly undermines the corporate strategy. The second is switching to an activity-based budget model (Bragg, 2013). It involves pooling all costs into cost centers, assigning these costs to activities, and charging the activities to products and customers. This approach requires a complete revamping of the budget model, as well as a new chart of accounts to reflect the changes. The third is the installation of budgeting and planning software (Bragg, 2013). This is a best practice because in many schools, budget is created using an electronic spreadsheet such as Excel, or even manually. The trouble is that individual departments create their own budget models using formats that vary from the one used by the budgeting department. When the budgeting staff (Bursar) receives these models from the various departments, they must manually re-input the information into a master spreadsheet, which is quite labor intensive. In addition, when any significant variable is added to the model, all related formulas must be manually altered and then tested to ensure that the model still operates properly. Further, it is difficult to track which department has submitted budget information or when it made its last update. For these reasons, the use of spreadsheet for budgeting may is not the best of practices. The solution is to purchase budgeting and planning (B&P) software. This software maintains a central database of budgeting information that is automatically updated when users enter information. In addition, the software generates templates for data-entry use by each department, as well as issuing all pro forma financial reports at the press of a button. The better systems also have workflow management

capabilities that reveal who has not yet submitted a budget. Variance analysis tools issue warnings to the budgeting staff when submitted budgeting information exceeds predetermined levels or when other preset rules are violated. This approach may be difficult to practice in Ghanaian secondary schools because of the low level of computing skills among most of the accounting staff. It is obvious that the low level of computing skills has contributed to the dependence of most of these institutions on the manual method of budgeting.

Fraud theories

Several theories have been propounded to explain fraudulent practices of organizations and individuals. Basically, there are four of such theories: (a) the white collar crime theory (b) the fraud scale theory (c) Clarke's theory and (d) the fraud triangle theory (Kulzick, 2004). White-colour crime fraud theory proposes that fraudulent practices are learnt and are not genetically. It thus put the responsibility of fraud on individual perpetrators choices and not an uncontrolled genetic force. The fraud scale theory identifies nine motivational causes of fraud, which are categorized into three: situational pressures, perceived opportunity, and personal integrity. The Clarke's theory, like the fraud scale, identifies another motivation of fraud. However, it puts the cause of fraud at the doorsteps of job dissatisfaction. The Cressey's fraud triangle theory however, dominates all three proposed theories. The tenets of this theory seem to cover all aspects of this current study. Hence, it was adopted as the theoretical basis for this research. The detailed review of this theory, which relies heavily on the earlier works of Lokanan (2015) is given below.

Cressey's fraud triangle theory

Pressure to commit occupational fraud

Cressey (1953) hypothesized that individuals commit fraud because of non-sharable financial pressure. Non-shareable financial pressure is a financial strain experienced by an individual, which he or she does not intend to share with others. The individual's inability to communicate the financial strain serves as a motivation to transgress the law in order to solve the problem. The literature on the pressure to commit occupational fraud can be broadly classified into financial pressures and non-financial pressures (AIC & PwC, 2003; Albrecht, Albrecht, Albrecht, & Zimbelman, 2012; Fitzsimons, 2009). Non-financial pressures can be further categorized as (1) work-related pressure (Bartlett, Endo, Tonkin, & Williams, 2004; Baucus, 1994; Hollinger & Clark, 1983; Holton, 2009; Peterson & Gibson, 2003); (2) pressure associated with gambling and drug addiction (Howe & Malgwi, 2006; Kelly & Hartley, 2010; Sakurai & Smith, 2003); and (3) pressure associated with individuals who want to make a statement by living luxurious lifestyles (Dellaportas, 2013; Neu, Everett, & Rahaman, 2013; Rezaee, 2005). These limits of the definition thus capture, at least partly, the fraud scale theory and the Clarke's theory.

Monetary success, or the impressive acquisition of millions through personal accomplishment, is responsible for generating strong pressures to succeed in a narrowly defined way, and to pursue such success by any investment(s) is the catalyst that drives many offenders to commit fraud (Dellaportas, 2013, p. 30). In an organizational context, financial pressures stems from the company's failure to meet Wall Street's expectations (Dorn,

2010; Power, 2013; Sikka & Hampton, 2005; Sikka, 2010a). In other cases, financial pressure arises from the company's inability to compete with other companies in similar industries (Albrecht, Albrecht, & Albrecht, 2004; Sikka & Hampton, 2005). Within these purviews, monetary incentives in the form of compensation bonuses are given to executives to improve the company's financial performance (Brennan & McGrath, 2007). Financial incentives, coupled with the company's interest in investors' relations (i.e. to keep stock price high and maintain investors' confidence), serve as added incentives for executives to manipulate financial statements (Mardjono, 2005).

Work-related non-financial pressures that motivate fraud include workers' dissatisfaction and perceived inequities in the workplace (Hollinger & Clark, 1983; AIC & PwC, 2003). Hollinger and Clark (1983) chronicled work-related pressures associated with fraud, noting that employees' dissatisfaction is one of the main indicators in predicting fraudulent behaviour in an organization. In other studies, employees turn to fraud because of perceived inequities in the work-place (Bartlett, Endo, Tonkin, & Williams, A. 2004). Unfair treatment related to promotion, remuneration and a lack of appreciation were all cited as reasons for workers to commit fraud (pp. 60-65). These workers have little respect for the organization they work for and usually see fraud as an act of revenge against their employers (Baucus, 1994).

Vices such as gambling and drugs represent another category of pressures that motivate fraud (Dellaportas, 2013, p. 30). Easy access to online gambling including poker and gaming machines, casinos and lotto-style games has contributed to a substantial growth in the gambling industry (Howe & Malgwi, 2006; Kelly & Hartley, 2010; Sakurai & Smith, 2003).

These increased opportunities serve as motivation for fraudsters to steal money and other assets in order to satisfy their chronic dependence on gambling (ACFE, 2012). Recent studies have shown that the vast majority of offenders, whose primary motivation for fraud is gambling, usually plough back their proceeds on gambling itself (Hing, 2002; Sakurai & Smith, 2003).

The offenders' desire for material possessions creates pressure for them to live like their more affluent counterparts (Dellaportas, 2013; Neu, Everett, & Rahaman, 2013). The type of pressure experienced by offenders in this category varies by their individual circumstances (Duffield & Grabosky, 2001; Morales, Gendron & Guenin-Paracini, 2014; Peterson & Gibson, 2003). Many of these offenders have "egocentric motivations and a desire to possess more than one can afford, colloquially referred to as 'keeping up with the Jones'" (Dellaportas, 2013, p, 31). Egocentric motivations serve as an incentive to the fraudster and are said to be "any pressures to fraudulently enhance personal prestige" (Rezaee, 2005, p. 283). This type of motive is usually "seen in those people with very aggressive behaviour and desire to achieve higher functional authority in the corporation" (p. 283). Offenders in this category are extremely ambitious and are obsessed with power and control; personality traits that make them more likely to engage in risky behaviour that could lead to fraud (Dellaportas, 2013, p. 31).

Opportunity to commit occupational fraud

The opportunity to commit fraud is the next component of Cressey's (1953) fraud triangle. A perceived opportunity to commit a fraudulent act arises when someone in a position of trust violates that trust to address a non-sharable financial pressure (Cressey, 1953, p. 30). In the accounting

literature, opportunity has been examined within the context of weak internal controls which, according to KPMG (2006, 2008, 2010), is a major factor attributable to fraud (Albrecht & Albrecht, 2004; Alleyne & Howard, 2005; Dellaportas, 2013; Fleak, Harrison, & Turner, 2010; Kelly & Hartley, 2010; Rae & Subramaniam, 2008; Strand , Rose & Rose, 2010). Such an opportunity arises when the individual has the technical skills and knowledge of "assets, people, information, and computer systems that enables him or her not only to commit the fraud but to conceal it" (Coenen, 2008, p. 12). Indeed, the opportunity to engage in fraud increases as the firm's control structure weakens, its corporate governance becomes less effective, and the quality of its audit functions deteriorates (Free, Macintosh, & Stein, 2007; Neu, Everett, & Rahaman, 2013; Power, 2013; Rezaee, 2005).

Others look to the criminology literature for explanation of the opportunity to commit fraud (Benson & Simpson, 2009; Colvin, Cullen, & Ven, 2002; Donegan & Gagon 2008). Colvin, Cullen, and Ven (2002) argued that coercion and social support are necessary conditions for criminal behaviour. Individuals, who are denied access to social support from legitimate sources, may seek social support from illegitimate sources (p. 25). In the absence of social support, individuals who learn "to manipulate others in efforts to gain social support and in the process develop an intermediately intense, calculative social bond, will be more likely to approach a criminal opportunity with a calculating spirit" (p. 31). Donegan and Ganon (2008) build upon the work of Colvin et al. (2002) and examine opportunity from the perspective of sub-cultural deviance. Donegan and Ganon (2008) argued that

the opportunity to commit fraud comes from a sub-culture, which through its practices either sends a message to support or inhibit fraudulent conduct.

The rationalization of occupational fraud

Rationalization is the lack of feelings and indifference expressed by offenders to justify any guilt arising from their misconduct (Dellaportas, 2013, p. 32). It is a mechanism by which an employee determines that the fraudulent behaviour is "okay" in her or his mind. For those with deficient moral codes, the process of rationalization is easy. For those with higher moral standards, it may not be quite so easy; they may have to convince themselves that a fraud is okay by creating "excuses" in their minds (Coenen, 2008, p. 12).

The social psychology and criminology literature both provide a great deal of help in understanding rationalization. The criminologists Sykes and Matza (1957), in their work on neutralization theory, argued that criminals normally use 'the techniques of neutralization' to rationalize their acts. Neutralization techniques are often employed to shield the individual from his or her own internal values surrounding the existence of guilt (Foucault, 1969, Stout, 2007, Sykes & Matza, 1957, p. 669). The psychological process of sanitizing one's conscience was expanded upon more recently by Murphy and Dacin (2011). Building on the work of Bandura (1999) (theory of moral disengagement) and Festinger (1957) (cognitive dissonance theory), Murphy and Dacin (2011) found three psychological pathways to fraud nestled within attitude/rationalization: (1) lack of awareness, (2) intuition coupled with rationalization, and (3) reasoning- the perceived benefits outweigh the costs. The authors used their framework to explain how fraud becomes normalized within an organization and is consistent with the works of Ashforth and Anand

(2003), Lehman and Okcabol (2005), den Nieuwenboer and Kaptein (2008), Rae and Subramaniam (2008), and Ball (2009) on how executives rationalize their criminal acts because they see it as a necessary part of their job.

Rationalization also involves the fraudster reconciling his/her actions with commonly accepted principles of decency and trust. Self-serving and "morally acceptable rationalization is necessary before the crime takes place" (Dorminey, Fleming, Kranacher, & Riley, 2010, p. 19). Perhaps this is because a fraudster who "does not view him/herself as a criminal, he/she must justify his/her misdeeds to him/herself before he/she ever commits them" (p. 19). Brytting, Minogue, and Morino (2011) provide examples of common rationalization employed by fraudsters to justify their illegal behaviour: "everyone is doing it; it's only fair; I've (they've) no choice; it's just a loan; no one is hurt; I've (they've) earned it; they deserve it; it's not a crime; they don't mind; it's for a good cause" (p. 57). Similarly, for corporate executives, the rationalization to commit fraud may include thoughts such as: "we need to keep the stock price high," "all companies use aggressive accounting practices," "it is for the good of the company," or "the problem is temporary and will be offset by future positive results" (Albrecht, Albrecht, Albrecht, & Zimbelman, 2012, p. 118). These cognitive defense mechanisms are developed to justify and perhaps even valorise occupational fraud. Together, they allow the perpetrator to view illegal behaviour as acceptable and consistent with his or her personal code of ethics (Albrecht, 2003; Ash forth & Anand, 2003; Cohen, Ding, Lesage, & Stolowy, 2010 Cooper et al., 2013; Morales et al., 2014; Neu, Everett, & Rahaman, 2013).

Different authors have used different articulations to increase the explanatory potential of the fraud triangle as a modern fraud diagnostic tool (see Albrecht, Howe, & Romney, 1984; Choo & Tan, 2007; Krancher, Riley, & Wells, 2010; Ramamoorti, Morrison, & Koletar, 2009; Rezaee, 2002, 2005; Wolfe & Hermanson, 2004). Albrecht et al. (1984) introduced the Fraud Scale Model, which suggests that the likelihood of fraud occurring can be assessed by examining the relative forces of pressure, opportunity and personal integrity. Rezaee (2002) provided an alternative referred to as the "3-C" model and consists of three components necessary to commit corporate fraud: "Conditions", "Corporate structure", and "Choice". Wolfe and Hermanson (2004) proposed a fourth dimension, "capability", to the fraud triangle and in so doing, transformed it into a "Fraud Diamond".

Others prefer to combine the fraud triangle with psychology, sociology and criminology theories. Choo and Tan (2007) explain corporate fraud by relating the fraud triangle to Messner and Rosenfeld's (1994) work on the American Dream Theory ("ADT") of crime. Ramamoorti, Morrison, and Koletar, (2009) introduced the Bad Apple, Bad Bushel, or Bad Crop Syndrome, the so-called ABCs of fraud, to understand the incidence of fraud from an individual, group, and macro-oriented contextual perspective. In addition, Krancher et al. (2010) M-I-C-E (Money, Ideology, Coercion, and Ego/Entitlement) model modifies the pressure side of the fraud triangle, by providing an expanded set of motivations beyond a non-shareable financial pressure to commit fraud.

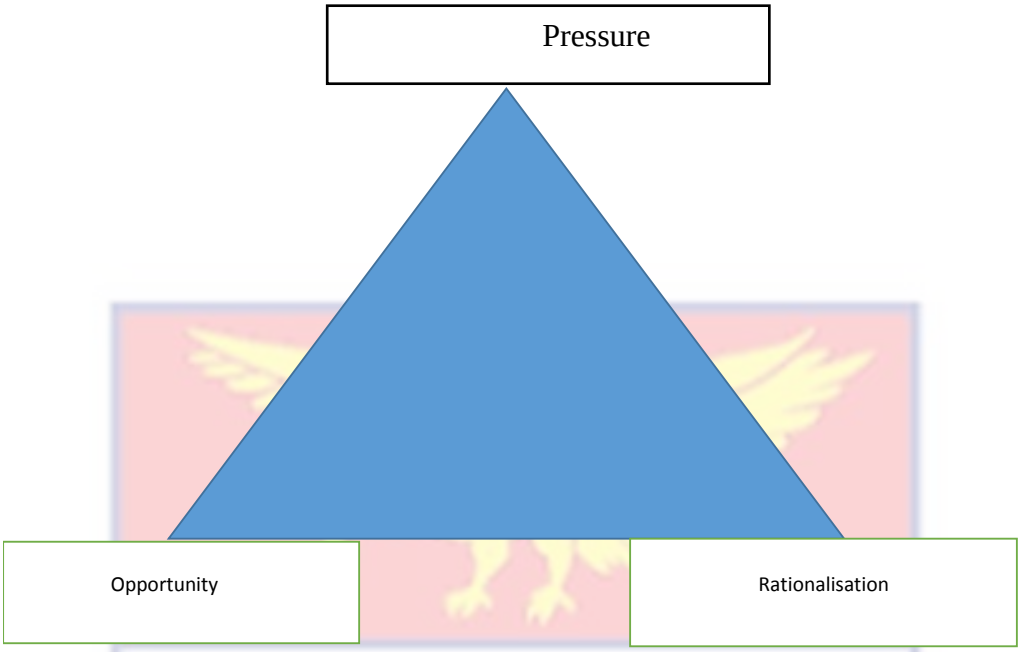

Figure 1: The Fraud Triangle (Adapted from Lokanan, 2015)

Agencification Theory

One persistent theme in public administration is whether a government portfolio should be organized as an integrated ministry or as a dual organization composed of a ministerial department with one or several semidetached agencies (Verhoest, Roness, Verschuere, Rubecksen, & MacCarthaigh, 2010). Historically, ministerial portfolios have been arranged either as "integrated ministries," meaning that a ministerial portfolio constitutes a unitary organization, or as vertically specialized structures, meaning that a portfolio is split into a ministerial, or cabinet-level, department, on the one hand, and one or more separate agencies, on the other (Verhoest et al. 2010, 3). Over time, agencies seem to have been moved out of and into ministerial departments, often in a cyclical manner (Aucoin 1990; Hood & Jackson 1991; Pollitt 2008; Verhoest, Bouckaert, & Peters 2007). The term

"agency," is used to refer to an administrative body that is formally separated from a ministerial, or cabinet-level, department and that carries out public tasks at a national level on a permanent basis, is staffed by public servants, is financed mainly by the state budget, and is subject to public legal procedures. Agencies are supposed to enjoy some autonomy from their respective ministerial departments in regard to decision making (Verhoest et al. 2010). However, the respective ministers normally keeps the political responsibility for agencies' activities (cf. Pollitt and Talbot 2004). Agencification thus signifies a transfer of government activities to bodies vertically specialized outside ministerial departments. Related to the NPM movement, governments across continents have established agencies at arm's length from ministerial departments in order to take care of certain regulatory and administrative tasks (Pollitt et al. 2004; Verhoest, Peters, Bouckaert, & Verschuere, 2004).

Agencification may be accounted for by (1) organizational, (2) functional, (3) contingency, and (4) institutional approaches (Trondal, 2014). According to an organizational or institutional approach, agencies come about through power struggles and compromises conditioned by preexisting organizational structures. Organizational change is framed by the heritage of structures, and new agencies are thus likely to be embedded within existing organizational architecture (Radin, 2012). According to a functionalist account, agencification is a response to collective action problems.

The principal-agent model is often the analytical expression of this functional logic, together with the notion of transaction costs (see Tallberg 2003, 25). The benefits of agencies "lie in the reduction of political transaction costs, by providing solutions to collective-action problems that prevent efficient

political exchange" (Tallberg 2003, 26). Contingent events may help explain institutional change and the timing of organizational birth (see March and Olsen 1989; Pierson 2004). Decisions to create agencies have been motivated by the need to respond to particular circumstances of the moment and, in some cases, to crises. Finally, the creation of agencies can also be seen as a trend in public policy and as a fashionable idea within the realms of public management (Christensen & Lægreid, 2006). Meyer and Rowan (1977) emphasize the importance of cultural rules within wider institutional environments that take the form of "rationalized myths." They are myths because they are widely held beliefs whose effects "inhere, not in the fact that individuals believe them, but in the fact that they 'know' everyone else does, and thus that 'for all practical purposes' the myths are true" (Meyer 1975). Delegating tasks to "independent" agencies were increasingly popular in domestic politics across the Organisation for Economic Co-operation and Development area in the late 1980s and therefore was likely to appeal to many national governments.

The idea of agencification is based on the promise of improved organizational performance, both in administrative and financial sense. The key element of this theory is the structural disaggregation of traditional bureaucracies in tandem with increased managerial autonomy, strategies designed to "let managers manage" and strengthen accountability for results (Alexander, 2002; Fedele, Galli, & Ongaro, 2007; Schick, 1996).

The underlying assumption of the agencification doctrine supporting the creation of agencies is that the result control and financial incentives they are given will enable them to enhance their performance by using their managerial

autonomy in determining financial and human resource matters (Pollitt, 2009). These assumptions about the effects of autonomy and result control are drawn from principal-agent theory (Van-Thiel & Pollitt, 2007). It is argued that public managers serve their own interests, which do not necessarily coincide with the interests of the central government (Schick, 1996). The creation of executive agencies is thus an attempt to formally align the interests of the two parties by manipulating the incentive structure (Van-Thiel, 2004). The main focus of principal-agent theory is on how the principal can control the agent in a situation of goal conflict and information asymmetry, both of which occur with great frequency in the public sector (Halachmi & Boorsma, 1998).

Principal-agent theory is used as a theoretical justification for new public management (NPM) reforms such as agencification, and the basic control mechanisms in the reforms are designed to overcome the problems inherent in extending greater autonomy to government bodies. Under principal-agent theory, the agent executes tasks on behalf of the principal but necessarily has a degree of discretion in executing those tasks due to the highly specialized nature of the bureaucracy. In other words, the agent has more information about the processes, the achieved results, and other important circumstances in the implementation process, which creates an asymmetry of information between agent and principal. At the same time, the interests of the agent are not always congruent with the interests of the principal, and therefore agents, who are assumed to be utility-maximizing actors, are likely to use their discretion in order to pursue their own goals to the detriment of the principal. In this process, the agent's opportunistic behavior can result in the creation of moral hazard and adverse selection (Kim & Cho, 2015).

The principal can use several control devices to force the agent to perform better and thus mitigate the effects of information asymmetry and goal conflict. For instance, the principal may use monitoring systems to measure and evaluate the performance of the agent, or systems of financial incentives that link performance to reward. From the perspective of principal-agent theory, the performance benefits of enhanced autonomy can only be realized if that autonomy is coupled to substantial and appropriate incentives (Verhoest et al., 2004). Yet, no consensus has been reached as to whether giving organizations more autonomy has brought improvements in efficiency or quality of service (Talbot, 2004).

Empirically, it has been indicated that agencification has sometimes weakened central capacity and oversight, increased information asymmetry and bureaucratic/stakeholder influence. Where central oversight has been maintained, it has required the development of an audit-based regulatory system (Moynihan, 2006). Similarly, Overman and Thiel (2015) found a negative effect of agencification on both public sector output and efficiency, and thus refuted the economic claims about agencification.

Implication of Agencification theory on present study

In view of the significance of education in national development, the government and the public serve as shareholders and are keenly interested in the management of schools. On the other hand, in an institution such as public Senior High School, the agent refers to top level personnel in the administrative department. The Ghana Education Service (GES) is the agency of the ministry of education (MoE) which is mandated to create an enabling environment in all educational institutions and management positions that will

sustain effective teaching and learning in school and promote management efficiency within the education sector. Thus, school board of directors are elected to ensure that this mandate of the GES is achieved. Thus, the board of directors of each school is the principal agent of GES. However, for the day-to-day running of the schools, school management teams, headed by the headmaster/mistress, act as an arm-extension of the board of directors. The school management set financial controls to ensure proper accountability. Hence, considering how characteristics of the school management team affects financial irregularities, it shows that the characteristics of the school management is a measure of the effectiveness of the governance of the board of directors. The principal (headmaster/headmistress) being the highest authority in the school (administrator), is responsible for monitoring and controlling school expenditure to make sure that money is carefully spent on the school's priorities, as directed by shareholders via adequate planning and budget. The authority to monitor and control school funds for the day to day financial management of the school by the principal issues from the board of trustees representing the shareholders. Due to the volume of work involved in financial management, principals often delegate financial management tasks to school employees and in some instances also pay for external accounting services.

However, the head teacher retains full responsibility for the financial records and reporting. This must be done regularly to the school board of trustees or governing council on financial management coupled with financial report of annual audit. In line with Agency Theory, the Principal being the agent with full responsibility for financial management should be properly

supervised so as to reduce agency costs. This is accomplished by the Board of Trustees or governing board via internal controls to keep the principal from self-serving, individualistic and opportunistic behavior. Underscoring the forms of internal controls imposed by the shareholders (Board of Trustees), Daily, Dalton, and Cannella (2003) stated that the shareholders design an appropriate governance structure for the company/institution which may include increasing the number of outside board members to perform audits and evaluations. As it is obtainable in Agency Theory, the Public will constitute the Board of Trustee excluding the principal so that the interests of the shareholders will not be sacrificed to a degree in favour of management, in other words, there will no managerial opportunism and agency loss.

In recent times though, some principals or school heads who are manipulative try to influence the decision of some key members of the governing council, hence, appropriate check on financial proceedings would be minimized, leading to agency loss and gross mismanagement of funds by the Principal and others in the administrative department.

The agency relationship is faced with a fundamental problem, which is dealing with the behaviour of the agent and his desire to maximize their own utility function, which may not be consistent with the objectives of the principal (Bouckovd, 2015). From this raises the agency problem where the agent may not act in the best interest of the principal (such as in embezzlement of resources).

This fundamental problem with the Agencification theory, coupled with the Fraud Triangle Theory, has the potential to breed financial malfeasance in several institutions. This study thus employs the tenets of these

two theories in trying to explain the relationships (if any) that would be established by the findings of this study.

Empirical Review Linking Governance and Financial Control to Financial Irregularities

This section presents a review of extant literature that considers the relationship between governance and financial controls on the one hand, and financial irregularities on the other hand.

Relationship between governance and financial irregularities in secondary schools

There is an apparent lack of information (at least according to the researcher's knowledge) on the relationship between school governance on financial irregularity**.** Instead, a number of researchers, in the US, have opined that several aspects of corporate governance mostly in the financial institutions and other institutions other than schools, affect financial irregularitiy.

Therefore, the empirical evidences established from researches in these fields have been used as proxies to compare the relationship between school governance and accountability.

With regard to board size, evidence from the US and Europe gives mixed results. For example, while Yermack (1996) (US) and Eisenberg, Sundgren, & Wells (1998) (Finland) provide evidence that firm value and performance is a decreasing function of board size. Baysinger and Butler (1985), Hermalin and Weisbach (1991), and Bhagat and Black (1997) (all in the United States) found no meaningful relation between various characteristics of board composition and firm performance. On the other hand, Dalton & Daily (200) used the Meta-analysis technique, which showed a

different result in that larger boards were associated with better corporate financial performance even when considering the nature of the firm and irrespective of how financial performance was measured.

Literature however shows a yawning gap about the relationship between gender, and years of experience with accountability. In the area of gender and its association with accountability and corruption, empirical studies seem to favour women over men. For example, Swamy, Knack, Lee, & Azfar, (2001) found that women are less involved in bribery, and are less likely to condone bribe taking.

Relationship between financial controls and irregularities

Different authors have reported aspects of the relationship between financial controls and irregularities. For example, Eden (1996) assigned 224 bank branches to experimental conditions (audited or not audited) and monitored their performance for a year. Their findings showed that performance significantly improved during the half year following the audit in the experimental branches, while the control branches experienced a decline due to poor general business conditions. Similarly, Mawanda (2008) conducted a research on effects of internal control systems (a subcomponent is financial control) on financial performance in institution of higher learning Uganda. The study established a significant relationship between internal control system and financial performance. These authors found a positive and significant relationship between budgeting planning and sales growth, and between budgetary control and sales growth. However, no significant difference was found between budget planning and return on investment (ROI). Paralleling this study, Onduso (2013) in a study on "the effect of

budgets on financial performance of manufacturing companies in Nairobi County" concluded that the financial performance as measured by ROA is strongly influenced by using budget and managerial performance respectively. Mohammed and Ali (2013) in a study "the relationship between budgeting and performance of Remittance companies in Somalia" concluded that the correlation between budgeting and firm performance is 0.514, which means that one level increase of budgeting effectiveness will lead to 0.514 higher firm performance. Likewise, Faith (2013) conducted a study entitled "the effects of budgeting process on financial performance of commercial and manufacturing parastatals in Kenya". The key findings were that; more formal budgeting planning promotes higher growth of sales revenues in the parastatals, formal budgetary control leads to a higher growth of profit in parastatals and greater budgetary participation leads to better managerial performance.

Conceptual Framework of School Governance, Financial Controls, and Financial Irregularities in Secondary Schools in Ghana

The conceptual framework for this study pulls together the theoretical underpinning of the fraud triangle theory and agency theory.

Figures 2 shows the conceptual framework used for the study. The researcher posits that financial irregularities in secondary schools (Dependent variable) if present, is dependent on the two (2) main factors (Independent Variables) namely:

1. School governance;
2. Financial controls

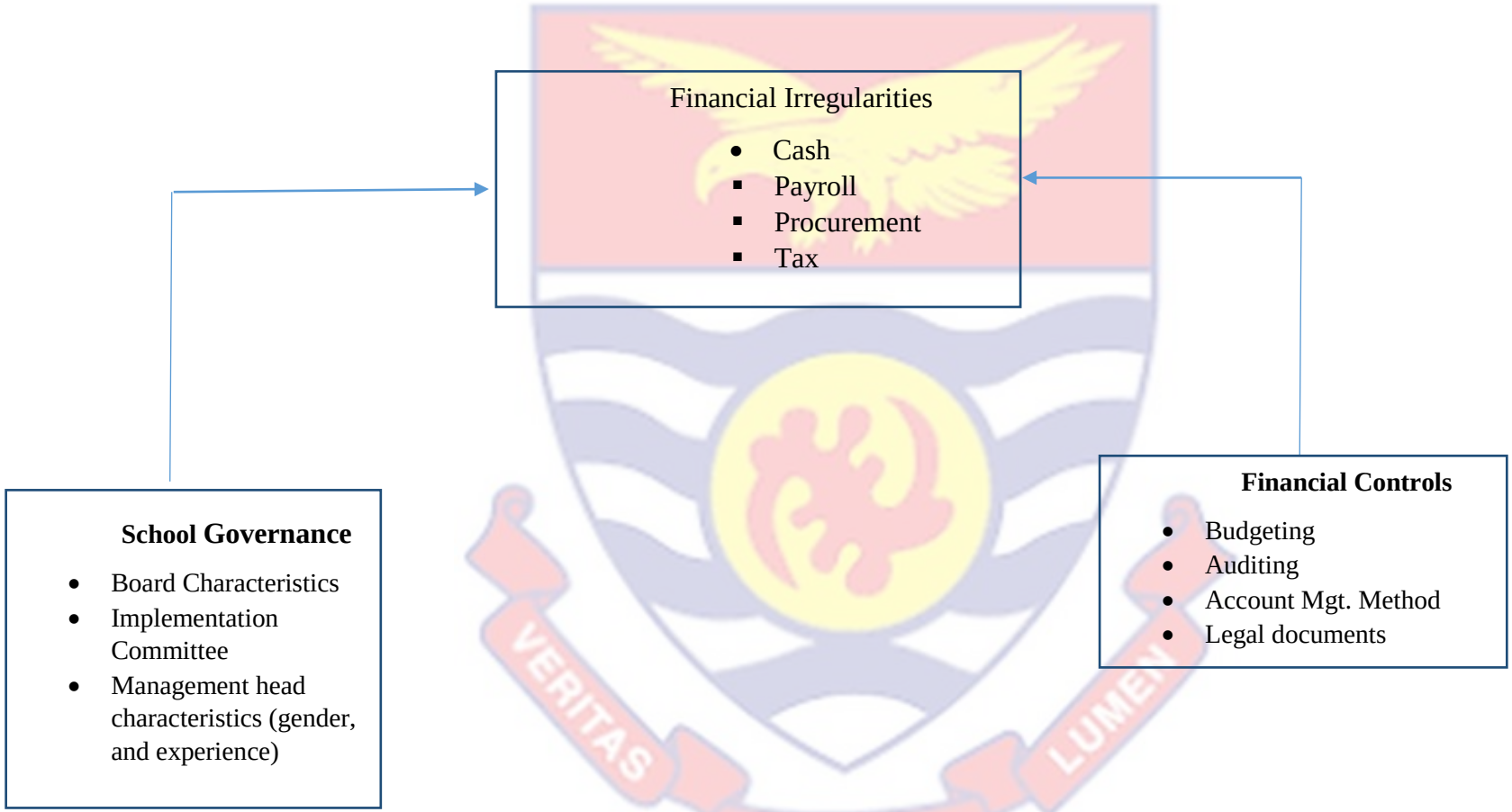

Figure 2: Conceptual Framework of governance, financial controls and accountability in Secondary Schools in Ghana. Source: Author's Construct (2015)

School governance

The study considered the following characteristics of governance: board characteristics (board size, sex ratio representation, religiosity of board chair), presence or absence of implementation committee, and demographic characteristics of school management head (sex and experience of head and bursar). These variables, as discussed earlier, are expected to have either positive or negative correlation with financial irregularities.

Financial control

Generally, financial controls are measured using scales developed based on the COSO framework. However, in this study, only specific component which seem to be prevalent in the management of Ghanaian schools are considered. These were: budgeting (who responsible for preparing budget), auditing (presence or absence of internal auditor, who is responsible for reviewing auditors' report), and mode of account mangement (manual or electronic).

Summary

In this chapter, I have discussed theories underpinning financial control systems, as well as those related to public governance. The COSO framework was reviewed as the benchmark of financial controls. In addition, two theories namely, agencification, and the Cressey's fraud theories were considered, and linked to financial irregularities. Finally, a conceptual framework of how school governance and financial control relates to financial irregularities were discussed.

CHAPTER THREE

METHODOLOGY

Introduction

In this chapter, the procedures that were adopted in the study are explained. It describes the research design, study population, sample size and sampling technique, data types and sources and, the data collection instruments. It includes measurement of reliability and validity of the various instruments, and the data analysis procedures employed in the study.

Study Area

The Eastern Region is the sixth largest region in terms of land area in Ghana. It lies between latitudes 6^{o} and 7^{o} North and between longitudes $1^{o}30'$ West and $0^{o}30'$ East.

The level of education within the region is quite low, comparing with national averages. On the average, 20 percent of all persons aged 15 years and older have never attended school in the Eastern Region. The majority (59.8%) have primary or JSS/JHS/Middle school education. Secondary and higher education are not accessible physically and financially to most communities, particularly the poor and those in the rural areas. As such less than 10 percent of inhabitants have senior secondary/high education, and negligent proportions have vocational technical, post-secondary and higher education. Finally, less than two thirds of the populations on the average are literate.

Research Design

The study employed mainly quantitative research. Correlational survey design was used. According to Aliaga and Gunderson, cited in Muijs (2004, p.1), quantitative research is "explaining phenomena by collecting numerical

data that are analyzed using mathematically based methods (in particular statistics)". Surveys generally "gather data at a particular point in time with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events"(Cohen, Manion, & Morrison, 2005, p. 205). Miller (2005) stated that even though correlational studies do not establish causality (cause and effect), it can show how two characteristics are related to each other or how one can be predicted with the knowledge from the other or others. Correlational design was chosen because it allows the researcher to test relationships and predict the factors that affect financial irregularities in the schools.

Study Population

The study population consisted of all 93 senior high and senior high technical schools in the Eastern region of Ghana. It included both state-owned and Faith-Based (Mission Schools) schools. The Eastern region was selected because it has consistently topped all regions in terms of financial misappropriation as reported in the Auditor-General's report over the four years (2010 to 2013) under review.

Sample Size and Sampling Technique

A census of all 93 schools was conducted to gather data for the analysis. Since the number of schools were not too many, a total census was possible and not beyond reach.

Data Source

The data consisted of primary data that was collected directly from the respondents of all 93 schools. That is, the respondents consisted of 93 head

teachers (67 males, 26 females) and 93 bursars (60 males, 33 females). In addition, secondary data from published Auditor-General's reports for the years 2010 to 2013 was used as the dependent variable (irregularities).

Data Collection Instrument

A survey questionnaire was used in the study. The questionnaire was the main research instrument because it is more appropriate for collecting data for a social survey research (Kaplan, 1995). The questionnaire was designed with reference to variables of the study consisting of structured questions. The structured questionnaire type enabled simple data analysis through tabulation with regard to frequencies and percentages. This profile was used to come up with questions to address the objectives of the study in quantitative (numerical) terms.

Regression Model

Ordinary least squares regression (OLS) model was estimated to establish the effect of school governance (SG), and financial controls (FC), on school financial irregularity (FI). The general form of the equation is given as:

$$Y= \beta0 + \beta1X1 + \beta2\ X2 + iii + \beta kXk + \varepsilon0$$

(where Y is the predicted (dependent variable); financial irregularities in this case which was computed as the mean of the sum of irregularities from 2010 and 2013) value, β0 is the value of Y when all Xs are zero, β1 to βk the represent regression coefficients, and X1 to Xk represent the independent variables (IVs) namely: governance (board characteristics and gender /experience/school-related characteristics) and financial controls (including budgeting), and ε_0 is the error term).

Hence, the regression model is specified to be:

$$FI = \beta 0 + \beta 1SG + \beta 2FC + \varepsilon 0$$

(Where FI is financial irregularities, β0 is the amount of financial irregularities when governance, financial controls, and budgeting are zero. Also, β1 is the change in financial irregularities for one-unit change in governance, β2 is the change in financial irregularities).

Data Analysis

Collected data was edited, coded, and entered into the computer using the Statistical Package for Social Sciences (SPSS) version 23 and was then scored. The analysis involved partial least squares correlation analysis, and ordinary least squares regression analysis (to determine the best determinants). Suitable correlation coefficients (Pearson r, Phi, and Biserial) were used depending on the scale of measurement of the variables in the correlation. Partial least squares correlation analysis was used to determine the relationship between the study variables Financial controls, financial irregularity, and governance, and to establish causality (by controlling for possible confounding factors). In addition, ordinary least squares regression analysis was used to establish the extent to which the independent variables (governance and financial control) predicted the dependent variable (financial irregularity).

Delimitations

The study only covers governance, financial controls, and financial irregularites in secondary schools in the Eastern region of Ghana. The Eastern Region was used because it ranked highest in the proportion of irregularities recorded in all four years from 2010 to 2013, with over 100% increment in 2011 alone. Governance was measured by (1) board

characteristics (board size, board chair, and sex ratio representation on the board), (2) demographic characteristics of management heads (experience and gender) (3) existence of implementation committee. The demographic characteristics of head teacher and bursar are used as proxies to measure governance because the school management is set up by the board of directors of the school. Since the characteristics of the board include demographic characteristics, the same principle has been extended to include the characteristics of key components of the school management team. Financial control was measured using (1) use of accounting software (2) presence of internal auditor (3) who is responsible for reviewing the internal auditor's report (4) who is responsible for budget preparation (5) whether all stakeholders are involved in the budget preparation and (6) whether or not financial information is provided to parents during PTA meetings. The study only covers governance, financial controls, and financial irregularities in secondary schools in the Eastern region of Ghana. Financial irregularities are those reported by the Auditor-General covering the years 2010 to 2013. Misappropriated funds covers only four aspects: cash, procurement/stores, payroll, and tax.

Limitations

This study could not get access to the schools' institutional memory. Hence, such information such as which gender of head or bursar was at post at what time could not be determined. In addition, information with regards to who the bursar presented the various financial statements to (whether PTA or Board), what the Board's composition was at that time, who the board chair was etc. could not be determined. The responses analysed are for those

personnel who were at post at the time of data collection. These factors could influence the results, and are thus noted.

Variables of the Study

Dependent variable: the dependent variable of the study was financial irregularities. There were four sub-variables of financial irregularities (cash, payroll, procurement, and tax).

Independent variables (Predictors): there were two categories of independent variables. These were school governance and financial control. Each dependent variable had a number of sub-variables. The sub-variables of school governance include (1) board characteristics (board size, religiosity of board chair, and sex ratio representation on the board), (2) demographic characteristics of management heads (experience and gender) (3) existence of implementation committee. On the other hand, the sub-variables of financial control used in this study were (1) use of accounting software (2) presence of internal auditor (3) who is responsible for reviewing the internal auditor's report (4) who is responsible for budget preparation (5) whether all stakeholders are involved in the budget preparation and (6) whether or not financial information is provided to parents during PTA meetings.

Measurement of Variables

1. **Financial Control**: This variable was measured by both a 5 point Likert and dichotomous (yes or no) questions. All multiple choice questions were dummied. The Likert scales ranged from "strongly disagree (1) to strongly agree (5)" and a total of all items computed from each respondent reflected financial control. (Baker, Castro, Labrena & Meyer, 2005).

2. **Financial irregularity**: this variable was used as the dependent variable. It was measured by compiling all funds misappropriated as reported by the Auditor-General for the years 2010 to 2013. All four categories of funds misappropriation (cash irregularities, stores/procurement, salary, and tax) were considered. Means of these figures were then computed and used accordingly for the analysis.
3. **Governance:** this variable was measured as was the case for the financial controls. However, some of the questionnaire items under this variable were continuous in nature. Those type of questions were maintained as is.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents and discusses the results of the study in relation to the specific objectives of the study. First however, preliminary descriptive statistics are given to give context to the discussions according to the objectives of the study. In all, a copy each of the questionnaire was sent to each school. The questionnaire was then answered and returned to the researcher. There was a 100% response rate.

Preliminary Findings (descriptive statistics)

Table 2: Headmaster/Headmistress Personal/Gender/experience/school-related Data

/N	Item	Option		
			Frequency	Percentage%
.	Sex	Male	67	72
		Female	26	28
	Total		93	100
.	Years of experience in previous industry:	0 – 5yrs 6 – 10yrs	62 22	67 23
		11 and above	9	10
	Total		93	100
.	Working experience	0 – 5yrs	29	31
	at present school:	6 – 10yrs 11 – 15yrs 16 and above	11 46 7	12 49 8
	Total		93	100
	Working experience	0 – 5yrs	18	19
	in current position:	6 – 10yrs	32	34
		11 – 15yrs	38	41
		16 and above	5	6
	Total		93	100

n=93; Source: Field Survey Data, Acquah (2015)

In a nutshell, findings from Table 2 revealed that most workers occupying the post of headmaster/headmistress are males and majority of the headmaster/headmistress had ample years of working experience in previous industry. Additionally, most of the headmasters/headmistresses had worked in the school for over 10 years and majority has also worked as headmaster/headmistress for over 10 years at the various schools.

Essentially, findings from Table 3 revealed that most (65%) of the workers occupying the post of the Bursars are males and majority (94%) of the Bursars had much working experience in the public sector of the Ghanaian economy. Also, findings revealed that majority (44%) of the respondents (bursars or headmasters) had ample years of working experience in previous industry and most (37%) of the Bursars worked in the school for a period ranging from 11 to 15 years and majority (46%) has also worked as Bursar for a period ranging from 11 – 15 years at the various schools

Table 3: Bursar Personal/Gender/experience/school-related Data

S/N	Item	Option	Frequency	Percentage%
1.	Sex	Male	60	65
		Female	33	35
	Total		93	100
2.	Last industry of work:	Public	87	94
		Private	6	6
	Total		93	100
3.	Years of experience in sch	0– 5yrs	44	47
	Previous industry:	6 – 10yrs	38	41
		11 and above	11	12
	Total		93	100
4.	Working experience	0 – 5yrs	20	22
	at present school:	6 – 10yrs	31	33
		11 – 15yrs	34	37
		16 and above	8	8
	Total		93	100
5.	Working experience	0 – 5yrs	16	17
	in current position:	6 – 10yrs	28	30
		11 – 15yrs	43	46
		16 and above	6	7
	Total		93	100

n=93 (Source: Field Survey Data, 2015)

Descriptive statistics of the components of financial irregularities are presented in Table 4. From Table 4, the range of irregularities spanned between GH₵ 3,587,015.86. The procurement component recorded the highest sum of irregularity (GH₵10,511,620.14). This constitutes over 56.8% of the total irregularity reported. The least of the sums of irregularities was recorded within the tax component (GH₵563,620.70). Figure 3 presents the means plot of the financial irregularities.

Table 4: Descriptive statistics of Financial Irregularities

IR	Range	Min	Max	Sum	Mean	SD
Cash	927,281.79	1,124,985.74	2,052,267.53	6,882,843.60	1,720,710.90	410,305.54
Procurement	3,587,015.86	660,590.73	4,247,606.59	10,511,620.14	2,627,905.034	1,656,069.67
Payroll	85,909.95	92,890.27	178,800.22	554,347.09	138,586.77	3,616,400
Tax	260,003.61	4,1324.79	301,328.40	563,620.70	140,905.18	112,419.68287
Total Irregularity	4,356,316.97	1,919,791.53	6,276,108.50	18,512,431.53	4,628,107.88	2,081,008.27

Source: AG's Report for 2010 - 2013

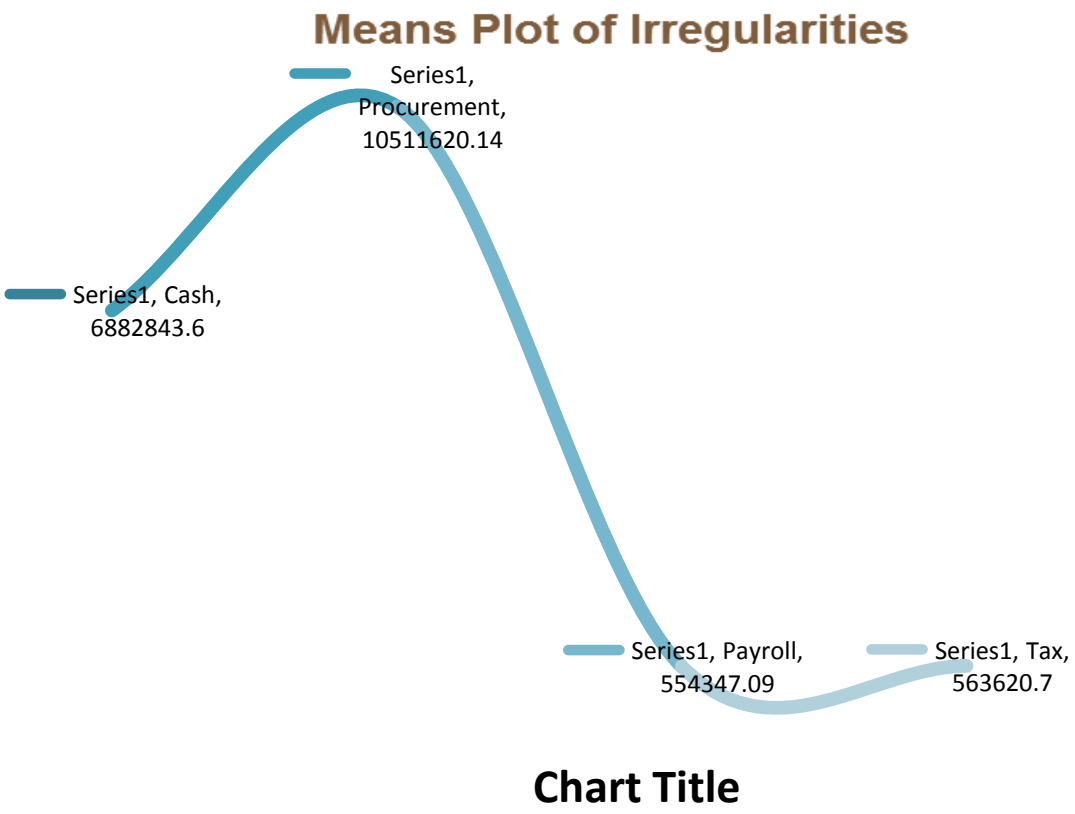

Figure 3: Means Plot of Financial Irregularities

Figure 3 indicates that the highest mean irregularity was recorded within the procurement (₵ 10,511,620.14) aspect of the total financial irregularities. This represented over 56.8% of all mean irregularities.

The lowest (₵ 563,620.70) was recorded as tax component, and represented barely 3% of all financial irregularities. Although tax recorded the lowest mean irregularity, the variation (SD = 112419.68) within the irregularities recorded was wider as compared to Payroll irregularities (SD = 1656069.66793).

In summary then, the major backdoor where the highest irregularities were recorded was within procurement. Tax on the other hand, recorded the lowest irregularities

Objective 1: Relationship between aspects of school governance and financial irregularities

Table 5 presents the findings of the relationships between gender, experience, and type of school, on the one hand, and financial irregularities on the other hand (see Appendix B for Davis convention for interpreting correlation coefficients).

Table 5: Correlation Coefficients of Financial Irregularities and Financial Controls

Variable	n	Type of correlation	Coefficient	Sig
Head Sex (1=Male, 0=Female)	93	Biserial	.060	.303
Bursar Sex (1=Male, 0=Female)	93	Biserial	.006	.918
Head Exp. (1= 0-5yrs, 0=otherwise)	93	Biserial	-.131	.024
Bursar Exp. (1= 0-5yrs, 0=otherwise)	93	Biserial	-.045	.444
Type of Sch. (1=FBS, 0=otherwise)	93	Biserial	-.127	.050

NB: FBS is faith-based school; $p<0.05$

Table 5 shows that there were no significant correlations between gender of either head (r_{bi} = 0.06) or bursar (r_{bi} = 0.006) and irregularities.

From Table 5, headmasters' experience had significant negative correlation with financial irregularities (r_{bi} = -.131). The negative correlation between the head's years of experience in his current position and irregularities implies that the level of irregularities decreases as heads served for more than five (5) years in their positions as heads of the schools. In other words, schools whose heads were less experienced (in their positions as heads of the schools) recorded more irregularities as compared to those with heads who have served in that capacity for long (more than 5 years).

A possible explanation to this finding is that the long years of service affords the heads the ability to learn on the job, and thereby see loopholes that can be used to misappropriate funds. They are likely to see ways of 'sealing' these loopholes. This knowledge could then be used either for good (not engaging in misappropriating funds) or for bad (misappropriating funds). It is apparent from the above logic that the experienced folks seem to be concern more about a 'good name' than wealth. Less experienced heads, who probably may be younger on the other hand come under pressure from society to prove that they are in a position of responsibility. This pressure gives a breeding grounds for corruption among less experienced heads who might be willing to behave in a dishonest way to meet societal pressures and expectations. Nevertheless, another possibility why there seems to be more financial irregularities among schools headed by less experienced ones is the lack of experience. This lack of experience in their positions as heads makes them liable to inefficiencies. Hence, some of the irregularities recorded may actually be a result of honest

errors due to their inexperience rather than malice. This idea has been opined by some authors who have demonstrated that inexperienced heads of firms lose their jobs within the first three years due to inefficiencies as a result of inexperience (Andreou, Louca, Panayides, & Petrou, 2014).

The relationship between other components of governance of the Senior High Schools, and financial irregularities as reported by the AG has been presented in Table 6 below.

Table 6: Correlation between governance and financial irregularities

Governance variables	N	Type of correlation	Coefficient	Sig
Board Chairman	161	Biserial	-.153	.027
Implementation Committee	161	Biserial	-.321	.000
No. of Persons on the Board	161	Pearson product	.181	.011
Sex Ratio Representation on Board	161	Pearson product	-.202	.005

Source: Field Survey, Acquah (2015).

Table 6 shows that all four aspects of school governance had significant correlation with financial irregularities. Three out of four of the correlations were negative. These were board chairman (rbi =. -153), implementation committee (rbi = -.321) and sex ratio representation on the Board (r = .202). Board size on the other hand showed positive significant correlation (r = .181).

The significantly negative correlation between the religiosity of the board chairman (1 = religious leader; 0 = otherwise) and financial irregularities implies that schools whose board chairs were religious leaders recorded lower levels of irregularities. Drawing on the functionalist theory which purports that religion promotes social solidarity by providing norms, imposing sanctions, and more important, by legitimizing the established social order, it was expected that a religious leader doubling as Board Chair will promote transparency and reduce irregularities. The findings of this study seem to support this theory. Empirically, most of the literature have rather examined the relationship between religious denominations and business ethics. While some have found positive relationships between religiosity and ethical behavior (e.g., Clark & Dawson 1996; Wiebe & Fleck 1980), others have established independence of religiosity and moral/ethical behavior (e.g., Kidwell et al. 1987; Kohlberg 1981; Vitell 2009). The one single published study that examined the relationship between religiosity and corruption (financial) however came to a sad conclusion. It revealed that religion was highly associated with corrupt business behaviour (Yeganeh & Sauers, 2013). The results from this current study however contrast this

finding and add further weight to earlier works which indicated positive correlations.

In addition, the negative correlation between the existence of an implementation committee in the schools implies that schools that had implementation committee to enforce the findings of the public accounts committee recorded less irregularities as compared to schools that did not have an implementation committee. This finding was expected as well. Often times, laws needed to check corruption problems often already exist in Ghana. The public procurement act, is a typical example. In addition to the laws, several regulatory bodies have been set up to ensure transparency and accountability. For example, the economic and organized crime organization (EOCO) and the serious fraud office (SFO) were set up for this purpose. Most of the time however, what is left to ensure accountability is a 'biting teeth' for both the law and the law enforcement institutions. Despite having all the beautiful laws, an effective enforcement lacks woefully. If there were effective implementation committees of the public accounts committee which ensured prosecution of school officials caught in misappropriations, this could serve as deterrent and prevent others from following suit. The need for an implementation committee to play a watchdog role has been highlighted by the AG. To quote him: "There is a need for a more effective follow up mechanisms on the final public account report and the auditor general's report endorsed by Parliament to prevent or minimize occurrence of malfeasance committed by public officials. The general public, civil society organizations and accountability institutions and state should continually perform their

watchdog role over the public purse." Perhaps, the most effective form of implementation will be what is practiced in China (see Guo & Li, 2015).

The results from Table 6 also implies that financial irregularities increased with increasing board size. In other words, the larger the board, the more irregularities that were recorded. Some earlier authors have proposed that a board's ability to monitor and make important decision improves with its size because there is the need to ensure diversity of perspectives, backgrounds, expertise and experience within the board (Abor, Abekah-Nkrumah, & Abor, 2008). However, several other theories and empirical results have shown otherwise (see Belkhir, 2013). For example, using a sample of large public US corporations, Yermack (1996) finds a statistically significant negative relationship between board size and firm performance. Eisenberg et al. (1998) report a similar negative relationship between board size and return on assets for a sample of small and mid-sized Finnish firms. Although these reports are limited to the banking sector, the principle behind could still apply to other fields such as in high school management. A possible explanation could be that communication, coordination of tasks, and decision making effectiveness among a large group of people is harder and costlier than it is in smaller groups (Belkhir, 2013; Guest, 2009). Secondly, board cohesiveness is could be undermined because board members will be less likely to share a common purpose, communicate with each other clearly and reach a consensus that builds on the directors' different points of view (Lipton & Lorsch 1992). Thirdly, director free-riding increases because the cost to any individual director of not exercising diligence falls in proportion to board size (Lipton & Lorsch 1992). Hence, Jensen (1993) and Lipton and Lorsch (1992)

suggest that as board size increases beyond a certain point, these inefficiencies outweigh the initial advantages from having more directors to draw on, leading to a lower level of corporate performance. Lipton and Lorsch (1992) argue that a board size of eight or nine directors is optimal, whereas Jensen (1993) argues that the optimum board size should be around seven or eight directors. In this study, majority of the schools had board size of thirteen (13). This exceeds the optimum proposed by Lipton and Lorsch (1992). The finding thus seems to support the proposition of these authors.

Finally, the sex ratio representation (male to female) on the board also recorded a negative significant correlation with financial irregularities. This implies that as the ratio of females on the board increased, financial irregularities decreased. In other words, when there were more female than males on the board, the schools recorded lower irregularities in their finances. This implies that as the proportion of females on the board increases, it leads to improved performance of the board and hence reduce financial malfeasance.

This conclusion parallels what several earlier authors have found empirically (Adams & Ferreira 2003; Bonn 2004; The Boston Club 2004; Campbell & Mínguez-Vera 2008; Carter, Simkins, & Simpson 2003; Erhardt, Werbel, & Shrader 2003). Two opposing theories have been put forward to explain this effect. While others opine that higher proportion of females on the board leads to better performance, others think better performing firms are likely to include females on their board (Esteban-Salvador, 2011). The first proposition seems to be the most probable explanation because Smith, Smith, and Verner (2006) have found evidence that the positive relationship is due to the first

effect, in other words, that diversity positively affects performance and not the reverse. The reason for this observation could be that because women are socially and community minded (Dimovski & Brooks, 2006), they are concerned about the image of the school and the effect of financial misappropriation on the children in terms of their welfare (feeding, lodging, etc.). This social and community consciousness of women results in decisions that are more creative and innovative which less prone to errors. (Lazzaretti, Kleinübing Godoi, Parodi Oliveira Camilo, & Marcon, 2013).

From the findings of objective one, therefore, the study failed to accept the first (1st) null hypothesis that that said that there is no significant correlation between school governance and financial irregularities. The alternative hypothesis that stated that there is significant correlation between school governance and financial irregularities is therefore accepted.

Objective 2: Relationship between aspects of financial controls and financial irregularities

The purpose of objective 2 was to establish the relationships between some components of financial controls of the Senior High Schools on the one hand, and financial irregularities as reported by the AG on the other hand. The financial controls have been further sub-categorized into three components namely: mode of financial management, auditing, and budgeting. Hence, financial control has five components. The results are presented in Table 7 below.

Table 7: Correlation Coefficients of Financial Irregularities and Financial Controls

Financial Control	Variable	N	Type of correlation	Coefficient	Sig
Mode of mgt.	Software	93	Biserial	-.222	.000
Auditing	Internal Auditor	93	Biserial	.108	.064
	IA's report reviewer	93	Biserial	-.092	.117
Budgeting	Budget Prep	93	Biserial	-.162	.012
	Stakeholders Involved		Biserial	-.292	.000

NB: IA = internal auditor. Source: field survey, Acquah (2015).

Table 7 shows that two (mode of financial management and Budgeting) out of the three sub-categories of financial controls showed significant correlations with financial irregularities namely: mode of finance management, and budgeting. All the components of these two sub-categories recorded significant correlations with financial irregularities. Putting them together, three (3) out of the five components of financial controls had significantly negative correlations with financial irregularities. These were whether the school used any accounting software or not (1 = yes; 0 = no) for their financial management (r_{bi} = -222), who is responsible for budget preparation (1 = both head and bursar; 0 = otherwise; r_{bi} = -.162), and stakeholders' involvement in budget preparation (1 = all stakeholders are involved; 0 = otherwise; r_{bi} = -.292). The results also revealed that one of the auditing variables (whether financial information is provided at PTA meetings or not) had significant positive correlation with financial irregularities.

The significantly negative correlation between the mode of finance management in the school (whether manual or use accounting software) implies that schools that used an accounting software recorded lower levels of irregularities. One possible reason why irregularities in schools which used any form of an accounting software (Microsoft spreadsheet, Tally 9 or any other customized software) was relatively lesser than schools that did not is that, all accounting software have features which helps in functions such as invoicing, dealing with payments, paying wages and providing regular accounting reports such as trading and profit and loss accounts and balance sheets. In addition, accounting software improves accuracy of operation, and, perhaps most importantly, the ability to see the real-time state of the school's

financial position. In contrast to using an accounting software, the manual system faces many challenges (which are inherent with all manual systems), which may contribute to the irregularities (systemic irregularities).

For example, transposition of figures, incorrect recording of a transaction, incomplete recording of a transaction, where only one side of the double entry is recorded, are all quite common mistakes that results from a manual system, and can prove to be quite difficult to locate without a good deal of experience in accounting (AccountsMan, 2012). The security implications of using a manual accounting system have been well demonstrated by several scandals that have been recorded in history. Even totally audited firms were still able to turn out bogus and untrue financial statements for years without being caught (Doost, 1999). Typical examples of proof of insecurity of manual accounting system includes the equity funding case in the late 1960s, the Saving and Loan Association scandals of the 1980s, to international bank frauds and the bankruptcy of the Phar-Mor company, all recorded cases in the US (Doost, 1999). Aside the difficulty in recognizing errors (whether genuine or fabricated), the manual system is slow in generating such reports for financial control purposes even in situations where it is able to detect such errors. In all then, the advantages of using an accounting software to mitigate errors inherent and common in a manual system far outweighs any potential drawbacks such as cost and complexity. For relatively small organizations such as Schools, much customized and less expensive and yet efficient software could be developed by the GES to ensure financial integrity of the schools.

The results also imply that the person responsible for budget preparation (1 = both head and bursar; 0 = otherwise) had a negative correlation with financial irregularities. Hence, when both the head and bursar are involved in preparing the school's budget, it led to reduced financial irregularities as opposed to either the head alone or the bursar alone preparing the budget. A probable explanation is that, when both the bursar and the head are involved in the preparation of the budget, the head serves as a check on the bursar thereby reducing the possibility of misappropriation. If the budget was to be prepared by either one of these two personnel alone, that could likely lead to dishonesty in the budget such as inflation of prices.

Stakeholders' involvement in the budgeting process also showed significant correlation with financial irregularities. The relationship was negative. This implies that when all stakeholders were involved in the budgeting process, financial irregularities decreased. This was expected. When all stakeholders (heads of departments, PTA, SRC) are involved in the budgeting process, it provides a mechanism to properly execute the budget (Kang, Young, & Min, 2013) by school management. These are in agreement with the tenets of participatory budgeting (PB). The enhanced transparency and accountability that participatory budgeting creates due to the power given to the citizens (stakeholders) helps to reduce corruption (Shah, 2007). The modus operandi are such that community members, instead of school management officials alone, decide how school funds should be spent, from start to finish. They exchange ideas, collaborate to develop project proposals and then vote on which proposals should get funded. Once the funds are allocated, community members monitor project development to ensure

accountability (Kasdan & Lerner, 2013). Although the stakeholders discussed in this study did not include the general citizenry, the result is a reflection of the larger concept of participatory budgeting. All available empirical results mostly from Latin America, have demonstrated enhanced accountability (e.g. Botey, 2015; Shah, 2007; Wampler, 2007). It is apparent then that involving more persons from influential down to the least influential member of the community will enhance budgeting practices and reduce irregularities. It will be much easier to device corrupt methodologies in the budgeting processes in the schools if the one responsible for the budget preparation is just one person or two. Even if it is a group responsible for drawing and monitoring the budget, it will be relatively easier to form alliance with the intent to collude and connive. The results will be systematic corruption in the form of irregularities in the schools. On the other hand, if there is general community involvement in the budgeting process (participatory budgeting) it provides more financial controls and reduces the risk of organized collusion with the intent to steal from the school's coffers.

From the findings of objective 2, therefore, the study failed to accept the second (2^{nd}) null hypothesis that that said that there is no significant correlation between financial control and financial irregularities. The alternative hypothesis which stated that there is significant correlation between school governance and financial irregularities is accepted.

Summary of the correlations

In all, 9 out of the 14 independent variables showed significant correlations with financial irregularities. Out of these nine variables, two were gender, experience, school-related, three were financial controls and 4 were

governance characteristics. In addition, 8 out of the nine independent variables were negatively correlated with financial irregularities. Only board size had positive correlation with financial irregularities.

Objective 3: Determinants of financial irregularities

Multicollinearity Diagnostic Test

Multicollinearity diagnostic test was performed to ensure that there were not any perfect linear relationship between any two of the determinant variables (Field, 2011). Such high correlations have the ability to bias the regression estimates. Tolerance and Variance Inflation Factor (VIF) were used. Both the tolerance and VIF show whether a determinant has a strong linear relationship with the other determinant or determinants (Field, 2011; Pallant, 2011). Table 8 shows the minimum and maximum tolerance and VIF observed in estimate (see appendix C for individual values of VIF and Tolerance for all 15 determinants).

Table 8: Collinearity diagnostic test

Measure	Minimum	Maximum
VIF	1.000	4.575
Tolerance	.219	1.000

n=127. p>0.05. VIF =Variance Inflation

Source: Field Survey, Acquah (2015)

Both the VIF and Tolerance values in Table 6 show that there was no significant multicollinearity that could bias the subsequent regression estimates. The minimum and the maximum Tolerance value were .219 and 1.000 respectively. These values were more than 0.10. Tolerance value less than 0.10 indicates possibility of multicollinearity (Pallant, 2011). From Table 8, the minimum and the maximum VIF values of 1.0 and 4.575 respectively were recorded. These figures were far less than 10 indicating no significant multicollinearity since VIF greater than 10 shows significant concern for multicollinearity (Pallant, 2011, Field, 2011).

Best determinants of Cash irregularities

A standard multiple regression was performed between the amount of cash irregularities as the dependent variable and fourteen (14) determinants (including gender/experience/school-related characteristics, 6 financial control characteristics, and 4 governance characteristics) as independent variables. Analysis was performed using International Business Management's Statistical Package for Social Sciences (IBM SPSS) (version 23) regression. Cai & Hayes (2008) have extensively discussed the issue of heteroscedasticity and its impact on the regression estimates. The initial exploration of the data for this research showed high heteroscedasticity and non-normal distribution. Several transformation procedures (including Box-Cox) did not solve the heteroscedasticity and non-normal distribution problems. Hence, Cai & Hayes (2008) recommendations were adopted and used in this study (see also Long & Ervin, 2000). The macros designed by these authors were used to generate the regression estimates (model). Additional hand-calculated estimates (adjusted R^2, part correlations) were employed to throw further light on the

contributions of the individual determinants on the total model estimate. Hand-calculation was employed because Cai & Hayes, (2008) macros does not generate them by default. The formulas for these calculations were adopted from Tabachnick and Fidell (2013), and (University of Notre Dame, 2003). In addition, some of the determinant variables were dropped because of the impossible regression covariance matrices which were associated with their inclusion. The fourteen final determinants passed the test of multicollinearity and were thus included. The same principles were applied for subsequent regressions using different dependent variables (the components of total financial irregularities: cash, procurement, payroll, and tax).

Further, for easy and possible comparison of the contributions of the individual determinants, the proposal by Gelman, (2008) was adopted to account for the shortfalls and difficulties in using standardized coefficients. Hence, this study reports only the standardized coefficients proposed by this author because of the impossibility to compare unstandardized coefficients (due to different measurement scales), and the difficulty in interpreting traditional standardized coefficients (with binary inputs). His proposition generally leads to more understandable inferences than the current default and make regression coefficients more interpretable as changes from low to high values (for binary inputs or numeric inputs that have been scaled by two standard deviations) (Gelman, 2008). In addition, the misunderstanding that a regression analysis cannot produce a standardized beta greater than one has been dealt with by (Jöreskog, 1999). Hence, some of the standardized betas reported in this study are above 1.

Table 9 displays the standardized regression coefficients (Beta), the part correlations (sri^2), and R^2, and adjusted R^2, the standard error of estimate, the F-ratio and the significance after entry of all fifteen determinants. Pearson correlation coefficient for regression was significantly different from zero, F (15, 111) = 3.1875, p = .0002, with R^2 at .3859. The adjusted R^2 value of .3029 (30.3%) indicates that about a third of the variability in cash irregularities is predicted by those aspects of demography, financial controls, and governance used in the model. In other words, about 30% of the total variability in cash irregularities is explained by these aspects of demographic, financial controls, and governance characteristics.

Out of all fifteen determinants, only four (gender of headmaster, board size, type of school, and accounting software) made significant contributions (best determinants). The shared variance between these four variables was about 12%. Although these four made significant contributions to the total variance explained, the betas indicate that board size (beta = 1. 2003) made the strongest unique contribution to explaining financial irregularities, when the variance explained by all other variables are controlled for. This was followed by accounting software (i.e. whether the school uses any accounting software accounts manually) (beta =-1.0574). This was the case even though type of school made a slightly higher unique contribution than accounting software.

Table 9: Standard multiple regression between cash irregularities and various components of financial control, and governance characteristics

Determinant	Beta	Part Corr.	T	P
gender of bursar	-.2471	.0055	-.7602	.4488
gender of head	.5134	.0257	2.2981	.0234
experience of head in current position	-.1081	.0004	-.3909	.6966
experience of bursar in current position	.1159	.0011	.7022	.4840
internal auditor	-.0045	.0000	-. 0111	.9912
who prepares budget	-.0554	.0003	-.2507	.8025
all stakeholders	-.2235	.0014	-.61 71	.5384
board size	1.2003	. 1684	3.6505	.0004
board chair	-.1426	.0020	-.9444	.3470
implementation committee	.0441	.0001	.1590	.8740
sex ratio rep on board	.2979	.0046	1.1486	.2532
type of school	-. 4511	.0299	-.1555	.0333
financial information during PTA	.1713	.0006	. 64 62	.5195
who reviews IA's report.	-.2061	.0006	-. 3962	.6927
accounting software	-.0574	.0249	-.3980	.0182
R^2	**Adj. R^2**	**F**	**Sig. F**	
.3859	.3029	3.1875	.0002	

N = 127; Source: Field Survey; Acquah (2015)

It has been explained elsewhere (Berger, 2003) that differences in standard deviations could give rise to such 'anomalies'. The type of school (whether faith-based or not) made the smallest unique contribution to explaining cash irregularities.

Board size as a determinant

Board size was the only governance characteristic that emerged as a significant determinant of cash irregularities. This implies that schools with larger board size were likely to record higher levels of cash irregularities as compared to those with smaller board size. It contributed the largest proportion (over 16%) to the explanation of the variance in cash irregularities.

The result from the study is contrary to the hypothetical expectations based on the agency and resource dependency theory which argue that larger board size creates greater firm value through an effective external linkage (Wetukha, 2013). However, the results of this current research parallels Yermack's (1996) findings.

One point of interest on the subject of board size in relation to the board's performance as a control mechanism is the nature of the composition of the board. Boards with members who lack knowledge on financial management could prove to be of no use in proper management of cash flows irrespective of the size of the board. That is, if a board is small (in their number) and yet the members have expertise in effective financial management strategy, such a board will be more effective than a larger board whose members have no expertise in financial management. Hence, the expertise on the board seem to be a mediating factor that determines a board's performance rather than size. It was found in this study that the minimum

board size was 10, which is more than what has been recommended by Yermack (1996). This could have accounted for the results obtained.

Nature of school as best determinant of cash irregularities

This determinant was among the two school-gender/experience/ school-related characteristics (the other been gender of head) that emerged as significant determinant. It alone contributed about 3% to the explanation of the variance in cash irregularities. Its impact on cash irregularities was negative. This implies that, faith-based secondary schools (mission schools) recorded relatively lesser cash irregularities than public (state-owned) ones.

Effort to explain this finding is quite challenging due to the numerous recorded cases of fraud and cash embezzlement in religious organizations (e.g. Rhodes, 1989). However, the relationship between degree of religiosity and business-related ethicality has generally been found to be positive (e.g., Conroy & Emerson, 2004; Ibrahim et al., 2008; Kurpis et al, 2008; Wong, 2008). That is higher degree of religiosity leads to higher ethicality (including reduced cash misappropriation).

A possible explanation of this finding is that the long line of bureaucracy to follow in order to report even a case of corruption in the public sector seems to fuel corruption. The same long line of bureaucracy is followed to even execute review process and probable punishment of culprits. With faith based schools however, that long chain of bureaucracy is broken since the school management is partly accountable to the religious organization. It is therefore easier to quickly detect cash irregularities and deal with it.

Gender of headmaster/headmistress as best determinant of cash irregularities

Gender of the headmaster/headmistress of the school was the second school-gender/experience/school-related characteristic that emerged as a best determinant of cash irregularities. It accounted for about 3% to the explanation of variance in cash irregularities. Its effect on cash irregularities was positive (beta =.5134), and made the third largest unique contribution (behind board size and accounting software) to explaining the variance in cash irregularities. This implies that schools with male heads were more likely to record higher cash irregularities than schools with female heads.

The result was consistent with majority of others that researched the impact of gender on ethicality. Peterson et al., (2010) has reviewed these. In view of these findings, Kennedy and Lawton (1996, p. 904) concluded that while some studies "have shown little or no difference between males and females...none have found higher standards for males than females". Roxas and Stoneback (2004) reported the results of an eight-country ethical dilemma study of accounting students (Australia, Canada, China, Germany, Philippines, Thailand, Ukraine, and United States) that concluded that "males were significantly less ethical than females" (Roxas & Stoneback, 2004, p. 161). Analogous cross-national findings have been reported by, among others, Sikula and Costa (1994), Whipple and Swords (1992) and Hossain, Nyamu, & Hughes, (2010).

A possible explanation to this finding could be that women inherently possess greater integrity than men and that there is therefore less corruption under their leadership (Hossain et al., 2010). Hence, the idea of

misappropriation of cash in the form of paying bribes and for personal use has less appeal to women than men. In addition, the gendered opportunity structure of corruption provides an alternative explanation for lower observed levels of corruption among women in public office and lower levels of overall corruption in institutions in which women have attained critical mass (Hossain et al., 2010). Corrupt activities may run in networks (typically all male), formed on patronage relationships or based on long-established political ties. Women may be excluded from opportunities to engage in or benefit from corrupt activities, whether due to being relative newcomers to these relationships and networks, due to cultural limitations against women interacting with non-kin men, or due to their having less access to the networks and arenas through which corrupt dealings are organized. These are all possible explanations to this current finding.

Accounting Software as best determinant of cash irregularities

Whether a school uses any accounting software (including Microsoft excel) or does all financial transactions manually emerged as the last significant determinant of cash irregularities. It made just about the same unique contribution as gender of headmaster. Its impact was the second most influential amongst the four determinants **(beta = -1.0574),** falling only behind board size. The impact was negative as was expected. This implies that schools that used any other mode of financial management other than manual (being it excel spreadsheet or customized accounting software) could curb cash irregularities and hence record less of such cases.

The negative significant impact between the mode of finance management in the school (whether manual or use accounting software) and cash irregularities

implies that schools that used an accounting software recorded lower levels of cash irregularities. This implies that ICT could be used to control cash irregularities in the schools. This finding is in line with the idea expressed by some authors that ICT makes it simpler and easier to maintain financial management (Carvalho, 2002). Paralleling this idea, one report on the use of Integrated Financial Management System (IFMS) which applies high technology to enhance financial management and reduce mismanagement and corruption came to a similar conclusion (Sottie, n.d.). These findings are apparently the case because the use of computers and computer software (ICT) have been credited with improving efficiency or productivity in financial management (Mistry & Jalal, 2012). For this reason, industry experts recommend computerization as the best route to go (e.g. Shapiro, 2008). The use of an accounting system offers several advantages. These include (among other things) recording invoices and checking for duplicates, automatic update of suppliers' account, recording of bank receipts, and making of payments to suppliers (Hadler, 2015). These are challenges that the manual system faces, which may contribute to the irregularities (systemic irregularities).

For example, transposition of figures, incorrect recording of a transaction, incomplete recording of a transaction, where only one side of the double entry is recorded, are all quite common mistakes that results from a manual system, and can prove to be quite difficult to locate without a good deal of experience in accounting (AccountsMan, 2012). The security implications of using a manual accounting system has been well demonstrated by several scandals that have been recorded in history. Even totally audited firms were still able to turn out bogus and untrue financial statements for years without being caught

(Doost, 1999). Typical examples of proof of insecurity of manual accounting system includes the equity funding case in the late 1960s, the Saving and Loan Association scandals of the 1980s, to international bank frauds and the bankruptcy of the Phar-Mor company, all recorded cases in the US (Doost, 1999). Aside the difficulty in recognizing errors (whether genuine or fabricated), the manual system is slow in generating such reports for financial control purposes even in situations where it is able to detect such errors. In all then, the advantages of using an accounting software to mitigate errors inherent and common in a manual system far outweighs any potential drawbacks such as cost and complexity. For relatively small organizations such as Schools, much customized and less expensive and yet efficient software could be developed by the GES to ensure financial integrity of the schools.

Summary of findings

Four out of fifteen determinants emerged as best determinants of cash irregularities. Out of these, two were school-gender/experience/school-related characteristics (type of school and gender of headmaster), and one each was governance (board size) and financial control (accounting software). Board size made the most influential unique contribution to explaining the variance in cash irregularities whilst accounting software made the least unique impact.

Table 10: Standard multiple regression between payroll and various components of financial control, and governance characteristics

DETERMINANT	BETA	PART CORR.	t	P
gender of bursar	-.0982	.0087	-.8390	.4033
gender of head	.0786	.0006	.8445	.4002
experience of head in current position	-.0846	.0024	-.8077	.4210
experience of bursar in current position	-.0910	.0068	-1.0517	.2952
internal auditor	-.0152	.0000	-.1043	. 9171
who prepares budget	-.0700	.0036	-.6592	. 5111
all stakeholders	-.1099	.0033	-.7803	.4369
board size	-.0068	. 0283	-.0624	.9503
board chair	.0469	.0021	.5119	.6098
implementation committee	.1190	.0042	1.0631	.2901
sex ratio rep on board	-.1260	.0083	-1.2499	.2140
type of school	-.0009	.005	-.0085	.9933
financial information during PTA	.0952	.0037	.7031	.4834
who reviews IA's report.	.0056	.0000	.0282	.9776
accounting software	.0193	.0000	.1121	.9109
R^2	**Adj. R^2**	**F**	**Sig. F**	
.0642	.0487	.7151	.7647	

Best determinants of payroll irregularities

Table 10 displays the standardized regression coefficients (b), the semipartial correlations (sri^2), R^2, and adjusted R^2. The coefficient of correlation for regression was not significantly different from zero, F (15, 111) = .7151, p = .7647, with R^2 at .0642. The adjusted R^2 value was .0487. The implication is that barely 5% explanation to the variance in payroll irregularities was predicted by school-demographic, financial controls, and governance characteristics. This prediction had no practical application since it was not statistically significant.

The non-significant prediction of payroll irregularities could be explained considering the laxity in the payroll structure in Ghana. Although it is the duty of school management to ensure prompt deletion of names of separated staff from their payroll in line with Regulations 297 and 298 of FAR 2004, the responsibility does not rest on school management alone. In certain instances, the controller and accountant general's office have shown inefficiency by failing to delete names of members of staff who have deceased. In my own experience, certain colleagues of mine were being paid professional salaries although they were not professional teachers. Even when out of good conscience my colleague reported and submitted documents to that effect to the Controller's office, nothing was done about it since 2012 and she continued to receive the professional amount. Although the difference in the amount between professional teachers and non-professional teachers isn't large, the situation gives insight into the inefficiency within the controller's office. Interestingly, the payroll irregularities recorded in most cases were amounts that were paid as unearned salaries, which may include monies paid

to deceased members of staffs. For example, the Auditor General's report for the financial year ended 31st December, 2012 showed that the amount of payroll irregularities attributed to unearned salaries was about twice as much as the amount of payroll irregularities that was due to unrecovered staff allowances. It follows then that the inefficiency at the Accountant General's department could be a confounding variable influencing payroll irregularities.

Best determinants of procurement irregularities

Table 11 presents the standardized regression coefficients (b), the semipartial correlations (sri^2), R^2, and adjusted R^2. The coefficient of correlation for regression was not significantly different from zero, F (15, 111) = .9551, p = .7647, with R^2 of .5069. The adjusted R^2 value was .0209. The implication is that barely 2% (adjusted R^2) explanation to the variance in procurement irregularities was predicted by school-demographic, financial controls, and governance characteristics. This prediction had no practical application since it was not statistically significant.

Procurement is a 'two way' affair that involve both the school officials and suppliers (Osei-Tutu, Badu, & Owusu-Manu, 2010). This is unlike cash irregularities where one person could, for example, simply alter figures with the intent to steal. For procurement irregularities to occur, two components are involved: the schools 'officials and corrupt business men. Hence, the characteristics of these second groups (the corrupt business men) could also influence the degree of irregularities due to procurement. This idea could perhaps explain the insignificant impact of the determinants (demographic, financial controls, and governance) on procurement irregularities.

Table 11: Standard multiple regression between procurement and various components of financial control, and governance characteristics

Determinant	Beta	Part Corr.	T	P
gender of bursar	.2012	0.0057	1.1707	.2442
gender of head	.0061	0.0001	.0386	. 9692
experience of head in current position	-.6679	0.0237	- . 9911	.3238
experience of bursar in current position	.2555	0.0084	1.3109	.1926
internal auditor	-.2265	0.0024	-.6642	.5080
who prepares budget	- . 0712	0.0006	-.4425	.6590
all stakeholders	-.6635	0.019	-1.0297	.3054
board size	.0608	0.0314	.4291	.6687
board chair	-.0943	0.0014	-.6655	. 5071
implementation committee	.5582	0.0144	.9053	.3673
sex ratio rep on board	.5051	0.0208	.9041	.3679
type of school	- .1411	0.0449	-.7497	.4550
financial information during PTA	-.1453	0.0014	-.3543	. 7238
who reviews IA's report.	-1.0833	0.0261	-1.0049	.3171
accounting software	.3538	0.0044	.5149	.6076

R^2	Adj. R^2	F	Sig. F
.1005	.0209	.9551	.5069

Best determinants of tax irregularities

Table 12 presents the standardized regression coefficients (b), the semipartial correlations (sri^2), R^2, and adjusted R^2. The coefficient of correlation for regression was not significantly different from zero, F (15, 111)

= .5771, p = .8870, with R^2 of .0793. The adjusted R^2 value was .0450. The implication is that barely 5% (adjusted R^2) explanation to the variance in tax irregularities was predicted by school-demographic, financial controls, and governance characteristics. This prediction had no practical application since it was not statistically significant.

Although the model as a whole did not significantly predict tax irregularities, presentation of financial information at PTA meetings was singly a significant determinant of tax irregularities. This finding though paradoxical, has been shown to be possible. Since the t-statistic used to determine significance is performed for individual determinants, it is possible for one variable to record significance although the model as a whole does not (Field, 2011; Tabachnick & Fidell, 2013). The implication is that the interaction effect of all the fifteen variable was not significant. It has been indicated elsewhere that when the interaction effects are insignificant, main effects are to be ignored, as in this case (Field, 2011; Tabachnick & Fidell, 2013).

Table 12: Standard multiple regression between tax and various components of financial control, and governance characteristics

Determinant	Beta	Part Corr.	T	p
gender of bursar	. 0965	**.0018**	.5440	.5875
gender of head	-.2951	.0185	-1.4930	.1383
experience of head in current position	-.0420	**.0001**	-.3445	.7311
experience of bursar in current position	.0173	**.0000**	.2210	.8255
internal auditor	.1138	**.0008**	.8757	.3831
who prepares budget	-.0628	**.0006**	- .7277	.4149
all stakeholders	-.0994	**.0006**	-.8478	.4684
board size	.1297	**.0151**	1.1055	.3984
board chair	-.1248	**.0032**	-1.5018	.2713
implementation committee	-.3239	**.0007**	-.7602	.1360
sex ratio rep on board	. 0272	**. 0027**	1.3109	.4488
type of school	.0771	**.0254**	-2.2504	.1926
financial information during PTA	-.1404	**.0000**	. 3728	.0264
who reviews IA's report.	. 0272	**.0002**	.5043	. 7100
accounting software	.0771	**.0009**	-.8183	.6150
R^2	**Adj. R^2**	**F**	**Sig. F**	
.0793	**0.0450**	.5771	.8870	

Best determinants of overall financial irregularities

Table 13 presents the standardized regression coefficients (b), the semipartial correlations (sri^2), R^2, and adjusted R^2. The coefficient of correlation for regression was significantly different from zero, F (15, 111) = 3.4885, p = .0001, with R^2 of 0.25. The adjusted R^2 value was 0.149.

The implication is that 25% explanation to the variance in overall financial irregularities was predicted by school-demographic, financial controls, and governance characteristics.

Out of all fifteen determinants, two (board size and type of school) made significant contributions (best determinants). The shared variance between these two variables was about 9%. Although these two made significant contributions to the total variance explained, the betas indicate that board size made the strongest unique contribution to explaining financial irregularities (beta = .5790), when the variance explained by all other variables are controlled for. Board size alone contributed about 8% unique contribution to explaining the variance in total financial irregularities. The type of school (whether faith-based or not) made the smallest unique contribution to explaining cash irregularities (beta = -.3672), contributing about half of the unique contribution of board size (4.4%). The signs of the betas were consistent to those recorded in the cash irregularities. Apparently then, the same explanations offered in the case of cash irregularities will suffice here and be applicable. This is apparently the case because whatever significance of these two determinants might be due to their impact on cash irregularities.

Table 13: Standard multiple regression between total financial irregularities and various components of financial control, and governance characteristics

Determinant	Beta	Part Corr.	T	P
gender of bursar	.0605	.0005	.3042	.7615
gender of head	.1749	.0047	1.0444	.2985
experience of head in current position	-.6008	.0192	-1.0085	.3154
experience of bursar in current position	.2423	.0076	1.4114	.1609
internal auditor	- .1627	.0018	-.5202	.6040
who prepares budget	-.1035	.0018	-.6422	.5221
all stakeholders	-.6612	.0189	-1.1546	.2507
board size	.5790	. 0806	3.4348	.0008
board chair	-.1529	.0036	-1.0710	.2865
implementation committee	.4620	.0099	.8506	. 3968
sex ratio rep on board	.5406	.0239	1.1200	.2651
type of school	-.3672	.0444	-2.0439	.0433
financial information during PTA	-.0238	.0001	-.0670	.9467
who reviews IA's report.	-.9365	.0196	-.9957	.3216
accounting software	-.1877	.0013	-.3157	.7528
R^2	**Adj. R^2**	F	**Sig. F**	
.2500	. 149	3.4885	.0001	

Unique observations of total semi partial correlations of determinants exceeding total coefficient of determination in the case of purchasing irregularities

A careful summation of all semi partial correlations in Table 9 showed that the total of all the unique contributions of the fifteen determinants well exceeded the overall coefficient of determination (R^2 =0. 1005). The value

was about twice the overall R^2 (0.2047). Generally, it has been opined that when the independent variables are correlated, squared semi partial correlations do not necessarily sum to multiple R^2. It is expected in most cases that the sum of all the squared semi partial correlations is usually smaller than R^2 (Tabachnick & Fidell, 2013). This author is however quick to add that under certain 'extreme' circumstances, the summation of all semi partial correlations could exceed the overall R^2. The 'extreme' circumstances under which such a rather paradoxical situation could arise includes when there is negative correlation between any two of the determinant variables. Such a situation is referred to as the cooperative suppression situation and has been described elsewhere (Cohen, Cohen, West, & Aiken, 2003).

It is noted from the correlations matrix amongst the independent variables that a number of these correlations were negative **(See Appendix E)**. Under such circumstances, Cohen et al., (2003) explains that the semi partial (part) correlations becomes larger than the zero-order correlations, and the observations made above is valid.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the summary, conclusions and recommendations of the study. Summary of the results and conclusions have been organized based on the specific objectives and the hypotheses of the study. This section also presents suggested areas for further research.

Summary

Good governance is a set of responsibilities, practices, policies, and procedures exercised by an institution to provide strategic direction to ensure objectives are achieved and resources are used responsibly and with accountability (World Bank, 2009). Good governance practices support schools by helping them manage their resources so they can deliver quality education. Literature has suggested that the success (effectiveness) of any school depends by and large, on strong leadership (governance) (Harris et al., 2003 cited by Agezo, 2010). This is the case because good governance (by management) in schools provide internal control over both administrative and financial reporting by setting a standard for ethical behavior (Agezo, 2010). In contrast, poor governance gives rise to many problems (see Crouch, Winkler, & RTI International, 2009) including [a] failure of resources—books, instructional materials, construction materials—to reach the school; [b] ghost teachers; [c] high rates of absenteeism among teachers and headmasters; [d] poor teacher deployment with large differences in class size between schools; [e] low attention by teachers to students whom they are not paid to tutor; [f] wastage of resources within schools, as has been enumerated by Crouch,

Winkler, & RTI International, (2009). In addition, financial misappropriation becomes very rife as a result of poor governance.

Further, to function effectively and efficiently all institutions need sound and effective systems of financial controls (Jones & Jones, 2008). This is so because despite the best of intentions, most people make mistakes. The mistakes may be errors in the end results of their work, needless inefficiencies in achieving those end results, or both (Anderson, 1977 cited by Jones & Jones, 2008). Sometimes, without the best of intentions, a few people deliberately falsify.

Despite the ill-effects of poor governance in any institution, current trends indicate that governance in the public sector has been problematic particularly in developing countries such as Ghana. The situation is same in the Public secondary schools. This is apparent from the various financial malfeasance reported by the Auditor-General in recent years. For example, the Auditor-General's report on pre-university schools in Ghana has indicated massive financial misappropriations in several aspects over the past years. For example, a careful review of the Auditor-General's report on pre-university education from 2010 to 2013 gives interesting revelation. In 2010 alone, the Auditor-General's report on pre-university schools revealed that there was about GH₵6,700,000.00 misappropriated funds in senior high schools. The Eastern region alone accounted for GH₵ 2,000,000.00 of this amount (over 28%). In 2011, the same report revealed that GH₵ 13,000,000.00 was unaccounted for, (over 90% increment over the preceding year's) with the Eastern region accounting for GH₵4,000,000.00 of this figure (over 30% of the total for that year). In 2012, about GH₵25,000,000.00 could not be

accounted for (93% increment over the preceding year's), with the Eastern region once again accounting for the largest portion (GH₵ 6,300.000.00 representing over 25%). Finally, almost GH₵ 16,000,000.00 was mismanaged in 2013 (15% reduction over the previous year's), with the Eastern region accounting for nearly GH₵6,300,000.00 (over 39%) (see Auditor-General, 2010, 2011, 2012, 2013 as attached).

The increase in amount of misappropriated funds in the schools suggests weak financial controls, which is a reflection of the effectiveness or otherwise of aspects of governance in the schools. Yet, to the best of the researcher's knowledge, literature which has discussed the relationship between these three (governance, financial controls, financial irregularities) variables in the context of Ghana secondary schools is largely inadequate. Several of the research have either focused on just one aspect of these three variables in relation to schools or has focused on other public institutions other than schools. In studies that touched on all three variables, the setting has always been outside of Ghana.

The general objective of this research was to explore the relationship between school governance, financial controls, and financial irregularities in Senior High Schools in the Eastern Region of Ghana. Specifically, the study sought to determine the

1. Examine the relationship between aspects of governance (gender and experience of head and bursar, board characteristics, existence of implementation committee) and financial irregularities.
2. Determine the relationship between financial controls (use of accounting software, presence of internal auditor, who is responsible

for reviewing the internal auditor's report, who is responsible for budget preparation, whether all stakeholders are involved in the budget preparation, and whether or not financial information is provided to parents during PTA meetings) and financial irregularities.

3. Determine the best predictors of financial irregularities (cash, payroll, procurement, or tax)

Correlational research design was used for the study. The population consisted of all 93 Senior high schools in the Eastern Region of Ghana.

A census of all 93 schools was conducted using content-validated questionnaire. Results were analyzed using measures of central tendencies and dispersions, correlation coefficients, and ordinary least squares regression (with adjustments for heteroscedasticity). The summary of major findings in relation to the specific objectives of the study is as follows:

Objective 1: Relationship between governance and financial irregularities

The finding from the results was that there were no significant correlations between gender of either head (r_{bi} = 0.06) or bursar (r_{bi} = 0.006) and irregularities

Findings from the study showed that headmasters' experience had significant negative correlation with financial irregularities (r_{bi} = -.131). Bursars' experience was not significantly correlated to financial irregularities.

Objective 2: Relationship between financial controls and financial irregularities

There were significant correlations between three aspects of financial control (use of accounting software, r_{bi} =-.222; who is responsible for budget

preparation, r_{bi}=-.162 and stakeholders' involvement in budget preparation, r_{bi} = -.292) and financial irregularities

In all, 9 out of the 14 independent variables showed significant correlations with financial irregularities. Out of these nine variables, two were demographic, three were financial controls and four were governance characteristics. In addition, 8 out of the ten independent variables were negatively correlated with financial irregularities. Only board size and provision of financial information at PTA meetings had positive correlation with financial irregularities.

Objective 3: Best determinants of financial irregularities (cash, payroll, procurement, tax and over all irregularities)

The model as a whole was able to predict of 30.3% of cash irregularities implying that about a third of the variability in cash irregularities is predicted by those aspects of demography, financial controls, and governance used in the model. Out of all fifteen determinants, only four (gender of headmaster, board size, type of school, and accounting software) made significant contributions (best determinants). The shared variance between these four variables was about 12%. Although these four made significant contributions to the total variance explained, the betas indicate that board size made the strongest unique contribution to explaining financial irregularities, when the variance explained by all other variables are controlled for. This was followed by accounting software (i.e. whether the school uses any accounting software accounts manually). This was the case even though type of school made a slightly higher unique contribution than accounting

software. The type of school (whether faith-based or not) made the smallest unique contribution to explaining cash irregularities.

With regards to payroll irregularities, the regression model offered barely 5% explanation to the variance in payroll irregularities was predicted by school-demographic, financial controls, and governance characteristics. This prediction had no practical application since it was not statistically significant.

The findings also showed is that barely 2% (adjusted R^2) explanation to the variance in procurement irregularities was predicted by school-demographic, financial controls, and governance characteristics. This prediction had no practical application since it was not statistically significant.

Further, the results showed that barely 5% (adjusted R^2) explanation to the variance in tax irregularities was predicted by school-demographic, financial controls, and governance characteristics. This prediction had no practical application since it was also not statistically significant.

Finally, the regression model predicted 25% explanation to the variance in overall financial irregularities. This prediction was statistically significant. Out of all fifteen determinants, two (board size and type of school) made significant contributions (best determinants). The shared variance between these two variables was about 9%. Although these two made significant contributions to the total variance explained, the betas indicate that board size made the strongest unique contribution to explaining financial irregularities, when the variance explained by all other variables are controlled for. Board size alone contributed about 8% unique contribution to explaining the variance in total financial irregularities. The type of school (whether

faith-based or not) made the smallest unique contribution to explaining cash irregularities, contributing about half of the unique contribution of board size. The signs of the betas were consistent to those recorded in the cash irregularities. Apparently then, the same explanations offered in the case of cash irregularities will suffice here and be applicable. This is apparently the case because whatever significance of these two determinants might be due to their impact on cash irregularities.

Conclusions

From the findings of objective one, it can be concluded that headmaster or bursars' gender have no significant impact on cash irregularities. Also headmasters' experience had significant negative correlation with financial irregularities. Specifically, the experience level of the head in his position as head led to reduced financial irregularities. Bursars' experience was not significantly correlated to financial irregularities. Further, it can be concluded that there was significant relationship between school governance and financial irregularities. Specifically, who the board chairman was, whether the school had an implementation committee or not, sex ratio representation on the Board, and Board size have significant correlations with financial irregularities.

From objective two, it can be concluded that there was significant relationship between financial controls and financial irregularities. Specifically, whether the school used any accounting software or not for their financial management, who was responsible for budget preparation, and stakeholders' involvement in budget preparation had significant relationships

with financial irregularities. The provision of financial information at PTA meetings showed significant correlation with financial irregularities as well.

From the findings of objective three, it can also be concluded from the entire study that gender of headmaster, board size, type of school, and accounting software emerged as best determinants of cash irregularities; no significant predictions were made by the determinants on payroll, procurement, and tax irregularities; board size and type of school) made significant contributions as best determinants of the overall financial irregularities.

Finally, the study also observed unusual situation where the sum of all squared semipartial correlations were higher than the corresponding total R^2. This was unusual but possible and has been attributed to cooperative suppression, a situation that has been described elsewhere (J. Cohen et al., 2003).

Recommendations

Based on the conclusions of the study, the following recommendations were made for consideration to reduce financial irregularities in Senior High Schools in Ghana:

1. The state should form partnership with private organizations capable of managing schools in order to reduce the bureaucracy in the system for effective financial control mechanism.
2. More matured and experienced ones should be appointed as heads of institutions since the “get rich quick syndrome” seems to affect the choices of relatively young heads. This phenomenon puts extra

pressure on them and gives them needed motivation to embezzle money.

3. Ghana Education Service should consider purchasing or designing accounting software for the various Senior High Schools. In addition, training on how to use these packages should be organized by the various teacher organizations such as NAGRAT, GNAT, CTA etc.
4. The principle of segregation of duty should be adhered to so that the bursar alone or the head alone will not be responsible for all phases of budgeting in the school (from the preparation to approval).
5. Since board size emerged as a significant determinant of cash irregularities, it is recommended that the maximum number of board members should be reduced to preferably 9, in line with the findings of Yarmack (1996).

Suggesstion for further research

It is suggested that further research is made into the governance, financial controls and financial irregularities of senior high schools in all the regions of Ghana and also into other educational institutions like the technical universities, polytechnics, and training colleges.

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APPENDIX A: AUDITOR - GENERAL'S REPORTS

A1: Significant National findings for the 2010 to 2013 financial years

Type of irregularities	Amount (GH¢) 2010	Amount (GH¢)	Amount (GH¢) 2012	Amount (GH¢)
Cash irregularities	3,050,570.14	4,609,560.89	7,220,009.14	7,034,283.49
Procurement/contract irregularities	3,039,741.82	5,608,415.23	12,519,999.33	7,736,823.58
Stores irregularities	71,189.00	1,228,224.80	2,954,177.27	-
Payroll irregularities	342,835.78	870,108.78	1,181,381.09	586,732.28
Tax irregularities	195,456.58	470,316.66	804,948.16	629,875.40
Total	**6,699,793.32**	**12,786,626.36**	**24,680,515.09**	**15,987,714.75**

REGIONAL SUMMARY OF IRREGULARITIES
A2 – 2010 and 2011

REGION	AMOUNT (GH¢) 2010	% OF TOTAL	RANK (2010)		AMOUNT (GH¢) 2011	% OF TOTAL	RANK (2011)
EASTERN	1,919,791.53	28.65	**1**		4,067,676.92	31.81	**1**
ASHANTI	1,247,444.20	18.62	**2**		2,619,403.74	20.49	**2**
CENTRAL	1,180,479.82	17.62	**3**		709,592.33	5.55	**6**
WESTERN	558,970.97	8.34	**4**		1,031,782.78	8.07	**4**
U / WEST	468,442.44	6.99	**5**		607,572.13	4.75	**7**
B / AHAFO	418,805.45	6.25	**6**		794,358.13	6.21	**5**
VOLTA	355,663.61	5.31	**7**		1,699,171.25	13.29	**3**
G /ACCRA	221,108.02	3.30	**8**		444,092.38	3.47	**9**
UPPER EAST	198,213.80	2.96	**9**		319,559.10	2.50	**10**
NORTHERN	120,873.98	1.95	**10**		493,417.60	3.86	**8**
TOTAL	**6,699,793.32**				**12,786,626.36**		

A3 – 2012 and 2013

REGION	AMOUNT (GH¢) 2012	% OF TOTAL	RANK (2012)		AMOUNT (GH¢) 2013	% OF TOTAL	RANK (2013)
EASTERN	6,276,108.50	25.43	**1**		6,248,854.58	39.09	**1**
ASHANTI	2,198,227.68	8.91	**6**		2,901,330.04	18.15	**2**
CENTRAL	1,359,004.88	5.51	**9**		1,048,878.62	6.56	**4**
WESTERN	1,518,183.43	6.15	**8**		1,236,419.32	7.73	**3**
U / WEST	2,213,336.55	8.97	**5**		449,237.46	2.81	**9**
B / AHAFO	1,919,927.02	7.78	**7**		930,132.24	5.82	**7**
VOLTA	2,432,787.90	9.86	**4**		749,908.88	4.69	**8**
G /ACCRA	2,876,925.75	11.66	**2**		989,254.30	6.19	**6**
UPPER EAST	1,327,048.11	5.38	**10**		404,036.44	2.53	**10**
NORTHERN	2,558,965.27	10.37	**3**		1,029,662.87	6.44	**5**
TOTAL	**24,680,515.09**				**15,987,714.75**		

A4 –Summary of 2010 to 2013

REGION	AMOUNT (GH¢) 2010	AMOUNT (GH¢) 2011	AMOUNT (GH¢) 2012	AMOUNT (GH¢) 2013
EASTERN	**1,919,791.53**	**4,067,676.92**	**6,276,108.50**	**6,248,854.58**
ASHANTI	1,247,444.20	2,619,403.74	2,198,227.68	2,901,330.04
CENTRAL	1,180,479.82	709,592.33	1,359,004.88	1,048,878.62
WESTERN	558,970.97	1,031,782.78	1,518,183.43	1,236,419.32
U / WEST	468,442.44	607,572.13	2,213,336.55	449,237.46
B / AHAFO	418,805.45	794,358.13	1,919,927.02	930,132.24
VOLTA	355,663.61	1,699,171.25	2,432,787.90	749,908.88
G /ACCRA	221,108.02	444,092.38	2,876,925.75	989,254.30
UPPER EAST	198,213.80	319,559.10	1,327,048.11	404,036.44
NORTHERN	120,873.98	493,417.60	2,558,965.27	1,029,662.87
TOTAL	**6,699,793.32**	**12,786,626.36**	**24,680,515.09**	**15,987,714.75**

APPENDIX B: Davis convention for describing magnitude of correlation coefficients

Magnitude of correlation (r)	Coefficient's Description
1.0	Perfect
0.70 – 0.99	Very High
0.50 – 0.69	Substantial
0.30 – 0.49	Moderate
0.10 – 0.29	Low
0.01 – 0.09	Negligible

Source: Davis. J.A (1971). Elementary Survey Analysis. Englewood. NJ: Prentice-Hall

APPENDIX C: Individual values of VIF and Tolerance for all 14 determinants

Coefficients			
Model	Sig.	Collinearity Statistics	
		Tolerance	VIF
(Constant)	.000		
Gender Bursar	.040	.754	1.326
Experience in Current position bursar	.980	.685	1.460
Gender of Head	.029	.826	1.210
Experience in current position head	.987	.405	2.470
Accounting software	.468	.184	5.448
Have internal auditor	.875	.321	3.113
Who Reviews Auditor's Report dummy	.809	.160	6.237
Who responsible for prep budget	.636	.565	1.768
All stakeholders involved in budget prep	.059	.271	3.690
No. of Persons on the Board	.145	.866	1.155
Board Chairman	.366	.703	1.423
Implementation Committee	.997	.285	3.511
Sex Ratio Representation on Board	.258	.439	2.280
Your school a mission school?	.000	.676	1.479
Financial info @ PTA meeting?	.696	.722	1.385

APPENDIX D

UNIVERSITY OF CAPE COAST

SCHOOL OF BUSINESS

DEPARTMENT OF ACCOUNTING AND FINANCE

INTRODUCTION

This questionnaire is designed to solicit information on the "Governance, Financial Control and Accountability in Senior High Schools in the Eastern Region of Ghana." The underlying reason for this questionnaire is to explore and assess the accounting practices of public and private schools in the Eastern Region of Ghana. Please note that this research is purely an academic exercise and nothing else. You are therefore assured of **strict confidentiality**. You are, however, kindly requested to provide your opinion on the items that follows as frankly and as you can.

Thank you in advance.

SECTION A

DEMOGRAPHIC BACKGROUND DATA

Tick (√) the correct response to the following questions as they apply to you. Where none of the answers suits your situation, write down the answer that really suits your situation against 'Any other' in this section.

Please provide answers where applicable and tick where necessary.

1. When was the school established?.....
2. Is your school a mission school?

a) Yes…… b) No:……

Headmaster /Headmistress

1. Sex a) Male [ ] b) Female [ ]
2. Years of Experience in previous industry (please state) …….
3. How long have you worked in the school?
   a. 1 – 5 years [ ]
   b. 6 – 10 years [ ]
   c. 11 – 15 years [ ]
   d. 16 and above [ ]

Bursar

1. Sex a. Male [ ] b. Female [ ]
2. Last Industry of work
   a. Public [ ] b. Private [ ]
3. Years of Experience in previous industry (please state) ……
4. How long have you worked in the school?
   a. 1 – 5 years [ ]
   b. 6 – 10 years [ ]
   c. 11 – 15 years [ ]
   d. 16 and above [ ]
5. How long have you worked in your current position?
   a. 1 – 5 years [ ]
   b. 6 – 10 years [ ]
   c. 11 – 15 years [ ]
   d. 16 and above [ ]

SECTION B

FINANCIAL CONTROL PRACTICES

1. Mode of fees collection

   a. Cash at counter [ ]

   b. Paid into School's Bank Account [ ]

   c. Mobile Money Platform [ ]

   d. Bank school fees payment platform [ ]

2. How often does the school deposit cash receipts at the bank?

   a. Daily [ ] b. Weekly [ ]

3. How often does the school receive statements from the Bank/Mobile Money Platform Operations

   a. Daily [ ] b. Weekly [ ] c. Monthly [ ]

4. a) What accounting system does the school use to record transactions?

   a. Manual [ ]

   b. Microsoft excel/word [ ]

   c. An accounting software [ ]

   b) Who authorizes/ signs these transactions?

   a) Headmaster [ ] b. Bursar [ ] c. Imputer [ ]

5. a) Does the school have an Internal Auditor from the Internal Audit Agency?

   a. Yes [ ] b. No [ ]

   b. If yes, how often do they produce report?

   a. Monthly [ ] b. Quarterly [ ] c. Annually [ ]

   c. Who reviews the Internal Auditor's Report?

   a. Bursar [ ] b. Headmaster [ ] c. Board of Directors [ ]

6. Which of these documents does the school have?

   a. The Public Procurement Act, 2004 [ ]

   b. The Financial and Accounting Instructions for Senior High Schools [ ]

   c. The Stores regulations, 1984 [ ]

   d. The Financial Administration Act, 2003 [ ]

   e. The Financial Administration Regulation, 2004 [ ]

   f. The Internal Revenue Act, 2009 [ ]

   g. The Value Added Tax Act, 1998 546 [ ]

   h. The Audit Service Act, 2000, Act 584 [ ]

   i. None of the above [ ]

Please provide answers to questions 7 – 10 by ticking appropriate code provided for the variables "Strongly Agree" =5, "Agree" = 4, "Not Sure" = 3, "Disagree" = 2, "Strongly Disagree" = 1

Item	1	2	3	4	5
7. Accounts personnel have adequate knowledge of legal financial regulation					
8. The school obtains alternative price quotations before procurement is made					
9. Accounts are appropriately checked and reconciled on monthly basis to forestall errors or fraud					
10. Procedures are in place to facilitate the timely submission of statutory financial returns					

SECTION C

Budgeting procedures undertaken in Senior High Schools

11. Does the school prepare an annual budget?

    a. Yes [ ] b. No [ ]

12. Who is responsible for the preparation of the budget? (you can select more than one)

    a. Accountant / Bursar [ ]

    b. Headmaster [ ]

13. Does your school's expenditure exceed income?

    a. Yes [ ] b. No [ ]

14. How often does the school undertake variance analysis

    a. Weekly [ ]

    b. Monthly [ ]

    c. Quarterly [ ]

    d. Annually [ ]

15. Are all stakeholders involved in the preparation of school budget?

    a. Yes [ ] b. No [ ]

Please provide answers to questions 16 – 19 by ticking appropriate code provided for the variables "Strongly Agree" =5, "Agree" = 4, "Not Sure" = 3, "Disagree" = 2, "Strongly Disagree" = 1

Item	1	2	3	4	5
16. Officers with budget responsibility have access to appropriate systems and tools to assist in developing their budget					
17. The budget officer ensures that variances are brought to the attention of management					

18. Management take swift action on variance reported and recommendations enforced					
19. Responsible officers with budget responsibilities often interact and share knowledge on budgeting practices					

SECTION D

GOVERNANCE IN SENIOR HIGH SCHOOL

20. Does the school have a Governing Board?

    a. Yes [ ] b. No [ ]

21. How many persons are on the Board? ……..

22. Is there majority community representation on the Board?

    a. Yes [ ] b. No [ ]

23. Who chairs the Board?

    a. Headmaster [ ]

    b. PTA Chairman or Parent [ ]

    c. Religious Leader [ ]

    d. Community Chief [ ]

    e. Government Appointee [ ]

24. How often do the Board meet? ……

25. Is there an implementation committee of the Board for findings of the Public Accounts Committee of Parliament

    a. Yes [ ] b. No [ ]

Please provide answers to questions 26-32 below by ticking the appropriate code provided for the variables. "Strongly Agree" = 5, "Agree" = 4, "Not Sure" = 3, "Disagree" = 2, "Strongly Disagree" =1

Item	1	2	3	4	5
26. The School Governing Board approves all adjustments and revisions made to the budget					
27. Final approval for financial reports and budgets are done by the Governing Board					
28.A member of the PTA serves on the schools governing board					
29. Parent, Teacher Association (PTA) meetings are held every term					
30. Appropriate financial information and budget reports/ variances are provided during PTA meetings.					
31. The headmaster often provide governing board with budget reports and variance analysis					
32. The governing board is prompt in deliberating on reports received from management.					

SECTION E

Challenges faced by the management of secondary school. Please provide answers to questions 33-40 below by ticking the appropriate code provided for the variables. "Strongly Agree" = 5, "Agree" = 4, "Not Sure" = 3, "Disagree" = 2, "Strongly Disagree" =1

Item	*1*	*2*	*3*	*4*	*5*
33. There is no concrete arrangement for training and retraining of accounting staffs.					
34. The school lacks adequate and qualified accounting staff due to complicated recruitment policy.					
35. Inability of implementing last audit recommendations before new audit					
36. Lack of knowledgeable training facilitators in accounting procedure in the school					
37. Frequent transfer of key accounting personnel to other schools					
38. Most accounting staffs are unfamiliar with computerized accounting methods					
39. Constraints of providing governing board up-to-date information on school's financial transactions due to limited staffs in accounting.					
40. Difficulty in understanding accounting policy design and instructions by the Controller and Accountant General					

APPENDIX E: Correlation Matrix amongst independent variables

		Gender_Bursar	Experience in Current positon_bursar	Gender of Head	Experience in current position_head	Accounting software	ave internal auditor	who Reviews Auditor's Report dummy	who responsible for prep budget	All stakeholders involved in budget prep	No. of Persons on the Board	score: Board Chairman	Implementation Committe	Sex Ratio Representation on Board	our school a mission school?	inancial info @ PTA meeting?
Gender_Bursar	Pearson Correlation	1	.203**	368**	.101	007	033	.018	072	-.089	.131	040	.011	-.090	045	006
	Sig. (2-tailed)		.000	000	.082	904	565	760	270	.182	099	551	.860	.196	488	926
		297	297	97	297	97	97	88	36	228	61	29	280	210	39	80
Experience in Current positon_bursar	Pearson Correlation	.203**	1	101	.009	053	.091	076	022	-.044	.147	001	.038	.061	549**	033
	Sig. (2-tailed)	.000		081	.880	359	116	199	737	.509	064	985	.526	.379	000	584
		297	297	97	297	97	97	88	36	228	61	29	280	210	39	80
Gender of Head	Pearson Correlation	.368**	.101		.009	010	011	017	.034	-.076	.053	.019	-.050	-.019	073	.005
	Sig. (2-tailed)	.000	.081		.879	866	848	769	602	.251	505	769	.404	.781	259	933
		297	297	97	297	97	97	88	36	228	61	29	280	210	39	80
Experience in current position_head	Pearson Correlation	.101	.009	009	1	227**	124*	.222**	051	.232**	.087	067	.164**	.270**	079	087
	Sig. (2-tailed)	.082	.880	879		000	033	000	435	000	273	313	.006	000	226	149

		297	297	97	297	97	97	88	36	228	61	29	280	210	39	80
Accounting software	earson Correlation	.007	.053	010	.227**		.227**	.452**	.299**	.615**	053	.180**	.626**	.529**	070	.469**
	ig. (2-tailed)	.904	.359	866	.000		000	000	000	.000	503	006	.000	.000	281	000
		297	297	97	297	97	97	88	36	228	61	29	280	210	39	80
Have internal auditor	earson Correlation	.033	-.091	011	.124*	.227**		.693**	.297**	-.220**	.045	.170**	-.368**	-.343**	.115	.185**
	ig. (2-tailed)	.565	.116	848	.033	000		000	000	.001	573	010	.000	.000	075	002
		297	297	97	297	97	97	88	36	228	61	29	280	210	39	80
Who Reviews Auditor's Report dummy	earson Correlation	-.018	.076	017	-.222**	.452**	.693**		.430**	.296**	062	.330**	.715**	.480**	.140*	.510**
	ig. (2-tailed)	.760	.199	769	.000	000	000		000	.000	432	000	.000	.000	032	000
		288	288	88	288	88	88	88	35	228	61	29	271	210	35	71
Who responsible for prep budget	earson Correlation	.072	.022	.034	.051	.299**	.297**	.430**		.261**	.001	.221**	.471**	.388**	017	084
	ig. (2-tailed)	.270	.737	602	.435	000	000	000		.000	987	001	.000	.000	818	197
		236	236	36	236	36	36	35	36	228	61	29	235	210	95	36
All stakeholders involved in budget prep	earson Correlation	-.089	-.044	.076	.232**	.615**	.220**	.296**	.261**	1	036	095	.404**	.299**	.044	108
	ig. (2-tailed)	.182	.509	251	.000	000	001	000	000		648	153	.000	.000	547	103

		228	228	28	228	28	28	28	28	228	61	27	227	208	89	28
No. of Persons on the Board	earson Correlation	-.131	-.147	.053	-.087	053	.045	062	.001	.036		.161*	.063	-.076	.128	010
	ig. (2-tailed)	.099	.064	505	.273	503	573	432	987	.648		042	.426	.339	153	901
		161	161	61	161	61	61	61	61	161	61	61	161	161	27	61
Board Chairman	earson Correlation	.040	.001	.019	.067	.180**	.170**	.330**	.221**	.095	.161*		.371**	.310**	.217**	.277**
	ig. (2-tailed)	.551	.985	769	.313	006	010	000	001	.153	042		.000	.000	003	000
		229	229	29	229	29	29	29	29	227	61	29	228	210	89	29
Implementation Committe	earson Correlation	.011	.038	.050	.164**	.626**	.368**	.715**	.471**	.404**	.063	.371**	1	.577**	.194**	.569**
	ig. (2-tailed)	.860	.526	404	.006	000	000	000	000	.000	426	000		.000	003	000
		280	280	80	280	80	80	71	35	227	61	28	280	209	28	79
Sex Ratio Representation on Board	earson Correlation	-.090	.061	.019	.270**	.529**	.343**	.480**	.388**	.299**	.076	.310**	.577**	1	.218**	.358**
	ig. (2-tailed)	.196	.379	781	.000	000	000	000	000	.000	339	000	.000		004	000
		210	210	10	210	10	10	10	10	208	61	10	209	210	70	10
Your school a mission school?	earson Correlation	.045	.549**	073	.079	070	.115	.140*	017	-.044	.128	.217**	.194**	.218**		.162*
	ig. (2-tailed)	.488	.000	259	.226	281	075	032	818	.547	153	003	.003	.004		015

	239	239	39	239	39	39	35	95	189	27	89	228	170	39	28
Financial info @ PTA meeting?	Pearson Correlation	.006	.033	.005	.087	.469**	.185**	.510**	.084	-.108	.010	.277**	.569**	.358**	.162*
	Sig. (2-tailed)	.926	.584	.933	.149	.000	.002	.000	.197	.103	.901	.000	.000	.000	.015
		280	280	80	280	80	80	71	36	228	61	29	279	210	28	80

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).