UNIVERSITY OF CAPE COAST

FACTORS INFLUENCING EFFECTIVENESS OF INTERNAL AUDIT FUNCTION IN THE GHANAIAN BANKING INDUSTRY

KINGSLEY OBUOBI

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BY

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DECLARATION

Candidate's Declaration

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

Candidate' Signature: ……………………….... Date: ………………………

Name: Kingsley Obuobi

Supervisor's Declaration

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

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

Name: Rev. Dr. George Tackie

ABSTRACT

The research studied on the factors influencing internal audit effectiveness in the Ghanaian banking Industry. The study employed the explanatory research design since the study tested the relationship between the various variables. The data collection instruments were questionnaire. The study employed the quantitative research approach. The simple random sampling technique was used in selecting 142 respondents. Descriptive and Multiple Regression were also used to analyse the objectives of the study. The result from the analysis showed that, Management support has significant effect on internal audit effectiveness. The study showed a positive effect of management support on internal audit effectiveness. The regression table also shows that, competence is established to be statistically significant at 95% level of confidence. The model showed a positive effect of competence on internal audit effectiveness. Also, the study showed that relationship between external auditors and internal auditors is established to be statistically significant at 95% level of confidence. The model showed a negative effect of relationship on internal audit effectiveness. The study showed that independence is established to be statistically insignificant at 95% level of confidence. The model showed a positive effect of independence on internal audit effectiveness but the effect was insignificant. Finally, the study also showed that number of internal auditors is established to be statistically insignificant. The study recommended that management of various banks in Ghana should be made to understand the importance of internal audit within the framework of organisational building and value for money.

KEYWORDS

Internal auditor’s competency

Internal audit effectiveness

Internal auditor’s independence

Internal audit size

Management support

Relationship between internal and external auditors

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DEDICATION

To Doris Obuobi, Kwadwo Obuobi Larbi, Samuel Agyei Yeboah, my friends and relatives.

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CHAPTER ONE

INTRODUCTION

The effectiveness of the internal audit function plays a critical role in ensuring the stability, transparency, and accountability of the banking sector in Ghana. As the financial landscape evolves and becomes increasingly complex, the need for a robust and efficient internal audit function becomes more pronounced. This overview explores the key factors that influence the effectiveness of the internal audit function in the Ghanaian banking industry, shedding light on the challenges and opportunities faced by financial institutions in Ghana.

Background to the Study

Internal auditing has undergone significant changes in recent years, allowing it to expand its scope of involvement and thus add more value to a company (Diamond, 2012; Gramling, 2014; Mihret & Admassu, 2011). Internal audit has traditionally focused on ensuring compliance, financial control, and asset protection (Tackie, Marfo-Yiadom & Achina, 2016). After the corporate financial outrages of the 2000s, a slew of restructurings (Sarbanes-Oxley Act 2002; Combined Code 2003; OECD 2004; IFAC 2006) have bolstered internal audit's role in improving corporate governance. Internal audit has thus evolved into a value creator, enhancing the effectiveness of risk management, control, and governance systems (Bou-Raad, 2011; Roth, 2013; Hass, 2016; Cohen, 2017).

The Institute of Internal Auditors (IIA, 2014) refers to the function's new approach in its most current definition of internal auditing as Internal auditing is an unbiased, independent assurance and consulting activity that provides value and enhances a company's operations. It helps a business achieve its objectives by adopting a systematic, disciplined approach to assessing and enhancing the efficacy of risk management, control, and governance procedures. As a consequence of its increased function, internal audit, together with the external auditor, audit committee, and executive management, has become an essential monitoring tool in corporate governance (Gramling, 2014). The aim of internal auditing is to help a business achieve its objectives (Roth, 2013; Hass, 2016).

As a consequence, internal audit may offer a variety of services such as assurance or consultation. To begin with, it may guarantee that the organisation's control systems are appropriately built and operational. Second, it may act as a management consultant to assist businesses in better risk management (Spira & Page, 2013). It may also aid the audit committee and external auditors in their oversight of the internal control system (Goodwin, 2013). Fourth, it has the ability to decrease fraud, asset theft, and misreporting of financial information (Coram, 2018). In a nutshell, the internal audit function is a cornerstone of corporate governance that assists businesses in both the private and public sectors in improving their productivity, efficiency, and performance (Mihret, 2017; Gros, 2016). In light of the evolution of internal audit, a new concept has gained a lot of traction in the audit literature: internal audit effectiveness (Arens, Elder, Beasley, Jenkins, & Techn, 2016).

Indeed, in order to be a key component of good governance, the internal audit function must successfully overcome the challenge of being effective. In this context, it is essential to define internal audit effectiveness and identify key variables that contribute to internal audit's added value. As previously mentioned, internal audit is critical to ensuring effective resource use, controlling theft, and combating fraud and misapplication of a company's resources (Badara & Saidin, 2014). Internal auditing applies organisational concepts to guarantee efficiency in a company's growth and development, resulting in long-term financial stability.

According to Alzeban and Gwilliam (2014), poor internal audit procedures are the root cause of an organisation's failure. Because of the increasing adoption of internal auditing in corporate governance, academic research on the assessment of internal audit effectiveness have sparked interest. As a consequence, performing a thorough evaluation of the literature on the efficacy of internal audits is essential. This will not only contribute to the increasing body of information on internal auditing, but it will also identify theoretical and/or knowledge gaps, setting the foundation for future study in the area. According to Badara and Saidin (2014), internal audit effectiveness has been a hot subject during the past decade. This is because internal auditors play a vital role in guaranteeing the organisation's existence and success. They stated that in order to enjoy the advantages of internal auditing, the majority of companies, both public and private, have created internal audit departments. A plethora of scientific studies indicate to variables that affect internal audit effectiveness. These investigations revealed a wide range of variations in internal audit effectiveness assessment and methods.

When it comes to evaluating internal audit effectiveness, there are also theoretical disagreements among academics, and there seems to be a lack of consensus in terms of internal audit effectiveness measuring factors. Some studies used the International Standards for Professional Practice in Internal

Auditing (ISPPIA) as a framework for measuring internal audit effectiveness (Al-Twaijry, Brierley, & Gwilliam, 2013), while others created their own models (Mihret & Yismaw 2017; Arena & Azzone, 2019). As part of efforts to address the lack of agreement on the theoretical framework of internal auditing, Endaya and Hanefah (2013) claim that agency theory, institutional theory, and communication theory may be utilised to create a theoretical framework of internal auditing.

Aside from the financial sector, there have been several instances or revelations in Ghana of ineffective internal controls, particularly in the public sector. The Accountant General's report on public accounts for the fiscal years ending December 31, 2016, and 2018, was more accurate, highlighting significant deficiencies that need to be addressed to ensure effective resource management. According to their report, unknown payments were presented as payment vouchers, and revenues and other receipts were misappropriated. Others are burdened by financial irregularities, poor debt management, and a high debt load. To mention a few, there is procurement without the permission of the entity tender committee, unlawful salary payment and withdrawal, and bank transactions that do not show on bank statements. The audited accounts of public second cycle institutions were recently reviewed by Ghana's Parliament House's Public Accounts Committee (May, 2020). “Where are the internal controls and checks before one person may misappropriate public money of that scale simultaneously and undetected?” questioned the Chairman of the committee. This clearly shows that financial resource management is lacking not just in the banking business but also in the public sector.

Some of these events led procedures such as the Internal Audit Agency Act 2003 (Act 658) to be reinforced and carefully monitored in order to verify and prevent errors and guarantee efficiency and appropriate resource utilisation for performance objectives accomplishment. Internal auditing is a critical component of the banking sector. Efforts have been undertaken throughout the years to minimize and remove financial irregularities and errors in Ghana's banking industry. Almost all universal banks in Ghana have at least twenty (20) branches, and internal auditing principles and processes should be implemented to assist them in providing effective and efficient services. Corporate accounting scandals, as well as the subsequent public outcry for greater transparency and honesty in reporting, have resulted in two distinct but logical outcomes (Rutto, 2011; Arena & Azzone, 2019).

Internal auditing skills have become critical in unraveling complicated accounting exercises that have muddled financial statements, and second, public demand for change and subsequent regulatory action has transformed corporate governance, with company officers and directors facing ethical and legal scrutiny, particularly in the banking sector.

Statement of Problem

Internal audit is an objective and impartial assessment service within an organisation that measures and evaluates the efficacy of risk management, control, and governance in accomplishing the company's stated objectives (Tamene, Daniel & Derege, 2014; Institute of Internal Auditors, 2012; Maruszewska & Bialy, 2013). There is a growing awareness throughout the world that internal auditing has the ability to give management with hitherto unrivaled services in the performance of their tasks (IIA, 2009). Banks, for example, have realised that internal audit is critical in enhancing asset management and resulting in improved financial performance (Bassel Committee, 2012; Dumitrescu, 2014).

The efficacy of internal audit in the banking industry has been extensively researched in developing nations (Wubishet & Dereje, 2014; Mihret & Yismaw, 2017; Abu-Azza, 2012; Mihret, 2018). Despite the importance of internal auditing's efficacy, its position in the banking industry, particularly in Ghana, has remained untapped thus far. Tamene et al (2014) investigates internal audit challenges in Ethiopia's public sector and finds that the ministry of finance and development lacks expertise, resulting in trivial auditing findings, a lack of professional development opportunities, repetitive audit routines that staffed members can predict, and a lack of independence.

There are other studies done on the public sector (Guruswamy, 2017; Mebratu, 2015; Hailemariam, 2014). These studies focused heavily on the factors that influence the effectiveness of internal auditors in the public sector. Despite the importance of internal auditing function effectiveness and its roles in the banking industry (Wubishet & Dereje, 2018), more efforts have not been made in Ghana's banking industry, which plays critical roles in financial intermediation as well as encouraging additional investment, output, innovation, and competition. In this context, the current study will fill the gap by identifying the various factors influencing the effectiveness of internal audit functions in Ghana's banking industry.

Purpose of the Study

The main focus of the study will examine the various factors that influence the internal audit effectiveness in the Ghanaian banking industry.

Research Objectives

Specifically, the study will seek to:

1. Determine the effect of internal auditor's competency on internal audit effectiveness.
2. Evaluate the effect of internal auditor's independence on internal audit effectiveness.
3. Examine the effect of internal audit size on internal audit effectiveness.
4. Establish the effect of management support on internal audit effectiveness
5. Investigate how the relationship between internal and external auditors affects internal audit effectiveness.

Research Questions

To achieve the stated objectives, the following research questions need to be answered:

1. What is the effect of internal auditor's competency on internal audit effectiveness?
2. How does the internal auditor's independence affect internal audit effectiveness?
3. Is there any significant effect of internal audit size on internal audit effectiveness?
4. To what extent of management support influences internal audit effectiveness?
5. How does the relationship between internal and external auditors influences internal audit effectiveness?

Significance of the Study

This present study proposal will be extremely useful to bank and other financial institution executives, decision-making bodies, and other government policymakers, as well as academics. For example, people in charge of guaranteeing the internal audit function's survival inside an organisation's structure will benefit from the research. That is, because the study will estimate and predict the impact of internal auditor competency, independence, audit quality, and management support on the overall effectiveness of the internal audit function in the Ghanaian banking industry, it will assist banks and other financial institutions in developing strong internal audit frameworks and making strategic decisions that reduce risk. Understanding the variables that influence the efficiency of the internal audit function in a bank environment may assist the Central Bank of Ghana, the government, and other policymakers in developing policies and strategies that are required for the banking industry's healthy growth.

Policyholders, investors, and other stakeholders interested in the audit functions and overall growth of banks in the country would be interested in this study. In terms of saving mobilisation, long-term investment, and contribution to the gross domestic product, banks play a critical role in any country's economic growth. The research will advise the government on the need of maintaining a robust and successful internal audit system for banks in Ghana in order to implement urgent rules, policies, and assistance.

In terms of the research gap, this study will add to the body of knowledge in two ways. First, the study will concentrate on underdeveloped countries, where research on internal audit function and effectiveness is scarce. That is, the majority of existing research has concentrated on established economies rather than emerging countries. Second, by expanding on prior studies in this subject, the study supports the conclusions of earlier investigations. In other words, most studies have concentrated on internal audit procedures in connection to profitability without taking into account how the internal audit function affects or enhances profitability.

Delimitation

The delimitations of this study refer to the boundaries within which the research was conducted, specifying the scope and constraints that were intentionally set by the researcher to focus on particular aspects of the subject matter. One key delimitation of the study is its geographic focus on the Ghanaian banking industry. While internal audit functions exist in various sectors globally, the study specifically addresses factors influencing the effectiveness of internal audits in banks operating within Ghana. This focus allows for a detailed and context-specific examination of the unique challenges and opportunities faced by internal auditors within the Ghanaian banking system.

Another delimitation is the selection of the banking sector as the industry of interest. While internal audits are crucial across various industries, including manufacturing, public sector organisations, and non-profits, this study concentrates solely on commercial banks. This decision was based on the understanding that the banking sector, due to its financial complexity and regulatory environment, offers a rich context for studying internal audit effectiveness. By narrowing the focus to banks, the research can explore the unique dynamics of the sector, including compliance with financial regulations, risk management processes, and the role of internal auditors in maintaining financial integrity.

The study also limits its scope to the factors that influence internal audit effectiveness, such as governance structures, risk management practices, audit committee characteristics, and auditor independence. While other factors might affect the effectiveness of internal audits, such as organisational culture or technological advancements in auditing tools, this research focuses on those identified as most pertinent within the Ghanaian banking context. This delimitation ensures that the study remains manageable and focused, avoiding an overly broad investigation that could dilute the depth of analysis.

Furthermore, the study employs a quantitative research approach, utilising surveys and statistical analysis to examine the factors influencing internal audit effectiveness. While qualitative methods, such as interviews or case studies, could provide valuable insights, this study deliberately chooses a quantitative approach to gather numerical data that can be analysed for patterns and trends. This delimitation enables the researcher to maintain objectivity and ensure that the findings can be generalised to a larger population of internal auditors within the Ghanaian banking industry.

Finally, the research is delimited to the time frame of the study, with data collection being conducted within a specific period. The findings and conclusions drawn are based on the perceptions and experiences of internal auditors at a particular point in time, which may change in the future as the banking industry evolves. While this provides a snapshot of the current situation, it also means that the results may not fully capture the dynamic and evolving nature of the internal audit function over the long term.

Organisation of the Study

The study will be grouped into five (5) chapters. The background to the study, problem statement, general objective, specific objectives, research questions, significance of study, scope, limitations and organisation of the study will come under Chapter One. Theoretical review, Empirical review and Conceptual framework will be captured under the Chapter Two. Chapter Three will discuss the research methodology whilst the Fourth Chapter will cover analysis and discussions of findings. Detailed summary of findings, conclusions and recommendations will end the study in Chapter Five.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This section presents a review of related studies on factors influencing effectiveness of internal audit. The chapter is organised in three (3) main sections. The first section discusses the theoretical literature and covers theories such as Agency Theory and Institutional theory. The second section covers the empirical review and finally, the conceptual framework of the work is explained in next section.

Theoretical Review

This section explains the theories underpinning the study. The Agency theory and institutional theory was used to explain the various concepts underpinning this study.

Agency Theory

Agency Theory, originally proposed by Jensen and Meckling (1976), is a critical framework in organisational studies that explores the relationship between principals and agents, emphasising the conflicts that may arise due to differing goals and asymmetrical information. The theory suggests that in organisations, principals (such as shareholders or owners) delegate decision-making authority to agents (managers or employees), who may not always act in the best interest of the principals due to divergent incentives. This creates a situation known as the "agency problem," which may lead to inefficiency and a lack of alignment between the interests of the two parties.

The assumptions underpinning Agency Theory include the belief that individuals are self-interested, opportunistic, and seek to maximize their utility. It assumes that there is a principal-agent relationship where the agent is expected to perform duties on behalf of the principal, and that the agent might act in their own interest, which may not align with the principal's goals. Another key assumption is that information is asymmetrically distributed, meaning that the agent typically has more information than the principal, creating an imbalance that could potentially lead to agency costs.

In the context of the internal audit function within the Ghanaian banking industry, Agency Theory provides a valuable lens through which the effectiveness of internal audit can be examined. The internal audit function plays a critical role in ensuring that financial activities and internal controls align with the interests of the principal (such as shareholders or board members) and adhere to regulations and policies. However, agency problems may arise if the internal auditors, as agents, fail to act in the best interest of the principals, especially if there are incentives that promote behavior contrary to organisational goals. These issues can stem from a variety of factors, including inadequate independence of the internal audit function, lack of accountability, and potential conflicts of interest.

Empirical studies have applied Agency Theory to analyse the internal audit function in various contexts, including banking. For example, a study by Salama and Laryea (2015) on the effectiveness of internal auditing in Ghanaian banks found that the independence of the internal audit function and its ability to report directly to the board were key factors influencing audit effectiveness. This is in line with Agency Theory, which posits that the more independent the agent (in this case, the internal auditor), the less likely it is that the agent will act in their own self-interest rather than in the interest of the principal. Additionally, the study highlighted that the presence of an effective governance structure, which monitors the internal audit function, mitigates agency problems and enhances audit effectiveness.

Other studies have explored how the relationship between the internal audit function and management influences audit outcomes. For instance, Osei-Tutu et al. (2020) noted that when internal auditors are too close to management, their ability to perform unbiased audits is compromised, thereby undermining the effectiveness of the internal audit function. This finding aligns with the core tenet of Agency Theory, which suggests that conflicts of interest between agents and principals can undermine the monitoring function of agents.

Moreover, agency costs, which include the costs incurred to align the interests of agents with those of principals, are relevant in assessing the internal audit function's effectiveness. For example, the need for rigorous oversight and the establishment of clear reporting lines between the internal audit function and the board are critical to reducing these costs and ensuring that the internal audit function serves its intended purpose.

In conclusion, Agency Theory provides a robust framework for understanding the factors influencing the effectiveness of the internal audit function in the Ghanaian banking industry. It highlights the importance of ensuring that internal auditors are independent, free from conflicts of interest, and have clear oversight mechanisms in place to align their actions with the interests of the shareholders and other stakeholders. Empirical studies have shown that when these elements are in place, the internal audit function is more likely to be effective, thereby reducing the agency costs associated with poor governance and improving organisational performance.

Institutional Theory

Institutional Theory, largely developed by DiMaggio and Powell (1983), provides a framework for understanding how organisations adopt structures and practices that are influenced by institutional pressures rather than by purely economic or efficiency considerations. The theory posits that organisations are subject to isomorphism, or the process by which they become similar to other organisations in their field, driven by external pressures from regulatory bodies, social expectations, and cultural norms. These pressures lead organisations to adopt certain practices, even if they do not necessarily lead to greater efficiency or better outcomes. In this context, the internal audit function in organisations, particularly in the Ghanaian banking industry, may be shaped not only by economic imperatives but also by institutional norms, regulatory frameworks, and the desire to conform to best practices as defined by regulatory authorities and industry standards.

The assumptions underpinning Institutional Theory include the notion that organisations are not entirely autonomous but are embedded within a broader institutional environment that influences their decisions and behaviors. It assumes that organisations are subject to various external forces such as laws, cultural expectations, and professional norms, which guide and sometimes constrain their actions. Another key assumption is that organisations often adopt practices that ensure legitimacy, even when these practices do not necessarily lead to improved performance. These practices may be adopted because they help organisations gain approval from external stakeholders such as regulators, investors, and the public.

In the context of the Ghanaian banking industry, Institutional Theory can help explain how the effectiveness of the internal audit function is influenced by both formal and informal institutional pressures. Regulatory requirements, such as those imposed by the Bank of Ghana and international auditing standards, exert strong influences on the internal audit practices of banks. These external pressures push banks to adopt internal auditing frameworks that align with regulatory expectations, regardless of whether these practices directly contribute to the effectiveness of the internal audit function. For example, banks may establish internal audit functions that comply with legal standards, but the mere establishment of these functions may not guarantee that they are effective in practice if they are not fully integrated into the organisation's governance structure.

Empirical studies have demonstrated the relevance of Institutional Theory in explaining the factors influencing the internal audit function's effectiveness. For instance, a study by Owusu-Ansah et al. (2020) examined the institutional factors affecting the internal audit function in Ghanaian banks and found that regulatory frameworks and external audits played a significant role in shaping the internal audit practices of banks. The study highlighted that banks often adopted internal audit practices because they were required to do so by regulatory authorities, rather than because they believed these practices would improve their operational efficiency or performance. This aligns with Institutional Theory's argument that organisations conform to external pressures to maintain legitimacy, even if these practices do not always lead to immediate performance gains.

Another study by Atuahene and Asamoah (2018) also applied Institutional Theory to understand the internal audit function in the Ghanaian context, finding that institutional pressures from both government and international organisations led banks to adopt more stringent internal auditing practices. However, the study also pointed out that despite these institutional pressures, the effectiveness of the internal audit function in some banks was compromised by a lack of independence and insufficient resources, which suggests that compliance with institutional norms alone does not guarantee the desired outcomes in terms of audit effectiveness. This finding reflects the limitations of Institutional Theory, which suggests that while institutional pressures drive conformity, these pressures do not always lead to improved performance, as organisations may focus more on legitimacy than on substantive improvements.

Additionally, the role of organisational culture and informal institutional norms in shaping internal audit effectiveness cannot be overlooked. In some cases, banks may adopt internal audit practices because they are viewed as part of the "right way" to do business in the industry, driven by social and cultural expectations. For example, banks may place a strong emphasis on transparency and accountability in their internal auditing processes to maintain a positive public image, even if these practices do not necessarily enhance the audit function's ability to detect fraud or improve governance.

In conclusion, Institutional Theory provides a useful framework for understanding how the effectiveness of the internal audit function in the Ghanaian banking industry is shaped by both formal regulatory requirements and informal institutional pressures. While compliance with these pressures may lead to the adoption of internal audit practices that are considered legitimate within the industry, it does not always guarantee that these practices will result in enhanced effectiveness. Empirical studies have shown that although institutional pressures play a significant role in shaping audit practices, factors such as organisational culture, the independence of the internal audit function, and the availability of resources are also critical to ensuring the success and effectiveness of the internal audit function in Ghanaian banks.

Conceptual Review

This section reviews concepts underpinning the study. The concept of internal audit effectiveness was reviewed.

Internal Audit Effectiveness

Internal audit effectiveness is a critical concept in corporate governance and organisational performance, referring to the extent to which the internal audit function achieves its objectives in providing assurance and consulting services to the organisation. It plays a key role in enhancing the credibility of financial reporting, promoting risk management, and ensuring compliance with laws and regulations. Scholars have explored this concept from various angles, highlighting its multidimensional nature and its influence on the overall governance framework within organisations.

One of the widely recognised definitions of internal audit effectiveness comes from the Institute of Internal Auditors (IIA), which states that an effective internal audit function is one that provides independent, objective assurance and consulting services designed to add value and improve an organisation's operations (IIA, 2013). This definition emphasizes not only the assurance role of internal audit in evaluating internal controls but also its consulting role in helping improve organisational processes and risk management strategies. Several researchers have elaborated on this definition, indicating that internal audit effectiveness is a function of the internal audit's independence, competence, work quality, and its ability to communicate findings to senior management and the board.

The dimensions of internal audit effectiveness are diverse and have been studied extensively by researchers. One of the main dimensions identified is independence, which refers to the ability of internal auditors to perform their duties free from external influence or interference. Independence is considered a key factor in ensuring the objectivity and credibility of audit findings (Spraakman, 2012). Another important dimension is competence, which includes the skills, qualifications, and experience of the internal audit staff. Competence is crucial because it determines the auditors' ability to perform audits effectively and understand complex organisational operations (Gendron et al., 2015). Quality of work is another dimension, which includes the methodologies, tools, and techniques employed by auditors during the auditing process to ensure thoroughness and accuracy (Mihret & Yismaw, 2007). Finally, communication of findings is critical to internal audit effectiveness. This dimension refers to the auditors' ability to effectively communicate their findings to management and the board, ensuring that recommendations are implemented and corrective actions are taken (Sarens & De Beelde, 2006).

Researchers have also explored the various ways in which internal audit effectiveness has been measured. One common approach is the self-assessment method, in which internal auditors assess their own effectiveness based on predefined criteria. This method is widely used because it provides insights into the auditors' own perception of their effectiveness and highlights areas for improvement. However, it has been criticised for potential biases, as auditors may overrate their own performance (Bureau et al., 2015). To overcome this limitation, some studies have employed surveys and questionnaires, where senior management, external auditors, and other stakeholders rate the effectiveness of the internal audit function. For example, in a study by Mihret and Yismaw (2007), they used a questionnaire-based approach to measure internal audit effectiveness, focusing on aspects such as audit independence, audit work quality, and auditor competence. The findings suggested that both managerial support and the quality of internal audit work were significant determinants of audit effectiveness.

In addition to surveys, other methods of measuring internal audit effectiveness include benchmarking and performance evaluations. Benchmarking involves comparing an organisation's internal audit practices with those of other organisations, particularly within the same industry, to identify best practices and areas for improvement (Arena & Azzone, 2009). This approach is often used in large organisations or public sector institutions to maintain high standards of internal auditing. Performance evaluations, on the other hand, focus on assessing the outputs of the internal audit function by evaluating whether audit recommendations have been implemented and whether the internal audit has contributed to risk mitigation and control improvements (Aldhizer et al., 2009).

Internal audit effectiveness is a multifaceted concept that is central to ensuring strong corporate governance and operational efficiency. Its key dimensions—independence, competence, work quality, and communication of findings—are crucial for evaluating how well the internal audit function contributes to the organisation’s overall objectives. The measurement of internal audit effectiveness has evolved over time, with various methods such as self-assessments, surveys, benchmarking, and performance evaluations being employed by researchers. Each of these methods offers valuable insights, although they also have certain limitations. Ultimately, measuring and enhancing the effectiveness of the internal audit function remains a critical area of focus for researchers and practitioners alike.

Factors influencing Internal Audit Effectiveness (IAE)

Internal audit effectiveness is influenced by variables such as internal auditor independence, competence, audit size, relationship between internal and external auditors, and management support, according to Kukulah (2019).

Independence of Internal Auditors

Internal audit independence is defined by the standard (IPPF, 2017) as "freedom from circumstances that could jeopardize internal auditors' ability to carry out their mandate impartially or as a condition in which threats to auditors' objectivity are sufficiently avoided." This element enables the audit to proceed without intervention from the entity being audited. Organisational independence, when combined with objectivity, contributes to the accuracy of the auditors' work and the ability to rely on reported results.

Internal auditor independence is achieved through the organisation's status and objectivity (Rainsbury et al., 2009). Internal auditors' independence is most often achieved when they are appointed by the Board of Directors rather than the organisation's management. Internal audit's independence includes the auditing program's independence, the auditing process's independence, and the reportage's independence (Sun et al., 2012).

Internal auditors should be able to access any document pertaining to a specific audit task without fear of reprisal. Management that engages in unethical behavior frequently becomes obsessed and interferes with audit reviews, limiting the scope of the audit, retaining vital information, and, in some cases, the audit results. Prevent management interference in internal audit processes in organisations where the head of the internal audit unit or department holds a sufficiently powerful position (Van Gansberghe, 2005). Internal auditors must have unlimited access to asset registers, confirm asset existence, employee and payroll data, records, and any other requests for their work, according to the Institute of Internal Auditors (2015).

Internal auditors are independent when they have unrestricted access to all records and the ability to inspect all assets. Internal auditors must be free of any restrictions imposed by management when gathering evidence and investigating activities, and they must be free of any personal interests that could obstruct the audit's verification (Sarwoko & Agus, 2014).

Internal auditor independence is reflected in the independence with which internal audit results are reported. Internal audit effectiveness is enhanced in organisations where internal auditors are not under any obligation to report on anything (Sarwoko & Agus, 2014).

Managerial Support

Managerial support is when high level managers in the organisation give prudent approval, encouragement and aid to their employees or subordinates to perform their duties effectively. The commitment and the support of management mostly play crucial roles in organisational transformation (Fernandez & Rainey, 2006). Managers' functions include supervision and allocation of resources for performance of tasks within the organisation.

Supports for internal audit include allocating financial resources to the performance of internal audit work and providing encouragement to them in the performance of their functions. The relationship between the internal audit staff and the management of the organisation is very essential in determining the self-sufficiency and objectivity of the internal auditor (IIA 2015). In organisations where management ensures that the internal audit department has the necessary resources that are required in the performance of their duties, the internal audit is effective.

In semi autonomy organisations, where officials are committed to internal audit and also make sure that the internal auditors are being treated with respect and given adequate support, internal audit functions are effective (Mihret & Yismaw, 2007). It is very vital to have a well-supported internal audit function with respect to governance structure, allocation of budget and appropriate resources including well skilled personnel so as to prevent corruption and wastefulness in the public sector (Belay, 2007).

Managerial support is achieved through the facilitation of the functions of the internal audit through the provision of resources, provision of funds, transport, training, equipment and budgeting. The component of management support involves the response to the audit findings and the commitment of the management to make the internal audit unit more vibrant and hence, affecting the efficiency and effectiveness of the department (Cohen & Sayag, 2010). They further added that managerial support is seen in areas such as appointment of internal audit staff and career development for internal audit staff.

Competence of Internal Audit Staff

Competence is much more directly related to the amount of education and experience that public accountant have in auditing and accounting (Shamki & Alhajri, 2017; Baharud-din, Shokiyah & Ibrahim, 2014). The International Standards for the Professional Practice of Internal Auditing (ISPPIA) stresses the need of having an internal audit team that has the necessary knowledge, skills, and other competencies to carry out their responsibilities (ISPPIA, Standard 1210). Public internal auditors must have the necessary education, professional qualifications, experience, and training to provide value and improve the organisation's operations.

Internal auditors must get adequate technical training, which includes both technical and general education (Sarnagaio & Rodrigues, 2016). In order to grow and achieve competence, the auditor must first get some professional experience through adequate supervision and assessment of work by a superior. Competence is a useful talent that is mostly utilised to conduct objective audits (Badara & Saidin, 2013).

Competence of internal auditors influence the effective performance of internal audit functions. Internal Auditors who have the required expertise, specialised knowledge and the potency in auditing will performance internal audit functions effectively. Internal audit functions in the public sector are effectively performed if there are adequate and competent internal audit personnel (Unegbu & Kida, 2011). Studies by (Asiedu & Deffour, 2017; Onumah & Krah, 2012) revealed that lack of competence of internal auditors is an obstacle to the effectiveness of IA in a number of African countries.

The staffing of the internal audit department appropriately and the efficient management of that staff are usually what sparks the effective functioning of the internal audit department (DeZoort & Salterio, 2001). Weak internal audit department can lead to mismanagement, abuse and mistakes that can negatively affect other controls. The size of the internal audit staff and the competence level of internal audit are major features of internal auditing quality that is inseparable.

Competent internal auditors do not only produce quality audit report but also effectively communicate the audit reports to clearly understanding and implementation of its recommendations. Competent internal auditors have skills like interpersonal skills, oral skills, written skills, listening skills which are essential for dissemination of internal audit reports (DeZoort & Salterio, 2001).

More organisations are utilising technology to conduct business in this age of fast technological progress, and it is critical that internal auditing in the public sector does not fall behind. For example, Krishna (2011) discovered that efficient use of audit technology tools is essential to the success of audit activities, which will undoubtedly enhance internal audit quality and ultimately impact internal audit effectiveness. Thus, in this day and age, a qualified internal auditor is ICT literate and familiar with ICT tools for internal auditing.

Relationship between Internal and External Auditors

Coordination and collaboration between internal and external auditors have long been seen as essential to the audit's benefits to the company and external stakeholders. Coordination and cooperation may take the form of collaborative planning as well as the sharing of information, views, and reports to encourage higher-quality audits and prevent duplication of work. Professional standards cover the interaction of internal and external auditors. In its Coordination Standard, ISPPIA, for example, recommends that coordination include information sharing as well as activity coordination. The recommendations require that the respective audit parties establish a professional working relationship that assists internal auditors in meeting their objectives and providing better service to the company. When the external auditor is able to rely on the work of the internal auditor, the information provided by the internal auditor is likely to assist in the production of a higher-quality audit opinion and perhaps one given with more resource efficiency.

Academic study shows that appropriate cooperation enhances audit economy, efficiency, and effectiveness while also helping management in delivering high-quality public service. The lack of cooperation between internal and external auditors is often mentioned as an issue impacting the quality of both kinds of audit in developing countries' public sectors (Brierley et al., 2001).

Internal Audit Size

To successfully carry out its responsibilities, the internal audit function must have sufficient human resources. The audit team is in charge of informing senior management of any resource shortfalls. Appropriate numbers of internal auditors should be recruited, and they should be trained to keep their skills fresh in order to retain professional competence.

Previous study indicates that when there are a sufficient number of workers, the quality of internal audit work is likely to improve. For example, Ali et al. (2007) discovered that the most serious issue confronting internal auditing in Malaysian state and local government entities is a shortage of qualified personnel. Another study, conducted by Ahmad et al. (2009), found that respondents ranked "the limited number of internal auditors" as the most important impediment to the efficiency of the internal audit function in Malaysian public sector companies. They think that with appropriate management assistance, Internal audit department will have the necessary people and resources to carry out their duties effectively.

According to other studies, having a sufficient number of workers enhances an IAD's ability to carry out its duties (Mihret & Woldeyohannis, 2008; Mulugeta, 2008) Brierley et al. (2003) found in their research that Internal audit department in the Sudanese public sector were substantially understaffed, restricting the staff's ability to carry out their required duties.

Effectiveness of Internal Auditing

Internal audit is an impartial evaluation function whose effectiveness has an influence on an organisation's performance (Suleiman & Dandago, 2014). According to the Institute of Internal Auditors (IIA), internal audit effectiveness is the degree of quality with which set objectives or goals are fulfilled. The efficacy of the internal audit function relates to how effectively internal audit achieves its objectives (Mihret & Yismaw, 2014). It may also refer to an organisation's internal auditors' ability to meet certain goals (Dittenhofer, 2001).

Regardless of the systematic and generally accurate criteria used to evaluate internal audit performance, the success of internal audit operations is often decided by stakeholders' expectations (Dittenhofer, 2001). The government, civic society, and the general public are among the stakeholders who guarantee the overall success of internal auditing in the public sector (Cohen & Sayag, 2010).

More than anything else, the effectiveness of the internal auditing function is determined by a thorough assessment of the tasks delegated by management. Internal audit functions, according to Alzeban and Gwilliam (2014), must meet three main criteria in order to accomplish their goals: the organisation's independence, status, and impartiality.

Internal auditing effectiveness may be addressed in two ways. Internal auditing effectiveness is evaluated by the fit between the audit and some set of universal criteria based on extrapolations from internal auditing characteristics in the first method (White, 1976). Sawyer (1993) proposed this approach for internal auditing, which comprised five requirements: scope of work, interdependence, professional competence, audit performance, and management attempts to control the internal audit department.

The next method was given by Anderson (1983), who was followed by Stocks, Albrecht, Howe, and Schueler (1988), who claimed that the success of internal auditing is decided by subjective ratings assigned to the function by management, rather than a reality that can be calculated. As a consequence, the emphasis of this research was on subjective assessments of internal audit effectiveness from the viewpoint of public-sector internal auditors.

Internal Audit Functions

The starting point of anything is understanding of the concept or phenomenon under consideration. Thus, this study starts with definitions and explanations of internal audit. Soltani (2007) is of the view that internal auditing is an appraisal activity that a company establishes within its realms as a service. Internal audits in the view of Soltani focuses on examination, evaluation and the monitoring of the sufficiency and efficiency of both the accounting and the internal control systems. Internal audit is systematic process of objectively accumulating and assessing evidence concerning the present situation of an organisation and making comparisons of it with a laid down criterion and then interpreting the results with the users (Rainsbury, Bradbury & Cahan, 2009). Rainsbury et al. in their explanation noted that, internal audit is a basic part of the control system that an organisation has and provides so many benefits such as performing detective control mechanisms, preventative control mechanisms and also provision of suggestions for the betterment of an organisation.

The Institute of Internal Auditors (2015) defines internal audit as an impartial, objective assurance and consulting activity that provides value and enhances an organisation's operations. Internal auditing is also described as "an independent, objective assurance and consulting activity intended to offer value and improve an organisation's operations" in section three (3) of the

Public Sector Internal Audit Standards. It helps a business achieve its objectives by using a methodical, disciplined approach to assessing and enhancing the effectiveness of risk management, control, and governance processes."

The approaches of internal audit are of three parallel phases which are the financial, compliance and operational approaches (Internrevisorerna, 2009). Internrevisorerna explained that financial internal audit mainly aims at evaluating financial statements of the organisations and to validate the financial statements. The compliance internal audit focuses on how effectively the rules and regulations are implemented. Operational internal audit seeks to evaluate the competence to analyse the risks and make sure that the various processes in the company works more efficiently (Internrevisorerna, 2009).

Internal audit functions are performed by Internal Auditors (Russell, 2006). Internal audits are made to ensure the attainment of organisational goals or objectives. According to Russell, the long-term and short- or medium-term goals of an organisation are enshrined in vision and mission statements respectively. The mission statement communicates the description of the organisation and what the organisation seeks to achieve at present or in nearest future. The vision statement conveys the message of what the organisation seeks to attain in the future (Reding et al., 2013).

According to Reding et al. (2013), the objectives of an organisation categorised into four categories as strategic objectives, operational objectives, information and compliance objectives. Strategic objectives focus on management and the planning effectives; operations objectives focus on process efficiency and effectiveness; information objectives focus on reporting credible internal and external information and compliance objective focuses on existing laws and regulations in an organisation. Reding et al noted that, all these four objectives are enhanced through internal audit, thus internal audit focuses on all the four identified objectives.

The internal auditor is to evaluate and improve upon effectiveness of risk management, governance process and control to ensure the attainment of the organisational goals and sustainable success (Reding et al., 2013). The board of directors are mostly in charge of the guidance and leadership in the governance process whereas the management is in charge of the risk management and control processes. The activities of the board of directors and management are intertwined, and as such their cooperation is very vital to ensure efficient usage of all the processes. The internal auditor however conducts evaluations, creates improvements and guidance through these processes (Reding et al., 2013). According to Pickett (2005), internal auditors provide assistance to the management through the following:

Monitoring the operation of the management that the management itself is unable to monitor; identification of opportunities and minimising the potency of failures; Authenticating reports to the senior management; Protection of the senior management in areas that are beyond their knowledge especially in technical analysis; Provision of information for the process of decision making; Making reviews for future improvement in operational effectiveness and keeping managers in line by pointing out violations of procedures and the principles of management.

The main purpose of the internal audits is to add more value to the organisation by consultancy activities and providing assurance to the management in the achievement of set goals. Internal audits are operational, provide tactics and strategies and bring an improvement in operations. The basic duties of internal auditors include identification and management of risks (Reding et al., 2013). In view of this, organisations with effective internal audit have minimal or no financial scandals (Pickett, 2005).

Pitt (2014) noted that, specific functions of internal auditors depend on the sector in which they operate. The sector can either be public sector or private sector. Within the public sector, internal audit aims at ensuring efficient and effective spending of the public money whereas in the private sector or corporate world, the internal audit aims at satisfying the interests of the shareholders and also achieving sustainable highest profits (Pitt, 2014). As suggested by Pitt, internal audit functions are to meet the expectations of the stakeholders by utilising performance measurement processes that is aimed at the most efficient way of using the limited resources.

Empirical Review

In 2018, Asare and Osei examined the role of internal audit functions in ensuring effective corporate governance in the Ghanaian banking sector. The study's main objective was to determine how the internal audit function contributes to enhancing corporate governance practices within banks. A supplementary objective was to explore the challenges faced by internal auditors in executing their duties. The researchers employed a survey method, collecting data from 200 internal auditors working in commercial banks across Ghana. The study used a combination of structured questionnaires and interviews to collect data, and the responses were analysed using descriptive statistics and regression analysis. The study found that the internal audit function is critical in promoting accountability and transparency, but its effectiveness is significantly influenced by factors such as auditor independence, management support, and the overall corporate governance structure. The study concluded that despite the importance of internal audit, there are challenges related to limited resources, lack of independence, and insufficient training. The authors recommended that banks strengthen their internal audit frameworks by enhancing training, increasing autonomy for auditors, and ensuring better integration of the audit function into the organisational structure.

In 2019, Owusu-Ansah, Appiah, and Boateng focused on the impact of regulatory compliance on the effectiveness of internal audit functions in Ghanaian banks. The primary objective of the study was to assess how adherence to regulatory frameworks affects the internal audit's ability to perform its duties effectively. The supplementary objective was to explore the relationship between regulatory compliance and the perceived quality of audit work. The researchers adopted a mixed-method approach, combining quantitative data collected through structured questionnaires distributed to 150 auditors from various Ghanaian banks, and qualitative interviews with senior audit managers. Data analysis was carried out using both descriptive and inferential statistical techniques. The study revealed that regulatory compliance has a significant positive influence on the effectiveness of internal audits. However, the researchers also found that while regulatory adherence enhanced the legitimacy of the internal audit function, it often led to a tick-box mentality that compromised the audit's overall effectiveness in risk identification and mitigation. The study concluded that banks must not only comply with regulations but also ensure that the audit function is equipped with the necessary resources and autonomy to perform effectively. For future research, the authors suggested a focus on exploring the effectiveness of internal audit practices in light of evolving regulatory frameworks and the use of technology in auditing.

In 2020, Tetteh and Aboagye examined the relationship between auditor competence and the effectiveness of internal audit functions in Ghanaian banks. The main objective of the study was to explore the role of auditor competence in influencing the quality and effectiveness of the internal audit process. The supplementary objective was to investigate whether the level of training and qualifications of internal auditors correlates with their performance. The researchers used a survey method to collect data from 120 internal auditors working in Ghanaian commercial banks. Data was collected using structured questionnaires, and the results were analysed using correlation and multiple regression analysis. The findings indicated that auditor competence, including educational background, experience, and training, was a significant determinant of the internal audit function's effectiveness. The study concluded that banks should prioritize continuous training programs and professional development for internal auditors to improve audit quality and performance. The authors recommended that future research should examine the impact of technological tools and digital competencies on the effectiveness of internal auditing.

A study by Amoako and Kusi in 2021 focused on the influence of organisational culture and the effectiveness of internal audits in the Ghanaian banking sector. The objective of this study was to assess how elements of organisational culture, such as communication, trust, and collaboration, affect the effectiveness of internal audits. The supplementary objective was to explore how cultural values within the bank influence auditors' independence and their ability to raise concerns without fear of retaliation. Using a qualitative approach, the researchers conducted semi-structured interviews with 15 senior internal auditors and audit managers from different commercial banks in Ghana. The data were analysed thematically, with findings indicating that organisational culture significantly impacts the independence and performance of internal auditors. A culture of openness and trust was found to enhance the effectiveness of internal audits, while a culture of fear and hierarchy often hindered the auditors' ability to execute their duties effectively. The study concluded that fostering a positive organisational culture that supports internal audit independence is crucial for improving audit effectiveness. The researchers recommended that banks focus on creating environments that encourage open communication and transparency, and they suggested that future research explore the role of cultural factors in the relationship between internal audit and corporate governance.

In 2022, Afriyie and Osei investigated the role of the internal audit function in detecting and preventing financial fraud in the Ghanaian banking industry. The main objective of this study was to examine how the internal audit function contributes to the detection and prevention of fraudulent activities within banks. The supplementary objectives included identifying the challenges faced by auditors in detecting fraud and assessing the effectiveness of the tools used in fraud detection. The study adopted a mixed-method design, with data collected through both surveys and interviews. The survey was distributed to 250 internal auditors in Ghanaian banks, and interviews were conducted with 20 audit managers. Data analysis was performed using both descriptive statistics and thematic analysis for the qualitative data. The study found that while internal audits played a vital role in identifying potential fraud, their effectiveness was often undermined by the lack of technological tools, inadequate staff, and insufficient independence. The study concluded that the internal audit function is crucial in fraud detection, but it needs to be adequately supported with advanced tools, greater independence, and sufficient resources. For future research, the authors recommended exploring the impact of emerging technologies such as artificial intelligence and data analytics on improving fraud detection in internal audits.

A study by Mensah and Danso (2023) focused on the impact of management support on the effectiveness of internal audits in the banking sector. The primary objective of the study was to examine how management support influences the internal audit function's ability to perform its duties effectively. The supplementary objective was to explore the ways in which senior management can facilitate the internal audit process. The researchers used a quantitative research design, collecting data from 180 internal auditors through structured questionnaires. Data was analysed using regression analysis, with the findings revealing that management support had a significant positive impact on internal audit effectiveness. When management provided adequate resources, clear communication, and a commitment to auditing independence, the effectiveness of internal audits improved. However, the study also found that in some cases, management influence could compromise the objectivity and independence of auditors. The authors concluded that strong management support is essential for effective internal auditing, but caution should be taken to avoid undue influence over the audit process. They recommended that future research explore how different forms of management support (e.g., financial, logistical, and emotional) affect the internal audit process.

In 2023, Kwame and Boateng examined the impact of technological advancements on the effectiveness of the internal audit function in Ghanaian banks. The primary objective of this study was to assess how the adoption of technology, such as automated audit tools and data analytics, affects the performance of internal audits. The supplementary objective was to explore the challenges and benefits associated with technology adoption in the internal audit process. A mixed-method approach was adopted, consisting of a survey with 150 internal auditors and semi-structured interviews with 15 senior audit managers. The survey data was analysed using descriptive statistics and regression analysis, while the qualitative data was analysed thematically. The findings indicated that technology adoption has a significant positive impact on the efficiency and effectiveness of internal audits, particularly in detecting fraud and managing risk. However, challenges related to the high cost of technology, lack of skilled personnel, and resistance to change were also identified. The study concluded that the integration of advanced technology can greatly enhance the internal audit function but requires a strategic approach to training, resource allocation, and overcoming resistance to technological change. The authors recommended future research that delves deeper into the role of emerging technologies such as blockchain and artificial intelligence in internal auditing.

In 2020, Adu and Koomson conducted a study focusing on the impact of audit committee characteristics on the effectiveness of internal audits in the Ghanaian banking sector. The main objective of the study was to investigate how the composition, experience, and independence of audit committees influence the performance of the internal audit function. The supplementary objective was to assess the relationship between audit committee effectiveness and the reporting and follow-up of internal audit recommendations. The researchers used a survey methodology, distributing questionnaires to 180 internal auditors working in commercial banks across Ghana. The data were analysed using structural equation modeling (SEM) to assess the relationships between audit committee characteristics and internal audit effectiveness. The results revealed that audit committee independence, experience, and active involvement in the audit process positively influenced the internal audit function's effectiveness. The study concluded that the internal audit function is more effective when the audit committee is independent and composed of members with relevant expertise. For future research, the authors recommended that further studies explore the specific practices of audit committees that contribute most significantly to internal audit effectiveness.

In 2021, Quartey and Ofori investigated the effect of risk management practices on the internal audit function's effectiveness in Ghanaian banks. The main objective was to examine how the internal audit function contributes to the overall risk management framework of banks. The supplementary objective was to analyse how risk management practices influence auditors' ability to assess and mitigate financial risks. The researchers employed a quantitative research design and collected data from 200 internal auditors across various banks in Ghana using structured questionnaires. The data was analysed through correlation and regression techniques. The study found that internal audit functions that are integrated into the bank's risk management framework were more effective in identifying and managing risks. The research also highlighted that a proactive approach to risk management led to a more comprehensive audit process. The study concluded that effective risk management practices are essential for ensuring the effectiveness of internal audit functions in the banking industry. The authors recommended that future studies focus on how internal audits can be better aligned with evolving risk management strategies, particularly in the face of emerging risks such as cybersecurity threats.

In 2022, Agyemang and Sarpong focused on the impact of internal audit independence on the effectiveness of audits within the Ghanaian banking sector. The primary objective of their study was to explore how the level of independence of internal auditors influences the quality of audit work. The supplementary objective was to assess how factors such as organisational hierarchy, political interference, and management pressure affect auditor independence. A quantitative research methodology was used, with data collected through structured questionnaires distributed to 160 internal auditors in Ghanaian banks. The analysis employed regression techniques to evaluate the relationship between auditor independence and audit effectiveness. The study found that auditor independence has a significant positive effect on audit effectiveness. However, the research also identified instances where internal auditors were subject to pressure from management or external forces, which compromised their independence and, consequently, the quality of their work.

The study concluded that ensuring the independence of internal auditors is essential for achieving effective internal audits. The authors recommended that further research examine the structural and environmental factors that impact the autonomy of internal auditors, particularly in the face of organisational and managerial pressures.

In 2023, Mensah and Ofori studied the role of internal audit in corporate governance within the Ghanaian banking industry. The objective of the study was to evaluate how the internal audit function contributes to corporate governance practices, particularly in enhancing accountability, transparency, and compliance with regulatory frameworks. The supplementary objective was to examine the challenges that hinder the internal audit function from fulfilling its governance role. A mixed-method approach was used, combining quantitative data from 250 internal auditors through surveys and qualitative insights gathered from 20 senior managers through interviews. The data was analysed using both descriptive statistics and thematic analysis. The study found that internal audit functions play a pivotal role in ensuring corporate governance standards are maintained within Ghanaian banks. However, challenges such as limited resources, lack of audit autonomy, and insufficient professional training were noted as barriers to the full effectiveness of internal audits. The study concluded that internal auditors are vital to ensuring that banks adhere to governance best practices, but they require adequate support to perform their duties effectively. For future research, the authors recommended exploring the role of internal audits in promoting corporate social responsibility and sustainability within the banking sector.

In 2020, Alzahrani and Salama conducted a study on the impact of corporate governance mechanisms on the effectiveness of internal audits in the banking sector in Saudi Arabia. The primary objective was to determine the role of board characteristics, audit committee structure, and external auditors in enhancing the effectiveness of internal auditing practices. The supplementary objective was to assess the moderating effect of organisational culture on the relationship between corporate governance and internal audit effectiveness. A survey was administered to 220 internal auditors working in banks, with the data analysed using Structural Equation Modeling (SEM). The study found that a strong audit committee with independent members and active involvement in audit processes significantly improved the quality and effectiveness of internal audits. Furthermore, the results indicated that organisational culture, particularly in terms of openness and transparency, played a significant role in reinforcing the positive effect of corporate governance on audit effectiveness. The authors concluded that a well-structured governance framework, combined with a supportive organisational culture, is essential for effective internal audits. They recommended future research to explore the influence of external regulatory frameworks and the integration of technology in auditing practices.

In 2021, Ntim and Siaw conducted research on the relationship between risk management and internal audit effectiveness in the banking industry in South Africa. The main objective of the study was to assess how risk management processes influence internal audit practices in South African banks. The supplementary objective was to evaluate the barriers to effective risk management integration within internal audit functions. A quantitative approach was used, with data collected via a questionnaire distributed to 250 internal auditors from South African banks. Regression analysis was used to analyse the data. The study found that risk management functions were positively correlated with the effectiveness of internal audits, particularly when internal auditors were involved early in the risk assessment process. However, the study also identified challenges such as insufficient resources and the siloing of risk management functions from internal auditing. The study concluded that for internal audits to be more effective, banks need to fully integrate internal audits within their risk management processes. The authors suggested that future research examine the role of internal audits in managing emerging risks such as cyber threats and operational risks in the banking sector.

In 2019, Maijoor and Vanstraelen conducted a study on the effectiveness of internal audits in European banking institutions, with a particular focus on the effect of audit quality on banking performance. The primary objective of the study was to examine the relationship between audit quality and the performance of internal audit functions within banks. The supplementary objective was to investigate how external and internal auditors collaborate to improve audit quality and effectiveness. The researchers employed a mixed-methods approach, combining quantitative data from 150 internal auditors in European banks and qualitative interviews with 20 audit managers. The data were analysed using both regression analysis and thematic content analysis. The study revealed that a higher quality of internal auditing, characterised by thorough testing of financial statements and compliance audits, was linked to improved banking performance. The study also found that collaboration between internal and external auditors enhanced audit quality and effectiveness. The study concluded that banks with stronger audit quality frameworks were better equipped to handle financial challenges. The authors recommended that future research focus on the effectiveness of collaborative audit models in improving internal audit outcomes and the regulatory measures that influence these models.

In 2022, Zhang and Wang studied the role of audit committee characteristics in influencing the effectiveness of internal audits in Chinese banks. The main objective of their study was to determine how the size, independence, and expertise of audit committees affect the internal audit function. The supplementary objective was to analyse how audit committee involvement in the internal auditing process impacts the detection of fraud and financial misconduct. The study used a quantitative approach, gathering data from 300 internal auditors across 50 large banks in China. The data was analysed using multiple regression analysis. The study found that the independence of audit committees had a positive influence on internal audit effectiveness. Furthermore, the involvement of audit committees in strategic decision-making and audit planning was found to significantly enhance the ability of internal auditors to detect and address potential risks. The authors concluded that audit committee characteristics directly affect the effectiveness of internal audits, especially in large organisations. They recommended that future studies examine the relationship between audit committees' responsibilities and the internal audit outcomes in different sectors, not just banking.

In 2023, Okafor and Eze conducted a study in Nigeria to examine the role of internal audit effectiveness in enhancing financial reporting quality in commercial banks. The main objective was to explore how effective internal audit practices influence the accuracy and reliability of financial statements in Nigerian banks. The supplementary objective was to assess the factors that hinder internal audit effectiveness in the banking sector. A survey methodology was used, with questionnaires distributed to 200 internal auditors in Nigerian banks. The data was analysed using correlation and regression analyses. The findings showed that effective internal audits were positively correlated with high-quality financial reporting. Factors such as auditor independence, training, and experience were found to significantly influence the quality of internal audits. The study concluded that internal audit effectiveness is crucial for ensuring the reliability of financial reporting in the banking sector. The authors suggested that future research should explore the relationship between internal audit effectiveness and customer trust in the banking sector, as well as the regulatory measures that promote internal audit quality.

Conceptual Framework

Based on the literature review, the conceptual framework below was proposed.

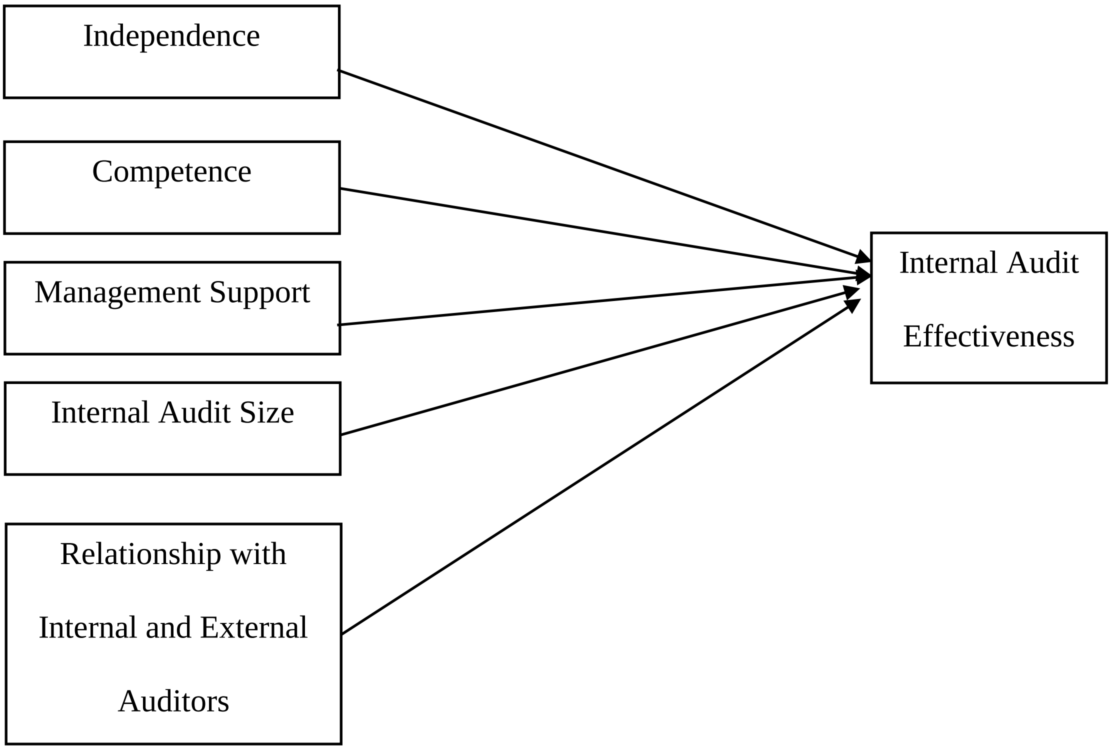

Figure 1: Conceptual Framework
Source: Author's Construct (2020)

Chapter Summary

This Chapter analysed the theoretical framework, underpinning this research. The concept within the study was explained from other researchers' perspective. The empirical review of other researchers was also analysed in order to identify the results from other research on the subject matter.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter presents the methods and materials used to establish the factors that influence the effectiveness of internal audit functions in the Ghanaian Banking Sector of Ghana. The chapter specifically contains the research paradigm, research design, sampling technique, sample size, data collection and data analysis and model specification.

Research Paradigm

This study used Positivist research paradigm. Positivism posits that scientific method is the only way to establish truth or reality. Thus, from positivists point of view, every research should be scientific. According to Bogdan and Biklen (2003), positivist research paradigm fits well for establishing causes of a phenomena or to test theory. Therefore, through this paradigm, this study was able to determine the causes of internal audit effectiveness in the Ghanaian Banking Sector.

Research Design

This section outlines the general design of the study, including the research approach and methodology employed. The research follows a descriptive study design. Descriptive research, as defined by Maxwell (2012), aims to collect detailed information about the current state of a phenomenon or occurrence to draw accurate conclusions from the data. It is particularly useful when there is a need to gain an understanding of the existing conditions or trends. According to Krishnaswamy (2009), descriptive research also assumes prior knowledge of the issue under investigation, which helps in framing the research problem and identifying the relevant data.

The study employs a quantitative research approach. Quantitative methods are ideal for collecting data that can be analysed numerically, facilitating statistical analysis and enabling objective, evidence-based conclusions. This approach minimizes subjectivity in the interpretation of the results and enhances the reliability and validity of the findings (Clark & Ivankova, 2016). By using quantitative data analysis, the study aims to ensure that the results are not only accurate but also generalizable, allowing the findings to be applied to a larger population beyond the sample under study. This combination of a descriptive design and a quantitative approach offers a robust foundation for understanding the factors influencing the internal audit function's effectiveness within the Ghanaian banking sector.

Population

A population refers to a group of individuals from whom a sample is drawn (Nsowah-Nuamah, 2005). It is essential for the sample to be representative of the larger population. The population of a study forms the focal point of a researcher's investigation (Ozili, 2018). In this study, the population consisted of all banks in Ghana, with the focus specifically on the internal auditors of these banks. The total population size was reported to be 142 internal auditors. This group was selected to provide insights into the research objectives and ensure the findings reflect the broader banking sector in Ghana.

Sampling Techniques

Sampling is inevitable in scientific studies. According to Agyedu et al. (2010), it is difficult for a study to include all the units within a population because of time and financial resource constraints. In view of this, they recommended sampling for any scientific study like this. Sampling techniques are grouped into two as probability and non- probability sampling techniques. With probability sampling techniques, all the elements within the population have equal chance of being selected but this is not so with non-probability sampling techniques. This study employed a non-probability sampling technique (purposive sampling) and a probability sampling technique (simple random sampling).

The first stage of this sampling process was to identify the respondents. Since the study is about effectiveness of internal audit and factors that determine it, this study purposively sampled only internal auditors within the banking sector. The internal auditors perform the internal audit; hence they have in-depth knowledge about internal audit and its effectiveness within the sector. Purposive sampling is used when one wants to sample people who have in-depth information knowledge about a phenomenon under consideration. The next stage is sampling of the respondents. This study used simple random sampling technique where respondents were randomly selected from the study population.

Sample Size Determination

The sample size determination table developed by Krejcie and Morgan (1970) was used to get the sample size of 142 from a sampling frame of 191. This sample size determination method was employed in the research since it is straightforward and does not need thorough computation. The study's sample frame consisted of 191 internal auditors from Ghanaian banks. The sample size was determined to be less than or equal to 10,000 using a 95 percent confidence range. The distribution of questionnaires for internal auditors in each financial institution was calculated in this research using Krejcie and Morgan's (1970) sample size determination table.

Data Collection Instrument

This research relied only on primary data, which was gathered through internal auditors via questionnaire distribution. Internal audit effectiveness; socio-demographic characteristics of internal auditors; independence of internal auditors; managerial support for internal audit; competence of internal auditors; internal audit size; relationship between internal and external auditors were all included in the data.

There are different data collecting instruments, however only questionnaires were utilised in this research. Structured, semi-structured, and unstructured questionnaires are all possible. A structured questionnaire was deemed most suitable for this research. This is due to the structured questionnaire's ability to gather data at the lowest possible administrative expense (Bryman, 2004). Bryman went on to say that using a structured questionnaire allows for more standardised data collection, which aids quantitative analysis.

This research collected data from internal auditors in Ghana's banking industry using a standardised questionnaire. The questions were divided into four parts. Appendix 1 contains the detailed questionnaire. This research utilised a questionnaire for determining internal audit effectiveness that has been widely used in several recent studies (Drogala et al., 2015; Dellai, 2016) and from COSO 2013. Except for questions in Section I, the research utilised a five-point Likert Scale for all of the questions in the questionnaire. The Likert Scale is a five-point scale ranging from strongly disagree (1) to strongly agree (5). The five-point Likert Scale was employed in this research since it was utilised in COSO (2013) and other studies on internal audit effectiveness (for example, Drogala et al., 2015). The five-point Likert Scale minimizes respondents' irritation while increasing response rate and quality (Dellai, 2016).

Ethical Consideration

According to Bryman (2004), as quoted by Poni (2014), research must explain its aim to respondents, as well as the degree of involvement of the respondents, and get the permission of individual respondents. This research responded appropriately by telling all respondents that the survey was for academic work and was a prerequisite for a master's degree at the University of Cape Coast. The research also notified all respondents about the kind and nature of data that was required from them. Furthermore, the research informed all respondents that participation in this study was entirely optional and guaranteed all respondents of the absolute confidentiality and anonymity of the information given.

Data Processing and Analysis

Following data collection, the data was cleaned, coded, and put into SPSS version 25.0 for analysis. In accordance with the main goals, the gathered data was statistically evaluated using Ordinary least squares (OLS) multiple regression. This was utilised to calculate the magnitude of the impact of the five factors listed above (the independent variables) on Internal Audit Effectiveness (the dependent variable). The banks were the unit of study, including answers from internal auditors.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

Introduction

The result and discussion are dealt with in the chapter. This study was aimed on the examination of the factors influencing internal audit effectiveness. The study is demarcated into various subsections.

Preliminary Analysis

The descriptive statistics of the data obtained is covered by the preliminary data review. It analysed the demographic characteristics of the data.

Descriptive Analysis

The analysis evaluated the demographic profiles of the gathered data from the respondents. The respondents were asked to state their experience and other characteristics. Table 4.1 shows the demographic characteristics of the respondents.

Table 1: Demographic Characteristics

Variable	Frequency	Percent
Number of years been in operation		
1-5	21	14.8
6-10	32	22.5
11-15	36	25.4
16-20	32	22.5
20+	21	14.8
Work Experience		
< 1 year	25	17.6
1-<5 years	32	22.6
5-<10 years	28	19.7
10-<15 years	28	19.7
15 years or more	29	20.4
Number of Internal Auditors		
1-5	16	11.3
6-10	86	60.6
11-15	22	15.5
16-20	9	6.3
more than 20	9	6.3
Total	**142**	**100.0**

Source: Field Survey (2023)

Out of 142 respondents, 21 had operated for 1 to 5 years. This represented 14.8 percent. 6-19 years were 32 with a corresponding percentage of 22.5 percent. Service between 11 to 15 years recorded the highest number of individuals with a corresponding percent of 25.4 percent. Number of years between 16 to 20 also recorded 32 respondents with a corresponding percent of 22.5 percent. Organisations that have served for 20 years and more also recorded 21 with a corresponding percentage of 14.8.

Out of 142 respondents, 25 of the respondents had less than one year working experience. This represented 17.6 percent. Respondents between the

1 to 5 years were 32 years. This represented 22.5 percent. Respondents with a working experience between 5 to 10 years were 28, representing 19.7 percent. Respondents with working experience between 10 years to 15 years were also 28, representing 19.7 percent. Respondents who have worked for 15 years and more were 29, representing 20.4 years.

Reliability and Validity Test

Reliability and validity in research projects are significant to determine the degree to which the scales of the measurements are valid and reliable. To conduct this, the Cronbach Alpha test was used to investigate internal consistency of the constructs. The Cronbach Alpha acceptable test rate was 70% or 0.7 and any construct recording below this limit indicates poor internal consistency. The factor analysis was applied to examine the measurement scale validity. For an acceptable factor analysis number of vital hypothesis is important. For example, Kaiser-Meyer-Oklin (KMO) values must be 50% (0.50) or more and the probability of Bartlett's Test of Sphericity must be significant (p-value < 0.05). Furthermore, the factor loadings of the elements or items must be greater than 0.6 and the Average Variance Extracted (AVE) must be 0.5 or better (Hair, 2010). The reliability and validity of the individual constructs have been presented in detail below.

Validity and reliability results for Management Support

In assessing the construct, six elements were used to measure management support. After the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.885), determinant (.025) and Bartlett's Sphericity Test ($X^2(15) = 508.464$; $p<0.05$) assumptions were met, factor analysis was conducted on all six items. The six components used to measure the construct were highly loaded (>.5). On the six (6) items using the Cronbach Alpha, reliability tests were carried out. Cronbach's Alpha was registered at .903. This suggests that the six elements were accurate in measuring the management of the study. The naïve method was used to measure the Management support variable.

Table 2: Exploratory Factor Analysis on Management Support

	Factor Loading
Senior management supports internal audit to perform its duties and responsibilities	.842
Senior management are involved in the internal audit plan	.832
Internal audit provides senior management with sufficient, reliable and relevant reports about the work they perform and recommendations made	.860
The response to internal audit reports by the senior management is reasonable	.812
Internal audit department is large enough to successfully carry out its duties and responsibilities	.865
Internal audit department has sufficient budget to successfully carry out its duties and responsibilities	.724
Cronbach Alpha	0.903
Eigenvalue	3.363
% of Variance	67.26
KMO=0.885; χ^2=508.464; df=15; p-value=0.000	

Source: Field Survey (2023)

Validity and reliability results for competence

In assessing the construct, five elements were used to measure competence. After the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.886), determinant (.027) and Bartlett's Sphericity Test ($X^2(10) = 502.549$; $p<0.05$) assumptions were met, factor analysis was conducted on all five items. The five components used to measure the construct were highly loaded (>.5). On the five (5) items using the Cronbach Alpha, reliability tests were carried out. Cronbach's Alpha was registered at .919. This suggests that the five elements were accurate in measuring the variable competence. The naïve method was used to measure the competence variable.

Table 3: Exploratory Factor Analysis on Competence

	Factor Loading
The professional knowledge of internal auditors is high.	.820
Internal auditors are considered as professional.	.827
Internal auditors are proactive.	.897
There is communication between internal auditors and auditees.	.906
Internal auditors attend educational seminars for continuous training	.879
Cronbach Alpha	0.919
Eigenvalue	3.788
% of Variance	75.76
KMO=0.886; χ^2=502.549; df=10; p-value=0.000	

Source: Field Survey (2023)

Validity and reliability results for relationship between internal and external auditors

In assessing the construct, nine elements were used to measure relationship between internal and external auditors. After the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.900), determinant (.007) and Bartlett's Sphericity Test ($X^2(36)$ = 1142.534; $p<0.05$) assumptions were met, factor analysis was conducted on all nine items. The nine components used to measure the construct were highly loaded (>.5). On the nine (9) items using the Cronbach Alpha, reliability tests were carried out. Cronbach's Alpha was registered at .945. This suggests that the nine elements were accurate in measuring the variable relationship between internal and external auditor's variable. The naïve method was used to measure the relationship between internal and external auditor variable.

Table 4: Exploratory Factor Analysis on relationship between internal and external auditors

	Factor Loading
External auditors are friendly and supportive	.830
External auditors have a good attitude towards internal auditors	.859
External auditors are willing to give internal auditors an opportunity to explain their concerns.	.816
External and internal auditors consult on the timing of work in which they have a mutual interest	.838
External auditors discuss their plans with internal audit	.855
External auditors rely on internal audit work and reports	.891
External and internal auditors meet on a regular basis	.794
External and internal auditors share their working papers	.811
Senior management helps to promote effective co-operation between internal and external audit	.824
Cronbach Alpha	0.945
Eigenvalue	6.287
% of Variance	69.854
KMO=0.900; χ^2=1142.534; df=36; p-value=0.000	

Source: Field Survey (2023)

Validity and reliability results for independence of Internal Audit

In assessing the construct, seven elements were used to measure independence. After the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.773), determinant (.006) and Bartlett's Sphericity Test ($X^2(21) = 710.604$; $p<0.05$) assumptions were met, factor analysis was conducted on all seven items. The seven components used to measure the construct were highly loaded (>.5). On the seven (7) items using the Cronbach Alpha, reliability tests were carried out. Cronbach's Alpha was registered at .833. This suggests that the seven elements were accurate in measuring the variable, independence. The naïve method was used to measure the construct, independence.

Table 5: Exploratory Factor Analysis on independence of Internal Audit

	Factor Loading
Internal audit staff are sufficiently independent to perform their professional obligations and duties.	.633
The head of internal audit reports to a level within the organisation that allows the internal audit to fulfil its responsibilities	.632
The internal audit department has direct contact with senior management other than the finance director.	.704
Conflict of interest is rarely present in the work of internal auditors.	.769
Internal auditors rarely face interference by management while they conduct their work.	.723
Internal audit staff have free access to all departments and employees in the organisation.	.745
The board of directors approves the appointment and replacement of the head of internal auditing.	.733
Cronbach Alpha	.833
Eigenvalue	3.502
% of Variance	50.030
KMO=0.773; χ^2=710.604; df=21; p-value=0.000	

Source: Field Survey (2023)

Validity and reliability results for Internal Auditor Effectiveness

In assessing the construct, twelve elements were used to measure internal auditors' effectiveness. After the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.902), determinant (.011) and Bartlett's Sphericity Test ($X^2(45)$ = 1077.639; $p<0.05$) assumptions were met, factor analysis was conducted on all twelve items. The ten out of twelve components used to measure the construct were highly loaded (>.5). On the ten (10) items using the Cronbach Alpha, reliability tests were carried out. Cronbach's Alpha was registered at .931. This suggests that the seven elements were accurate in measuring the variable, internal auditor effectiveness. The naïve method was used to measure the construct, internal auditor effectiveness.

Table 6: Exploratory Factor Analysis on independence of Internal Audit

	Factor Loading
Internal audit determines the adequacy and effectiveness of the firm's internal control systems	.774
Internal audit reviews the accuracy and reliability of financial reports	.724
Internal audit reviews compliance with procedures, policies and plans as well as regulations	.799
Internal audit reviews the firm's compliance with laws and regulations	.749
Internal audit reviews economical and effective use of the firm resources	.824
Internal audit makes recommendations for the improvements of internal control systems	.835
Internal audit improves organisational productivity	.795
Internal audit develops appropriate annual audit plans	.823
Internal audit recommendations are implemented timely	.781
Internal audit provides adequate follow-ups to ensure that the right action is taken	.789
Cronbach Alpha	**.931**
Eigenvalue	**6.238**
% of Variance	**62.385**
KMO=0.902; χ^2=1077.639; df=45; p-value=0.000	

Source: Field Survey (2023)

Correlation Analysis

Table 7 indicates the results from the correlations. The correlation among the six variables constructs were analysed.

Table 7: Correlations

		Management_ Support	Competence	Relationship	independence	IAE	Number of internal auditors in department
Management_Support	Pearson Correlation	1	.731**	.710**	.599**	.954**	.069
	Sig. (2-tailed)		.000	.000	.000	.000	.411
	N	142	142	142	142	142	142
Competence	Pearson Correlation	.731**	1	.819**	.646**	.899**	.036
	Sig. (2-tailed)	.000		.000	.000	.000	.674
	N	142	142	142	142	142	142
Relationship	Pearson Correlation	.710**	.819**	1	.769**	.801**	.019
	Sig. (2-tailed)	.000	.000		.000	.000	.825
	N	142	142	142	142	142	142
independence	Pearson Correlation	.599**	.646**	.769**	1	.659**	.023
	Sig. (2-tailed)	.000	.000	.000		.000	.788
	N	142	142	142	142	142	142
IAE	Pearson Correlation	.954**	.899**	.801**	.659**	1	.060
	Sig. (2-tailed)	.000	.000	.000	.000		.480
	N	142	142	142	142	142	142
Number of internal auditors in department	Pearson Correlation	.069	.036	.019	.023	.060	1
	Sig. (2-tailed)	.411	.674	.825	.788	.480	
	N	142	142	142	142	142	142

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

Source: Field Survey (2023)

From Table 7, there was a large positive significant correlation between management support and competence [*r*= .731, *n*=142, p<.05]. With increasing management support and increasing competence. Also, there was a large positive significant correlation between management support and relationship between external and internal auditors [*r*= .710, *n*=142, p<.05]. With increasing management support and increasing relationship with internal and external auditors.

There was a moderate positive significant correlation between management support and independence [*r*= .599, *n*=142, p<.05]. With increasing management support and increasing independence.

There was a large positive significant correlation between management support and Internal Auditors Effectiveness [*r*= .954, *n*=142, p<.05]. With increasing management support and increasing internal auditor effectiveness. However, there was no significant correlation between management support and number of internal auditors [*r*= .069, *n*=142, p>.05].

There was a large positive significant correlation between competence and relationship between external and internal auditors [*r*= .819, *n*=142, p<.05]. With increasing competent and increasing relationship between external and internal auditors. There was a moderate positive significant correlation between competence and independence [*r*= .646, *n*=142, p<.05]. With increasing competent and increasing independence. There was a large positive significant correlation between competence and Internal Auditor Effectiveness [*r*= .899, *n*=142, p<.05]. With increasing competent and increasing Internal Auditor Effectiveness. However, there was no significant correlation between competence and number of internal auditors [r= .036, n=142, p>.05].

There was a large positive significant correlation between relationship and independence [r= .769, n=142, p<.05]. With increasing relationship and increasing independence. Also, there was a large positive significant correlation between relationship and Internal Auditor Effectiveness [r= .801, n=142, p<.05]. With increasing relationship and increasing Internal Auditor Effectiveness. However, there was no significant correlation between relationship and number of internal auditors [r= .019, n=142, p>.05]. There was a moderate positive significant correlation between independence and Internal Audit Effectiveness [r= .659, n=142, p<.05]. With increasing independence and increasing Internal Audit Effectiveness. However, there was no significant correlation between independence and number of internal auditors [r= .023, n=142, p>.05]. Also, there was no significant correlation between Internal Audit Effectiveness and number of internal auditors [r= .060, n=142, p>.05].

Factors Influencing Internal Audit Effectiveness

The objective of the study was to analyse the factors influencing internal audit effectiveness. Factors such as internal auditor competence, relationship between external and internal auditors, independence, and number of internal auditors were regressed on internal auditors' effectiveness.

Diagnostic Tests

A diagnostic test was used to derive conclusions about the connections between the research variables. The tests were run to assess whether or not it was necessary to conduct an empirical analysis of the data using multiple regression analysis. When the essential assumptions are followed, as Greene (2002) explains, regression may be properly calculated. As a result, it was determined that multicollinearity and auto correlation among the research variables were present. The variance inflation factor (VIF) was used to test for collinearity, while the Durbin Watson test was used to test for independence.

Test of Multicollinearity

The variance inflation factor was used to test multicollinearity in the study (VIF). VIF values less than 10 and tolerance values more than 0.2, as described by Field (2009) and Landau and Everitt (2004), rule out the likelihood of multicollinearity among the research variables. Table 10 summarizes the findings of the multicollinearity investigation.

The VIF values for the predictor variables were less than 5, indicating that there was no chance of multicollinearity among the research variables, as described by Field (2009) and Landau et al (2004). The results indicate that all of the variables met the necessary threshold and that there was no evidence of multicollinearity. As a result, regression may be used because the variables are unrelated.

Test of Independence

The independence of error terms, commonly known as the auto correlation test, denotes the independence of observations. It was checked using the Durbin Watson (DW) test to make sure the model's residuals were not autocorrelated. DW values ranging from 0 to 4 and scores between 1.5 and 2.5, according to Garson (2012), imply independent observations.

Table 8 shows that the residuals of the empirical model are not autocorrelated, with D.W = 2.053 ranging between 1.5 and 2.5, implying that all variables passed the necessary threshold of less than 2.5 and that all variables exhibited no auto correlation, as specified by Garson (2012).

Hypothesis Testing

Multiple regression analysis was used to experimentally evaluate the five hypotheses on whether to reject or fail to reject the null hypotheses when testing for hypotheses. To determine the degree and amplitude of the link between the variables, as well as to evaluate the hypothesised correlations, regression analysis was used. To reach a conclusion, the hypotheses were tested at a 95 percent confidence level.

Goodness of Fit

Table 8 displayed the model summary findings, which were estimated to demonstrate the explained differences between independence, auditor relationship, number of auditors, competent, and management support through R^2 change. On the model summary, Table 8 shows the regression results. The adjusted coefficient of multiple determinant = 0.712 in the regression analysis on Table 8, implying that management support, competence, connection, number of auditors, and independence explained 71.2 percent of the variance in internal audit effectiveness.

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.4881[a]	.7761	.712	.05161	2.053

Source: Field Survey (2023)

Joint Significance

The ANOVA results were calculated to illustrate the model fitness by F-ratio findings between management support, competency, relationship, number of auditors, independence, and internal audit effectiveness, as shown in Table 9.

The regression findings in Table 9 showed an excellent fit of the model, with a significant value of (F (5, 141) = 9352.521, p < 0.05, indicating that the suggested model fit well.

Table 9: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	124.580	5	24.916	9352.521	.000[b]
	Residual	.362	136	.003		
	Total	124.942	141			

Source: Field Survey (2023)

Table 10: Test of significance of each independent variable

Model		Unstandardised Coefficients B	Std. Error	Standardised Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	-.036	.022		-1.634	.105		
	Number of internal auditors	.001	.004	.000	-.073	.942	.993	1.007
	Management_Support	.608	.007	.642	90.173	.000	.421	2.376
	Competence	.418	.008	.444	51.227	.000	.284	3.522
	Relationship	-.022	.010	-.021	-2.188	.030	.222	4.498
	Independence	.005	.008	.005	.649	.518	.403	2.479

Source: Field Survey (2023)

Test of significance of each independent variable

Table 10 provides regression results for number of internal auditors, management support, competence, relationship and independence on internal audit effectiveness. Each independent variable was tested to determine the effect on internal audit effectiveness.

Management support is established to be statistically significant at (B = 0.608, t = 90.173, p< 0.05) at 95 percent level of confidence, according to the regression results shown in Table 4.10. The model revealed that management assistance had a favorable impact on internal audit effectiveness. According to the data, a unit increase in management support is responsible with a 0.608 rise in internal audit effectiveness. The researcher rejects the null hypothesis and proposes that management support has an effect on internal audit effectiveness because the relationship is statistically significant. The findings support the findings of Alzban and Gwilliam (2014), who claimed that financial and resource support for internal auditors can improve their operations.

The regression table also shows that competence is statistically significant at 95 percent confidence level (B = 0.418, t = 51.227, p < 0.05). The model revealed that competence has a positive impact on internal audit effectiveness. According to the data, an increase in competence equals a 0.418 rise in internal audit effectiveness. The researcher rejects the null hypothesis and proposes that competence has an effect on internal audit effectiveness because the relationship is statistically significant. The findings back up Feizizadeh's research (2012). Individuals acting as internal auditors' competence also influences their effectiveness in internal auditing responsibilities, according to the study.

Furthermore, the study showed that the relationship between external and internal auditors is statistically significant at 95 percent confidence level

(B = -0.22, t = -2.188, $p < 0.05$). The model revealed that relationships have a negative impact on internal audit effectiveness. According to the findings, a unit increase in the relationship between internal and external auditors results in a 0.022 reduction in internal audit effectiveness. The researcher rejects the null hypothesis and proposes that the relationship between internal and external auditors has an effect on internal audit effectiveness because the relationship is statistically significant. The findings back up George, Theofanis, and Konstanitinos' research (2015). Internal auditors' effectiveness might be harmed by their relationships with external auditors, according to the study. Internal auditors may become dissatisfied with their work because they believe that their positive connection with external auditors will keep them from losing their employment. They may believe that if the external auditor fails to prevent fraud in the organisation, the external auditor will cover up. This explains why there is a negative correlation between the efficacy of internal auditors and their connection with external auditors.

The analysis found that independence is statistically insignificant at the 95 percent confidence level (B = 0.005, t = 0.649, $p > 0.05$). The model revealed that independence had a favorable influence on internal audit effectiveness, but the effect was minor.

The study also found that the number of internal auditors is statistically insignificant at 95 percent confidence level (B = 0.001, t = 0.073, $p > 0.05$). The number of internal auditors had a positive effect on internal audit effectiveness in the model, but the effect was insignificant.

The magnitude of the independent variables' effect

The standardised coefficients (beta coefficient) depict the relative effects of each factor on internal audit effectiveness, allowing for direct comparison of variables (shown in Table 10). The beta coefficient is a measure of the relative relevance of the different independent factors on the efficacy of internal auditing (Kim et al., 2005). Management support explained the greatest variation for internal audit effectiveness in the study's regression equation, followed by competence and the connection between internal and external auditors. Internal audit effectiveness appears to be more dependent on management support, expertise, and relationships, according to the findings.

Chapter Summary

This chapter analysed and discussed the five objectives of study. The chapter begun with explaining the demographic characteristics of the study. Exploratory factor analysis was done on all variables that were measured on Likert Scale. Correlation Analysis was undertaken by the among the variables. Multivariate regression was run to analyse the factors influencing the internal audit effectiveness.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This happens to be the study's final chapter. The summary of the findings, conclusions and policy implications and recommendations are discussed in this chapter. For further study, the chapter also includes suggestions.

Summary

The research studied on the factors influencing internal audit effectiveness in the Ghanaian banking Industry. The five objectives were established in order to achieve the purpose of the study. Objective one was to determine the effect of internal auditor's competency on internal audit effectiveness. Objective two was to evaluate the effect of internal auditor's independence on internal audit effectiveness. The third objective was to examine the effect of internal audit size on internal audit effectiveness. The fourth objective was to establish the effect of management support on internal audit effectiveness. Finally, the fifth objective was to investigate the impact of relationship between internal and external auditors on internal audit effectiveness.

The study was based on agency theory and institutional theory. An explanatory research design was utilized, as the study aimed to test the relationships between various variables. Data were collected using questionnaires, and the study employed a quantitative research approach to analyze the data. The simple random sampling technique was used in selecting a respondent of 142 respondents. Descriptive and Multiple Regression were also used to analyse the objectives of the study.

The result from the analysis showed that, Management support has significant effect on internal audit effectiveness. The study showed a positive effect of management support on internal audit effectiveness. The regression table also shows that, competence is established to be statistically significant at 95% level of confidence. The model showed a positive effect of competence on internal audit effectiveness. Also, the study showed that relationship between external auditors and internal auditors is established to be statistically significant at 95% level of confidence. The model showed a negative effect of relationship on internal audit effectiveness. The study showed that independence is established to be statistically insignificant at 95% level of confidence. The model showed a positive effect of independence on internal audit effectiveness but the effect was insignificant. Finally, the study also showed that number of internal auditors is established to be statistically insignificant at 95% level of confidence.

Conclusion

The following conclusions are deduced from the analysis and findings of the study. With regards to the objectives of the study, this study concluded that, independence of internal auditors does not significantly influence internal audit effectiveness.

This study also concluded that management supports significantly influence internal audit effectiveness. This may be due to perception internal auditors and internal audit department in general have about management support. Management supports serves as motivation to work extra hard. This increases the effectiveness of management support to improve internal audit effectiveness.

The study concluded that competence of internal auditors significantly influences internal audit effectiveness. Competent internal auditors better know and understand internal audit rules, regulations and policies so they are able to work within proper framework, leading to effective internal audit.

Also, the study concluded that, the effectiveness of internal auditors does not depend on the number of internal auditors. That is, internal auditors can be effective irrespective of number of auditors.

Finally, relationship between internal and external auditors had a significant impact on internal auditors' effectiveness. Better relationship with external auditors would improve internal auditor's knowledge and also, the required role they need to play in the auditing process.

Recommendations

This study makes the following recommendation to improve the effectiveness of internal audit in the banking sector:

The first recommendation is support for internal audit. Management of various banks in Ghana should be made to understand the importance of internal audit within the framework of organisational building and value for money. Institutional Theory noted that, managements within the banking sector have specific goals to achieve; thus, they should see internal auditors as partners in achieving these set goals. In view of this, management should allocate needed financial, logistics and human resource to internal audit departments on time to improve their effectiveness. The supports should be provided fairly and justly. Management should not wait for lamentation from internal auditors before they see the need to provide necessary support for the smooth functioning of internal audit in the banking sector.

The second recommendation is regular training and development of internal auditors. Competence of internal auditors increases the effectiveness of internal audit in the organisation. This competence could be achieved through regular training and development of internal auditors on new internal audit policies, rules and procedures and sharing of experiences among internal auditors across various banks in Ghana.

Suggestions for Further Studies

The study's first flaw is that it places too much emphasis on participants' self-reported metrics. The fact that this technique of data gathering is susceptible to a common method or source mistake is a significant drawback. Although self-report measures have been proven to be trustworthy (Zechmeister & Zechmeister, 2003), most participants often respond to questions based on what they believe to be a socially desired response, which may bias replies and hence influence the actual connection between the variables.

Second, in future research, a bigger sample size would be suitable to establish the link between the variables, since this would result in more accurate data that would better represent the wider society.

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APPENDIX 1

QUESTIONAIRE AND INTERVIEW GUIDE

UNIVERSITY OF CAPE COAST

Section 1: Personal information

1. Number of years in the organisation

[ ] 1-5

[ ] 6-10

[ ] 11-15

[ ] 16-20

[ ] 20+

2. Level of Education

  a) High school academic studies
  b) High school commercial studies
  c) Two-year diploma after high school
  d) Bachelor's degree, not accounting
  e) Bachelor's degree, accounting
  f) Professional qualifications
  g) None

3. Work experience

  a) <1 year
  b) 1–<5 years
  c) 5–<10 years
  d) 10–<15 years
  e) 15 years or more

4. Annual training hours

  a) No training
  b) <20
  c) 21–40
  d) 41–80
  e) 81–120
  f) More than 120

5. Internal audit courses in a year

a) None

b) One course

c) Two courses

d) Three courses

e) Four or more courses

6. Number of internal auditors in department

a) 1–5

b) 6–10

c) 11–15

d) 16–20

e) More than 20

Section B:

Please indicate the extent to which you agree or disagree with the following statements concerning …. Circle the appropriate number on the Likert scale: 1=Strongly Disagree (SD), 2=Disagree (D), 3=Neutral (N), 4=Agree (A) and 5=Strongly Agree (SA).

Measurement of independent variables

No	**Management support for internal audit**	**SD**	**D**	**N**	**A**	**SA**
1.	Senior management supports internal audit to perform its duties and responsibilities	1	2	3	4	5
2.	Senior management are involved in the internal audit plan					
3.	Internal audit provides senior management with sufficient, reliable and relevant reports about the work they perform and recommendations made					
4.	The response to internal audit reports by the senior management is reasonable					
5.	Internal audit department is large enough to successfully carry out its duties and responsibilities					
6.	Internal audit department has sufficient budget to successfully carry out its duties and responsibilities					

No	Competence of Internal Auditors	1	2	3	4	5
1	The professional knowledge of internal auditors is high					
2.	Internal auditors are considered as professional					
3.	Internal auditors are proactive					
4.	There is communication between internal auditors and auditees					
5.	Internal auditors attend educational seminars for continuous training					

No.	Relationship between external and internal auditors	SD	D	N	A	SA
1.	External auditors are friendly and supportive	1	2	3	4	5
2.	External auditors have a good attitude towards internal auditors					
3.	External auditors are willing to give internal auditors an opportunity to explain their concerns					
4.	External and internal auditors consult on the timing of work in which they have a mutual interest					
5.	External auditors discuss their plans with internal audit					
6.	External auditors rely on internal audit work and reports					
7.	External and internal auditors meet on a regular basis					
8.	External and internal auditors share their working papers					
9.	Senior management helps to promote effective co-operation between internal and external audit					

No.	**Independence of Internal Audit**	SD	D	N	A	SA
1.	Internal audit staff are sufficiently independent to perform their professional obligations and duties**.**	1	2	3	4	5
2.	The head of internal audit reports to a level within the organisation that allows the internal audit to fulfil its responsibilities					
3.	The internal audit department has direct contact with senior management other than the finance director					
4.	Conflict of interest is rarely present in the work of internal auditors					
5.	Internal auditors rarely face interference by management while they conduct their work					
6.	Internal audit staff have free access to all departments and employees in the organisation					
7.	The board of directors (the President for Government Organisations) approves the appointment and replacement of the head of internal auditing					

Section 3:

Please indicate the extent to which you agree or disagree with the following statements concerning …. Circle the appropriate number on the Likert scale: 1=Strongly Disagree (SD), 2=Disagree (D), 3=Neutral (N), 4=Agree (A) and 5=Strongly Agree (SA).

Measurement of Dependent variables

No.	Internal Audit Effectiveness	SD	D	N	A	SA
1	Internal audit improves organisational performance					
2	Internal audit reviews organisational programmes to determine whether results are consistent with objectives and goals					
3	Internal audit determines the adequacy and effectiveness of the firm's internal control systems					
4	Internal audit reviews the accuracy and reliability of financial reports					
5	Internal audit reviews compliance with procedures, policies and plans as well as regulations					
6	Internal audit reviews the firm's compliance with laws and regulations					
7	Internal audit reviews economical and effective use of the firm resources					
8	Internal audit makes recommendations for the improvements of internal control systems					
9	Internal audit improves organisational productivity					
10	Internal audit develops appropriate annual audit plans					
11	Internal audit recommendations are implemented timely					
12	Internal audit provides adequate follow-ups to ensure that the right action is taken					