

**ADVANCING INTERNAL AUDIT EFFECTIVENESS AT GHANA POLICE  
SERVICE: DO INDEPENDENCE AND OBJECTIVITY OF INTERNAL  
AUDITORS MATTER?**

KNUST

By

**GORDEN ANG-IRAVILAA SAMWINE**

A Thesis Submitted to Department of Accounting and Finance,  
Kwame Nkrumah University of Science and Technology, Kumasi  
In Partial fulfillment of the Requirement for the Degree  
Of

Master of Science  
**(ACCOUNTING AND FINANCE OPTION)**

School of Business  
College of Humanities and Social Sciences

AUGUST 2023

## DECLARATION

I hereby declare that this submission is the result of my own work towards the Masters of Science (Accounting and Finance Option) programme and that, to the best of my knowledge, this study contains no materials previously published by no person or submitted for the award of any other degree of the University, except where acknowledgment has been duly made in the text.

Gorden Ang-Iravilaa Samwine .....  
(PG 9427321) Signature Date

Certified by:

Dr. Richard Owusu-Afriyie .....  
(Supervisor) Signature Date

Certified by: .....

Prof. K. O. Appiah .....  
(Head of Department) Signature Date

## DEDICATION

This research paper is sincerely dedicated to the memory of my late mother (ASSI NINGBIEH), who passed away so many years ago. Her passion and selfless efforts to see us through higher education before her untimely death. To my father who had been my source of inspiration.

Moreover, I dedicate this research paper to my ever loving wife madam PRISCILLA SUZIE and my two (2) sons KUGBIEH and DIEMAALEE for their constant sacrifices, encouragement, prayers, moral, emotional and financial support. They have never left my side throughout the process and given me strength and hope when I thought of giving this up. They provided me a great sense of enthusiasm and perseverance in continuing this. Without their love and assistance, this research would not have been possible.

And lastly, I dedicate this research paper to the Almighty God who gives me strength, wisdom, guidance, power of thinking, security, competence and for giving me good health while doing this. All of these, I offer to you.

## ACKNOWLEDGEMENT

First and foremost, Through him, and with him, and in him, O God, Almighty Father, in the unity of the Holy Spirit, all glory and honor is yours, forever and ever Amen, for His showers of blessings throughout my research work to complete satisfactorily.

Also, I would like to express my profound gratitude to my research supervisor, Dr. Owusu Afriyie for giving me the opportunity to do research and providing invaluable guidance throughout this research. His dynamism, vision, sincerity and motivation have deeply inspired me. It was a great privilege and honor to work and study under his guidance. I am extremely grateful for his friendship, empathy and great sense of humor.

Moreover, I am also thankfully to Dr. Prince Gyimah for providing facilities to carry out this research work and for introducing me in the field of research. His keen interest on me at every stage of my research and his prompt inspirations, timely suggestions with kindness, enthusiasm and dynamism have enable me to complete my thesis.

Nevertheless, I am extremely grateful to my family for their love, prayers, support and most especially to my dear wife and sons for prayers, love, caring, understanding, sacrifices for educating and preparing me for future.

Lastly, I thankfully acknowledge the support and inspiration that I received from my lectures, colleagues and friends throughout the process, am grateful for your encouragement, love sacrifices and understanding.



## ABSTRACT

Internal audits have recently gained prominence worldwide due to severe bankruptcies, assets embezzlement, corporate fraud in false financial reporting, inflated revenues, and irregular transactions in the public sector. Internal audit effectiveness also promotes greater accountability, disclosure, and transparency to restore trust, market confidence, and shareholders. To achieve these, contemporary researchers pay attention to the objectivity and independence of internal auditors. This study extends prior studies to investigate whether internal auditors' objectivity and independence affect the educational directorate's internal audit effectiveness. Further, the study examines the critical challenges affecting internal audit effectiveness at Ghana Police Service (GPS). The study employs descriptive and explanatory designs in collecting cross-sectional primary data via questionnaires from the GPS directorate, Ejisu Municipality. The study uses Ordinary Least Square (OLS) models and other quantitative methods to analyze 194 respondents from the GPS units in Ghana. The study finds that the objectivity of internal auditors does not influence internal audit effectiveness; however, internal auditors' independence positively relates to internal audit effectiveness in Ghana. Management support and technology usage are the other variables that contribute to internal audit effectiveness. Also, the study concludes that poor service condition is the critical challenge facing the implementation of internal quality effectiveness at the directorate. Lastly, most staff at the directorate are not familiar with international auditing standards such as IFRS, IPSAS, and other applicable policies that enhance the effectiveness of internal audits.

## TABLE OF CONTENT

<b>DECLARATION.....</b>	<b>ii</b>
<b>DEDICATION.....</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>iv</b>
<b>ABSTRACT .....</b>	<b>v</b>
<b>TABLE OF CONTENT .....</b>	<b>vi</b>
<b>LIST OF TABLES .....</b>	<b>ix</b>
<b>LIST OF FIGURES .....</b>	<b>x</b>
<b>CHAPTER ONE.....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the Study.....	1
1.2 Problem Statement .....	3
1.3 Research Objectives .....	4
1.4 Research Questions .....	4
1.5 Significance of the Study .....	5
1.6 Brief Methodology .....	6
1.7 Scope of the Study.....	6
1.8 Limitation of the Study.....	7
1.9 Organization of the Study.....	7
<b>CHAPTER TWO .....</b>	<b>8</b>
<b>LITERATURE REVIEW.....</b>	<b>8</b>
2.0 Introduction .....	8
2.1 Theoretical Review .....	8
2.1.1 Agency Theory.....	8
2.1.2 Institutional Theory .....	9
2.1.3 Relevance of the Theories .....	10
2.2 Conceptual Review .....	11
2.2.1 Definition of Internal Audit .....	11

2.2.2 Critical Roles of Internal Audit.....	12
2.1.3 Factors advancing Internal Audit Effectiveness.....	13
Independence.....	14
Objectivity.....	15
2.1.4 Other Variables .....	16
Management Support .....	16
Interaction between Internal and External Auditors.....	17
Technology and Audit Process Outsourcing.....	18
2.3 Empirical Review .....	19
2.4 Conceptual Framework .....	22

### **CHAPTER THREE ..... 24**

#### **RESEARCH METHODOLOGY..... 24**

3.0 Introduction .....	24
3.1 Research Design.....	24
3.2 Population.....	25
3.3 Sample And Sampling Technique.....	25
3.4 Data Collection.....	26
3.5 Data Analysis .....	27
3.6 Models And Measures.....	27
3.6.1 Measurement of Variables .....	28
3.7 Validity and Reliability .....	34
3.8 Profile of Ghana Police Service .....	36

### **CHAPTER FOUR..... 38**

#### **RESULTS AND DISCUSSIONS ..... 38**

4.0 Introduction .....	38
4.1 Demographics Statistics .....	38
4.1.1 Gender.....	38
4.1.2 Age .....	39
4.1.3 Education.....	39
4.1.4 Professional Qualification .....	40

4.1.5 Department .....	41
4.1.6 Working Experience.....	41
4.2 Descriptive Statistics of Variables .....	42
4.3 Correlations and Multicollinearity Tests.....	44
4.3.1 Correlation.....	44
4.3.2 Cronbach Alpha .....	46
4.3.3 Variance Inflation Factor (VIF) .....	46
4.4 Regression Results .....	47
4.4.1 Model Results.....	47
4.4.2 Discussion of Regression Results .....	49
4.5 Challenges of Internal Audit Effectiveness.....	53
<b>CHAPTER FIVE.....</b>	<b>54</b>
<b>SUMMARY, CONCLUSION, AND RECOMMENDATIONS .....</b>	<b>54</b>
5.0 Introduction .....	54
5.1 Summary of Findings .....	54
5.2 Conclusion.....	56
5.3 Recommendations .....	57
<b>REFERENCES .....</b>	<b>59</b>
<b>LIST OF APPENDICES.....</b>	<b>67</b>
<b>APPENDIX A – QUESTIONNAIRE .....</b>	<b>67</b>



## LIST OF TABLES

Table 4.1: Gender.....	39
Table 4.2: Age of Respondents .....	39
Table 4.3: Education .....	40
Table 4.4: Professional Qualification.....	40
Table 4.5: Department.....	41
Table 4.6: Working Experience.....	41
Table 4.7: Statistics of Variables (N = 194).....	42
Table 4.8. Spearman and Pearson Correlations (N = 194).....	45
Table 4.9: Cronbach Alpha .....	46
Table 4.10: Variance Inflation Factor (VIF) .....	47
Table 4.11: Regression results (without control variables).....	48
Table 4.12: Regression results (with control variables).....	48
Table 4.13: Challenges of Internal Audit Effectiveness (N = 194).....	52

## LIST OF FIGURES

Figure 2.1: Model of the study ..... 22

# KNUST



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Advancing the effectiveness of internal audit have been argument in recent literature due to a series of financial scandals, earning management, fraud, and accounting errors (Gyimah et al., 2022). Again, significant roles of internal audit effectiveness have driven external regulators to promote greater accountability, disclosure, and transparency to restore trust, market confidence, and shareholders (Vadasi et al., 2021). Extant literature stresses that internal audit effectiveness helps institutions in their governance obligations in assessing, training, guiding, and communicating accurate information to accomplish strategic objectives (Rakipi et al., 2021). With the expanded accentuation on accountability, transparency, and advancement in public institutions, governments must see a sense of duty coupled with a proficient and successful monetary control component (Tackie et al., 2016).

Internal audits have recently gained prominence following widespread reservations about effective internal audits in contemporary environs, where severe bankruptcies have occurred (Anh et al., 2020). Contrarily, the apparent significance of internal auditing, as a facet of corporate control has increased, thereby highlighting the need to exact the parameters of what indeed constitutes a significant determinant of internal audit effectiveness in Ghana, notably police service in Ghana considering the fact that resources ought to be seen to be effectively utilized in these institutions that render important services to the Ghanaian populace.

The new Public Financial Management Act 2016 (Act 921) in Ghana mandates the head of the internal audit directorate to perform audit procedures or activities in the public institutions. Formerly, the employees of the internal audit department at GPS primary concentrated on auditing paid vouchers, receipts and payments; however, there have been considerable changes per Sections 83(3) of the Act 921. For instance, Section (3) of Act 921 stipulates that internal auditors in public institutions shall (a) report and appraise the appropriateness of internal controls; (b) evaluate governance mechanisms and risk effectiveness (c) assure the 3Es (that is effectiveness, efficiency, and economy of scarce resources to administer programs and (d) evaluate compliances per applicable policies, laws, standards, enactments, procedures, and systems. This section establishes a central agency of internal audits in enhancing accountability, efficiency, transparency, and fairness in managing resources in government institutions (Tackie et al., 2016).

Henceforth, the management of every institution is under increasing pressure to enhance internal audit effectiveness due to its significant impact on financial performance, risk, and fraud prevention (Anh et al., 2020). Despite the crucial roles of effectiveness of internal audit, the actual enactment of internal controls within the environment of institutions virtually does not exist, and the topic is relatively unexamined by scholars (Jokipii, 2010; Onumah, Kuipo, and Obeng, 2012). Due to significant internal audit effectiveness, little evidence has been found related to companies examining the drivers contributing to internal audit effectiveness in developing countries. A recent audit report shows financial irregularities among top companies across the country. This research adds to the international debate on



advancing internal audit effectiveness as a panacea in promoting accountability and transparency in public institutions.

## **1.2 Problem Statement**

The frequent occurrences of fraudulent activities, embezzlement of financial assets, and earnings management have led stakeholders in public institutions to lose trust and confidence in the reports and decisions of top management (Gyimah et al., 2022). Anh et al. (2020), and Gyimah et al. (2022) argue that adequate internal audit quality can boost or build stakeholders' trust and confidence in the public sector's reporting information. Gamayuni (2018) argues that focusing on the objectivity and independence of internal audits prevents fraudulent activities in every institution. Thus, contemporary scholars are calling for more studies to examine whether the objectivity and independence of internal auditors drive audit quality or effectiveness in developing countries such as Ghana. Surprisingly, the extant literature in Ghana that has delved into this research arena focus on public universities (Gyimah et al., 2023), metropolitan, municipal, and districts assemblies (Mohammed et al., 2023; Tackie et al., 2016) or listed firms (Onumah et al. (2012). Henceforth, this research focuses on the police service, whose services are enormously crucial to the preponderance of the population of Ghana. The scarce resources at the police service negatively affect their operations, thereby craving the need for the internal audit to discharge their obligations effectively. However, the yardsticks to operationalized internal audit effectiveness remains unanswered? The solution to this problem remains the motive to conduct this study. Objectivity and independence have always represented the cornerstone of audit theory and practice, though these concepts have especially gained importance in the last two decades. Though there are extensive

studies on internal audit effectiveness, none of the extant research, to the best of my knowledge, have focused on the objectivity and independence of internal audit of GPS in the Sub Saharan Africa region, Ghana. Most studies focus on the external audit in developed countries, neglecting the internal audit, the main contributor to effective corporate governance. Henceforth, this research explores whether the objectivity and independence of auditor advances internal audit effectiveness at the police service, knowing the growing public outcry of governance scandal and the ill use of scarce public resources in some public institutions in Ghana wholly.

### **1.3 Research Objectives**

The primary purpose is to investigate whether audit objectivity and independence affect internal audit effectiveness at Ghana Police Service (GPS). The specific objectives are:

1. To examine whether the audit objectivity affects the effectiveness of internal audit effectiveness at GPS.
2. To ascertain whether the audit independence drives the effectiveness of internal audit at GPS.
3. To evaluate the challenges related to effectiveness of audit objectivity and independence at GPS.

### **1.4 Research Questions**

The precise research questions are:

1. To what extent does audit objectivity affects the effectiveness of internal audit effectiveness at GPS?
2. Does audit independence drives the effectiveness of internal audit at GPS?

3. What are the challenges related to effectiveness of audit objectivity and independence at GPS?

### **1.5 Significance of the Study**

This research highlights the awareness of the effectiveness of internal audit at GPS that can add value, and protect the administration and operation costs that align strategic objectives and policies. The research could help local or global internal audit and accounting professional associations to modify their training curriculum and seminars that will equip professional accountants' in-depth knowledge of the importance and the roles of internal auditors.

The study can help policymakers, key stakeholders, management, and internal auditors in Ghana understand and focus on the specific drivers influencing internal quality audits. Another practical important of this study is that, the result would help develop plans or strategies to effectively monitor the activities of public institutions through hands-on internal audit tasks.

Moreover, the study extends extant literature to apprehend the critical factors that contribute to the efficacy of internal audit in the law enforcement agency sector sector using the agency and institutional theories. Finally, researchers and academicians can find this valuable study since there is limited research on the subject area within the Ghanaian context.



## **1.6 Brief Methodology**

The research employs descriptive and explanatory designs to collect primary cross-sectional data that investigates the determinants that drive internal audit effectiveness at GPS. The study uses an online survey strategy and quantitative analysis to answer the research questions. The researcher adapts prior studies questionnaire items and collects data from respondents from various departments at GPS. The study follows methods used by extant studies by Gyimah et al. (2023), Gamayuni (2018), and Sulub et al. (2020) on factors that affect or contribute internal audit effectiveness. Data retrieved are edited, coded, and tabulated into manageable summaries and use STATA 16.0 software to analyze data for discussions. The study uses quantitative analytical measurements such as descriptive statistics and inferential statistics such as Variance Inflation Factor (VIF), Cronbach Alpha, Spearman, and Pearson Correlations, and regression model to achieve the study's objectives.

## **1.7 Scope of the Study**

The study's scope focuses only on GPS. The result makes it challenging to generalize the survey outcomes to cover all law enforcing agencies in Ghana. However, internal audit issues in Ghana use professional codes, laws, and standards in internal auditing, and thus, the findings can still be useful for decision-making and strategic decisions. Moreover, the researcher's proximity and easy access to information and the willingness of the administrators to assist in providing information relevant to the achievement of the study's objectives are other reasons for selecting GPS.



### **1.8 Limitation of the Study**

Some of the study's limitations are that studies on internal audit effectiveness of law enforcing agencies like police service are limited in developing countries. Thus, the researcher relies on studies conducted in developed countries, higher learning institutions, listed firms, local assemblies, and other public and private firms. Hence, this study would have a geographic limitation since the findings associated with the functions of internal audit in developing economies may not be the same as the advanced economy perspective. Also, respondents feel reluctant to provide relevant information. Before the respondents consented to answer the questions, it took several weeks to explain the purpose of the study. The constrained academic time frame is another limitation of this study. Nevertheless, the study adheres to the prescribed educational guidelines for the research in a proper manner.

### **1.9 Organization of the Study**

This thesis consists of five chapters. An overview of the study's background, problem statement, objectives and questions, significance, methodology, scope and limitations, and organizational structure are all presented in the first chapter. The theoretical review, conceptual review, empirical review, and conceptual framework are all presented in the literature review section. Design, population, sampling, and sampling techniques, data collecting and analysis, models, and measurements of variables, variability, and reliability are all topics included in the study process. The descriptive and inferential findings of the study are presented, analyzed, and discussed in the data analysis and discussion section. Last but not least, the implications and policies that should be implemented based on the study's findings are discussed in the summary, conclusion, and suggestion chapter.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

The section provides existing research on audit independence, objectivity, and other determinants influence internal audit effectiveness at Ghana Police Service (GPS). The chapter provides the theories used to achieve the study's objectives, and also, presents relevant definitions and explanations of the study's concepts. Moreover, the chapter highlights the empirical reviews, and finally, the chapter offers the study's conceptual framework showing the networks of the relevant variables used in the study.

#### **2.1 Theoretical Review**

The study provides the theories that underpin this current study. The study uses two approaches, namely, agency theory and institutional theory, to achieve the study's objectives.

##### **2.1.1 Agency Theory**

Jensen and Meckling (1976) advances the agency theory to explore asymmetry among principals (shareholders) and agents (management). Agency theory is an agreement between a principal and an agent where the agent acts on behalf of one or more individuals (principals) to conduct some services for them. This concept is supported by the fact that principals (managers) often use third-party experts to keep an eye on their agents (Adams, 1994). According to this theory, the agent's performance is affected by moral hazards and the unfavorable selection of alternative programs (Abdel-Khalik, 1993). According to agency theory, businesses have financial reasons to disclose information about any performance-enhancing initiatives they undertake

(Channar et al., 2015). The theory also stresses the corporate governance codes that allow principals to agree to their rights for transparency to address organizational challenges and achieve effective implementation of programs.

Agency theory throws more light on the development of audit quality and hence, is a valid economic theory of accountability. Furthermore, it states that it is essential to have direct involvement by shareholders firing, managerial compensation, and the threat of takeover to maximize stakeholders' wealth in a company or organization. The supervision, monitoring, and evaluation of activities in an organization are ways of achieving performance by internal auditors (Deumes and Knechel, 2008; Channar et al., 2015). Therefore, this theory emphasizes the internal auditors' capability to observe the activities of management and eradicates agency problems (Panda and Leepsa, 2017). Financial malfeasance in public institutions such as the GPS indicates the failure on the part of the internal auditor to carry out its mandated responsibilities or a shortage of suitably qualified professionals to examine and assess the most pressing issues confronting the organization and its financial information (Channar et al., 2015). Hence, internal audit effectiveness can help reduce financial malfeasance, fraud, or irregularities in the public sector and enhance financial reporting performance (Alzeban, 2020).

### **2.1.2 Institutional Theory**

This research also relies on the institutional theory proposed by Meyer and Rowan (1977), which asserts that an instructions' organizational and control systems tend to kowtow to social prospects (DiMaggio and Powell, 1983). Due to this assertion, this research assumes that corporate control systems are put in place to retort to a series of



controls and compliances requests. Goodwin and Wu (2014) posit that an institution's internal audit functions are intricate and multifaceted in realizing the weakness of an institution. Thus, this theory seems to assist internal auditors in structuring their responsibilities in ensuring social accountability and transparency. The fundamental function is to provide an effective internal audit process (Goodwin and Wu, 2014). The internal auditors' obligations focus on enhancing effective governance in a uniform perspective based on following the institutional theory. As a result, there has to be a closer look at the company's financial reporting to ensure the interests of all parties are protected. Thus, evaluating the roles of internal auditor is a crucial feature of organizational effectiveness at the GPS.

### **2.1.3 Relevance of the Theories**

GPS provides a necessary service to society and is therefore financially self-sufficient. The internal audit is one among the many tools that organizations utilize to boost their efficiency, making the agency theory applicable to this research. By analyzing the dynamics between management and staff, the audit committee may better plan for the institution's future. The institutional theory provides a theoretical lens through which experts can identify and assess factors that promote or hinder the continued existence and effectiveness of institutions. The frequency with which internal audits can be conducted is influenced by the institution's structure. Effective auditing systems in a school district involve cooperation between upper management and the audit division's employees. Researcher-generated considerations are discussed in relation to agency and institutional theories. The perspectives are organized around themes that define the debate at hand, such as internal audit programs on institutional performance (Telewa, 2014). Applying the institutional and agency theories linked to the inquiry



objectives presented in chapter one, this study investigates the key determinants of the efficacy of internal audits in the law enforcement agency (GPS).

## **2.2 Conceptual Review**

### **2.2.1 Definition of Internal Audit**

According to Gyimah et al. (2022), evaluating and advancing risk management, internal control, and governance processes are what set apart the innovative idea of internal audit. The structures and frameworks of risk administration, control, and governance ensure that objectives are met, such as accurate financial reporting, adherence to regulations and procedures, and meeting the ethical and moral expectations placed on an organization and its leaders.

Management's policies and procedures that foster resource accountability fall under the umbrella term "control," while the goals of good governance include things like "creditability," "equitable" service delivery, and "assurance of appropriate behavior" (IIA, 2006). Internal auditing has certainly evolved over the past two or three decades, as Pickett (2005) points out. In the past, internal audits were used to verify the hundreds of weekly monetary transactions recorded in the books. Since institutions operate in a world full of instability, risk management oversight is crucial. Therefore, modern internal audits should shift their focus from simple transaction volume checking to risk management and control (Rudasingwa, 2006). Instead of concentrating on finding mistakes and fraud, it should be used to prevent errors and extortion.

Internal auditing, as defined by Cohen et al. (2010), is a "independent consulting activity and assurance of objectivity" meant to guarantee the enhancement of an organization's worth. By taking a methodical and controlled approach to assessing, detecting, and correcting management risk processes in governance, internal audits help institutions reach their goals. To evaluate and guarantee the appropriateness, efficacy, and efficiency of a corporation's setup, internal auditing is a managerial role that serves as a control (Davidson, Desai, and Gerard, 2013). Internal auditing is defined by Fanning and Piercey (2014) as an independent review position formed by management to review, assess, and evaluate the institution's control systems.

Independent and objective assurance and consultation to enhance and add value to an organization's operations; that's how the IIA defines internal auditing. By methodically and stringently assessing governance procedures, controls, and risk management challenges, internal auditing helps institutions achieve their goals. The auditing industry follows the International Standards for Professional Practice in Internal Auditing. It's important to have an internal audit as part of your internal control systems. It's done internally with the primary goal of growing the business and making things run more smoothly. It has been shown that (Fanning and Piercey, 2014). According to Ali and Owais (2016), the purpose of an internal audit is to ensure that the company's books are in order and that they adhere to all relevant laws, regulations, accounting guidelines, professional standards, and internal rules.

### **2.2.2 Critical Roles of Internal Audit**

The fundamental purpose of an internal audit is to boost the company's worth and enhance its operations (Gyimah et al., 2022). Internal audits are currently relied on by

most institutions to guarantee risk-free procedures and compliant internal control (Demeke and Kaur, 2021). Mihret and Yismaw (2007) state that an internal audit aids businesses in recognizing and evaluating potential challenges to the attainment of their goals. Demeke and Kaur (2021) argue that internal audit contributes to an organization's value by helping to make sure that its risks are properly identified and controlled. This puts the profession at the forefront of risk management (Loum and Biçer, 2021) because it aids in the identification and evaluation of risks inside a company. In addition, the internal audit function aids in controls review and correction, as stated by Mulugeta (2008). Based on this claim from Mulugeta (2008), businesses can evaluate the efficacy and efficiency of their current controls, which may include procedures and policies. As a result of internal audit, an organization can rest assured that its operational, financial reporting, and regulatory compliance goals are being met (COSO, 2013).

### **2.1.3 Factors advancing Internal Audit Effectiveness**

Internal audit effectiveness is defined and explained differently by many writers. According to Cohen and Sayad (2010), audit effectiveness is measured by the quantity and variety of errors that are fixed. Sawyer (1995) agrees with this concept, arguing that auditors' work is futile until faults are remedied and stay corrected. Furthermore, Mihret and Yismaw (2007) define internal audit quality as the degree to which the internal audit office achieves its established goals.

The ability of an internal audit to plan, carry out, and objectively convey beneficial findings is crucial to its effectiveness, as stated by Oladejo et al. (2021). According to the research, a good internal audit involves careful planning, careful execution, and



the timely, objective presentation of findings. Therefore, the quality of the function as assessed by auditees, in this case, managers of audited departments inside the studied organizations, is used as a measure of internal audit effectiveness in the current study (Shatnawi et al., 2021).

The paper evaluates the efficacy of internal auditing based on recent works by scholars such as Alzeban and Gwilliam (2014), Cohen and Sayag (2010), Dellai and Omri (2016), Salehi (2016), Mustika (2015), and Shamki and Alhajri (2017). What follows is a discussion of the key factors that have been established in the literature as being crucial to the success of an internal audit.

### **Independence**

Many different meanings and interpretations of independence exist because there is no universally accepted definition (Wines, 2012). However, for the purposes of this investigation, independence refers to an absence of both mental and physical interference from management at all stages of the auditing procedure. If internal auditors get off to a good start with audit planning but wind up compromising their results, their independence will be compromised. The most important part of this definition is that audits are conducted independently of any management interference. The credibility of internal auditors' reports increases when they are treated as independent. According to Wines (2012), internal auditors' assurance services are only credible and valuable if they are perceived to be objective. A high degree of objectivity, integrity, impartiality, and freedom from issues on conflict of interest are hallmarks of independent internal auditors.



According to the International Standards on Internal Auditing, independence is the chance to avoid interference with the inner review movement's ability to perform inside review responsibilities objectively. The efficiency of the internal auditor can be improved, according to Cohen and Sayag (2010). It creates a more positive work atmosphere for internal auditors and reduces tension between them and their managers. According to research by Cohen and Sayag (2010), the internal auditing function benefits from an external auditor's independence. Internal auditors have strong moral principles and always give their honest assessments. Every auditor needs to be able to execute their job without interference. When internal review isn't autonomous from the management team, it can no longer provide a fresh perspective on issues (Alzeban and Gwilliam, 2014).

The Zhang et al.'s (2019) study takes into account the importance of internal review independence in determining the quality of internal review. In addition, Cohen and Sayag (2010) argue that the independence of internal review inside an organization affects the adequacy of internal review. Alzeban and Gwilliam (2014) examine the effectiveness of internal reviews in Saudi Arabia and conclude that independence of thought (along with "competence of internal review department," "size of internal review department," "relationship between internal and outside auditors," and "management support") is related with internal audit success.

### **Objectivity**

The internal auditing process relies heavily on objectivity (Alzeban, 2020). The effectiveness of an organization can be improved, the risk of fraud or error mitigated, and the institution's strategic goal advanced by employing an independent internal auditor (Aslem et al., 2020). Being dispassionate allows internal auditors to probe

thoroughly and provide quality assurance in the correct manner (Gamayuni, 2018). According to Bravo and Reguera-Alvarado (2018), the financial accounting process's honesty affects the board's impartiality while monitoring management's actions and making sure that the company is properly accounting for its shareholders. Further, Cohen and Sayag (2010) found that an objective corporate culture boosted the efficiency and integrity of the internal auditor. The ability to maintain objectivity under pressure is a prerequisite for internal auditors (Sulub et al., 2020). Each auditor needs to be able to make their own decisions when conducting audits (Prawitt et al., 2009). When internal auditors lose their independence, management no longer benefits from an outsider's point of view (Alzeban and Gwilliam, 2014). The objectivity of internal audits is a factor that Zhang et al. (2019) take into account.

#### **2.1.4 Other Variables**

According to the existing scholarly literature (see Alzeban and Gwilliam, 2014; Gamayuni, 2018; Pickett, 2010), the effectiveness of an internal audit is influenced by factors like management support, the relationship between internal and external auditors, the outsourcing of internal auditors, and the use of technology. These factors are then discussed in the study.

##### **Management Support**

Internal review effectiveness is profoundly impacted by management's commitment to the process. For instance, Mihret and Yismaw (2007) found that the reaction to an audit finding and the commitment to internal quality review were significant factors in determining the effectiveness of internal audits in their case study of internal audit adequacy on the open segment. The internal auditor anticipates that the institution's highest authorities will demand the primary actions to strengthen the internal review

process because internal audit exercises occur in an active management process and more controlled environment (Cohen and Sayag, 2010). According to Mihret and Yismaw (2007), internal audits are more likely to be recognized and valued if they have the backing of upper management. Organizational resources, a dedication to improvement, and clear expressions of inclusive esteem are all indicators of success in an internal audit.

The backing of management is also crucial to the efficacy of an internal audit (Sahali, 2016), making audit proposals an indispensable tool. Institutional management is analogous to a client who purchases internal review services. Therefore, its success depends on management's willingness to implement review suggestions and strengthen internal audits (Mihret and Yismaw, 2007). Unless administration or management is willing to commit to implementing audit findings and suggestions, they will not be very useful.

### **Interaction between Internal and External Auditors**

The interaction between internal and external auditors is addressed in professional standards. Internal auditors are better able to achieve their aims and provide better service to the firm as a result of the standards' insistence on developing a professional working relationship between the respective audit parties. In cases where the external auditor can rely on work carried out by the internal auditor, the external auditor can likely provide a higher-quality audit opinion and possibly one delivered with greater resource efficiency thanks to the information provided by the internal auditor. Audits are more cost-effective, efficient, and effective when suitable cooperation is used, according to academic studies, and management is able to deliver a better public service because of it.



Many studies have found that audit firms working in the public sector in poor countries suffer from a lack of coordination between internal and external auditors (e.g. Gwilliam and El-Nafabi, 2002; Gyimah et al., 2022). The internal auditor is responsible for sharing relevant data with assurance and consulting auditors, both internal and external. To further ensure that all bases are covered and that any necessary rework is kept to a minimum, the chief internal auditor must coordinate their efforts. One of the benefits of an internal audit from the perspective of the association and its external partners is the increased likelihood of cooperation and coordination between internal examiners and external inspectors. Data collected by internal auditors will likely contribute to a more positive audit sentiment, which will be appreciated by external auditors. The efficiency of an internal audit is boosted when an outside auditor has confidence in the results. Studies have found that with the right kind of engagement, audits can be more effective and productive, and administration can provide better services overall.

### **Technology and Audit Process Outsourcing**

In recent years, IT has helped internal auditors enhance the efficiency of auditing processes. Accounting professionals, auditors, financial officers, administrators, and managers can all benefit from increased productivity because to technological advancements, according to studies. The efficiency of an internal audit can be boosted by the incorporation of modern technical tools for data processing and retrieval. A team of internal auditors with expertise in the area being audited can be assembled more quickly through the use of outsourcing. Since outsourced internal auditors don't have to worry about building long-term relationships with the workforce, this also helps keep audits objective by saving money on training and hiring new auditors. It is unclear from the available literature whether outsourcing internal audits improves or



hinders the effectiveness of internal audits. Internal audit outsourcing, according to Davidson et al. (2013), is more professional and impartial than in-house internal audit departments. When an internal audit service provider also offers tax and advisory services to the client, however, the reliance of external auditors on the outsourced internal audit reduces (Desai et al., 2011). Internal outsourcing audits have been shown to increase the efficiency of internal audits and to have a favorable impact on organizational performance by lowering risk and overhead expenses (Prawitt et al., 2012).

### **2.3 Empirical Review**

Because the researcher sought to explore the drivers of the effectiveness of internal audits at GPS, the study presents and analyzes the divergent topics and recommendations relating to the subject area of the research. The empirical research seeks to dwell on the aspect enumerating the significant determinants of internal audit effectiveness in the form of internal auditor's independence and objectivity. Other determinants include management support, the relationship between internal and external auditors, technology, and outsourcing of internal auditors.

For instance, Tackie et al.'s (2016) study in the Decentralized Local Government reports a positive relationship between organizational independence and internal audit effectiveness; however, the study found that top management support does not affect internal audit effectiveness. However, Hailemariam's (2014) study on fifteen (15) public sector offices in Ethiopia reports a statistically significant but positive relationship between management support, competent internal audit staff, and approved internal audit charter availability on internal audit effectiveness. More so,

Ika et al. (2018) find a positive influence of auditor competence, the relationship between internal and external auditors, independence of internal audit organization, and management support on the effectiveness of internal auditors. Misrat and Yismaw (2007) posited that management support had a far-reaching consequence on Internal Audit effectiveness through the willingness to respond to audit findings and displaying the zeal and commitment to strengthening the internal audit function within the organization.

Many researchers, including Awuah et al. (2015), Dellai and Omri (2016), and Zhang et al. (2007), have pointed to the independence of internal auditors as a factor in audit quality, corporate governance, and overall performance. Independent audits have a statistically significant effect on the success of businesses, according to research by Iwasaki (2012). According to research conducted in Saudi Arabia by Alzeban and Gwilliam (2014), the perceived effectiveness of internal audits is positively and significantly influenced by factors such as the independence of internal auditors, the support of management, and the quality of relations between external and internal auditors.

According to research by Arena and Azzone (2009), in Italy, the quality of an internal audit depends on the composition of the internal audit team, the nature of the audit procedures and activities, and the strength of the relationships between departments. Internal Audit Quality, Audit Committee, Competence of Internal Audit Team, Independence of Internal Audit, and Management Support for Internal Auditing are cited as the five most important aspects of an effective internal audit in Greece by George, Theofanis, and Konstantino (2015).

Cohen and Sayag's (2010) research in Israel demonstrates that the key predictors of internal audit effectiveness are support from upper management and a degree of organizational independence. Dejnaronk et al. (2015) in Thailand discover that the efficacy of the internal audit function is influenced favorably by the use of a risk-based audit strategy, compliance of standards, and quality assurance and improvement program.

Furthermore, Ahmad et al. (2016) investigate both internal and external factors that affect the efficiency of internal audit departments in Malaysian municipalities. The findings of Ahmad et al. (2016) show that the internal audit is more effective when there is autonomy, competence, professionalism, cooperation between internal and external auditors, and the backing of upper management. According to the findings of another Tunisian study conducted by Dellai and Omri (2016), the objectivity, independence, managerial support, and industry of the organization all play a role in how effective internal audits are.

Additionally, Salehi's (2016) research discovered that internal audit effectiveness is affected by factors such as the competency of internal audit staff, the size of the internal audit department, communications between internal and external auditors, management's support for the internal audit department, and independent (outsourced) internal audit. Internal audit effectiveness is positively impacted by auditors' objectivity and competency, according to research conducted in Ghana by Awuah et al. (2015). On the other hand, they discovered a negative correlation between IT and the success of internal audits.



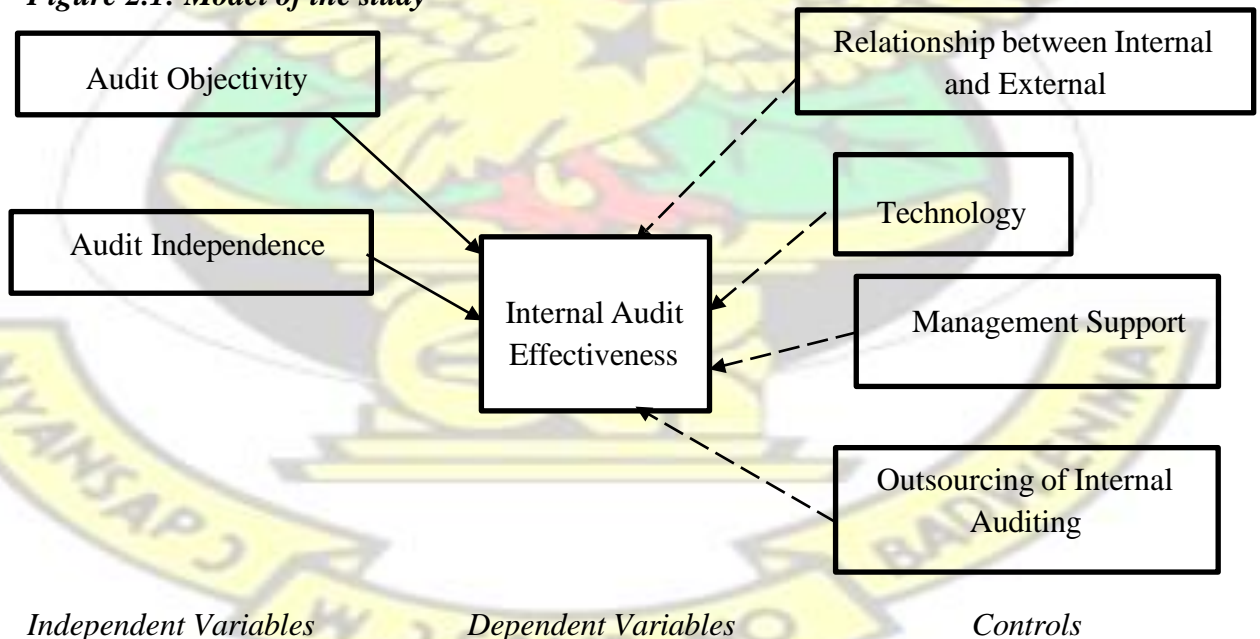
Furthermore, Onumah and Yao Krah (2012) note that in Ghana, internal audit performance is hampered by a lack of professional proficiency, management support, and weak audit committees. Furthermore, Tackie et al. (2016) discovered a statistically significant positive link between professional ability, organizational independence, and career advancement. However, the efficiency of an internal audit is unaffected by the top management.

The above few studies show inconsistent outcomes or findings. This current research relies on prior researchers' key determinants of internal auditing to examine whether the independence, objectivity, and other determinants of internal auditors affect internal audit effectiveness at GPS.

## 2.4 Conceptual Framework

Figure 2.1 shows the framework diagram of the variables of the study.

**Figure 2.1: Model of the study**





Relying on agency and institutional theories, this study extends knowledge by exploring whether independence, objectivity, and other drivers (management support, technology, the interaction between external and internal auditors, and outsourcing of internal audit) affect the effectiveness of internal audit at GPS. Following the framework style of Alzeban and Gwilliam (2014), the research adapts six key determinants (including controls) or internal auditing factors to examine the GPS's internal audit effectiveness in Ghana.

The dependent variable is internal audit effectiveness. Audit objectivity and independence are the control variables. The control variables are management support, the relationship between internal and external auditors, information technology, and outsourcing of auditors. The variables are used by prior, current researchers to examine the effectiveness of internal audit (Alzeban and Gwilliam, 2014; Brandon, 2010; Davidson et al., 2013; Gamayuni, 2018; Pickett, 2010; Salehi, 2016; and Sulub et al., 2020).

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

The section provides the methods used to achieve the research objectives. The research investigates whether the audit objectivity and independence influence internal audits effectiveness at Ghana Police Service (GPS). The chapter discusses the following: research design, study's population, sample and sampling technique, sources of data, and analysis. Furthermore, the econometric models and the measures of the study's variables. The study uses quantitative analytical approaches such as descriptive (percentages, mean, and standard deviation) and inferential statistics such as Cronbach Alpha, Variance Inflation Factor (VIF), Spearman and Pearson Correlations, and Ordinary Least Square (OLS) to achieve the study's objectives.

#### **3.1 Research Design**

The study employs explanatory and descriptive research to conduct the present investigation. The reason for using the explanatory and descriptive analysis is to investigate the nexus between internal auditor's objectivity, independence, and other determinants on internal audit effectiveness at GPS. Regarding the design strategy, the research follows Alzeban (2020), which uses an experimental approach to establish relationships between dependent, independent, and control variables. The dependent variable is internal audit effectiveness for the study, and the independent variables are audit objectivity and independence. The control variables are technology, management support, the relationship between internal and external auditors, and outsourcing of internal audits). For the research approach, the study uses a quantitative design. Saunders, Lewis, and Thornhill (2009) argue that quantitative

research seeks to ascertain the nexus between the independent and dependent factors. Again, the study uses descriptive and inferential statistics that are more reliable and objective to generalize findings on the relationships among independence, the objectivity of auditors, and the effectiveness of internal audits at GPS. Additionally, this research is quantitative study because it uses numerical data using descriptive and inferential statistics. The inferential and descriptive statistics include the frequencies, percentages, standard deviation, mean, Pearson Correlation and Variance Inflation Factor (VIF), Cronbach Alpha, and OLS Regressions. Finally, the time dimension of this study adopts a cross-sectional survey because the survey collects once (De Vaus, 2013). De Vaus (2013) contends that cross-sectional dimension helps collect responses from samples with similar features, which speed in collecting data, easy comparison, and statistical analysis.

### **3.2 Population**

Saunders et al. (2009) define a population as the entire collection of elements about inferences. GPS has twenty (20) departments, and this research focuses on only one department to achieve the study's objectives. Thus, the target population consists of three hundred and seventy-five (375) across the sixteen regions in Ghana. As stated earlier, the study focuses on one department (that is, finance department) involved in auditing procedures in the agencies.

### **3.3 Sample And Sampling Technique**

Bryman and Bell (2015) defined a sample as a representation of the whole population, and the current research cannot explore the entire population to accurately characterize and generalize its findings. On the other hand, sampling refers to the



technique used in selecting a proportionate representation from a total sample size (Ghauri et al., 2020). The study uses De Vaus's (2002) sample formula to the sample size for the survey, and DeVaus's (2002) formula is equal to:

Where N represents the total population, n is the sample size, and e represents margin error. Using margin of error (e) of 5%, the total population at GPS (N = 375), the n (sample size) equal to:

$$\text{—————} = 193.5$$

Thus, the approximate sample for the study is 194 respondents. This study uses a convenience sampling method to select the respondents using an online survey. Also, the study seeks the diverse views of respondents from various regional divisions at GPS. Google online survey was developed and send to the selected department for them to answer the questions. Two hundred and seventeen (217) responded to the survey; however, some of the twenty-one (21) were incomplete, and another late respondents comprising of three (3) were removed resulting to 194 usable samples equal to the approximate calculated sample.

### **3.4 Data Collection**

The research employs primary data to collect responses. The study uses online questionnaires to collect the primary responses. The questionnaire is deemed an advantageous method for the collection of preliminary data. The questionnaire has the advantage of being a low-cost option and allows research participants to think about questions. Also, the questionnaire enables the researcher to get adequate and accurate information from respondents to assess critical drivers of internal audit effectiveness



at GPS. The questionnaire instrument uses different scales, including a five-point Likert scale, allowing respondents to decide between strongly disagree or strongly agree. The questionnaire is fourfold. The first section contains questions on the sample profile, and the second section shows the factors that affect internal audit effectiveness (independent and control variables). The third section measures internal audit effectiveness (dependent variables), and the last section measures the challenges of internal audit effectiveness. The key source for individual questionnaire items is from the review of extant literature and questions used by prior researchers such as Alzeban and Gwilliam (2014), Brandon (2010), Cohen and Sayad (2010), Davidson et al. (2013), Gamayuni (2018), Pickett (2010), and Sulub et al. (2020).

### **3.5 Data Analysis**

The study enters the responses from the respondents into STATA software version 15 to analyze the data. Depending on the study's objectives, the statistical techniques such as percentages, mean and standard deviation, Pearson Correlation, Cronbach Alpha and VIF, and OLS models are all employed in the analysis. For the discussion of the study, the findings of the statistical analysis are presented in numbered Tables.

### **3.6 Models And Measures**

The study uses OLS model to estimate the relationship between objectivity and independence, and the effectiveness of internal audit effectiveness. Also, the study controls technology, management support, the interaction between external and internal auditors, and outsourcing of internal audits. Prior researchers almost used the variables to examine the effectiveness of internal of institutions (see Alzeban and

Gwilliam, 2014; Brandon, 2010; Cohen and Sayad, 2010; Davidson et al., 2013; Gamayuni, 2018; Pickett, 2010; and Sulub et al., 2020).

The econometric models are as follows: model 1 shows the relationship between independent variables (audit's independence and objectivity) and dependent variables (internal audit effectiveness), excluding the control indicators. Model 2 contains the control variables. Thus the model provides the network relationship between independent variables (audit's independence and objectivity), dependent variable (internal audit effectiveness), and the control variables (technology, management support, the relationship between internal and external auditors, and outsourcing of internal audits).

$$\text{Internal Audit Effectiveness} = \delta_0 + \beta_1 \text{Independence} + \delta_2 \text{Objectivity} + e \quad (1)$$

$$\begin{aligned} \text{Internal Audit Effectiveness} = & \delta_0 + \delta_1 \text{Independence} + \delta_2 \text{Objectivity} + \\ & \delta_3 \text{Management Support} + \delta_4 \text{Technology} + \\ & \delta_5 \text{Relationship between internal and external} \\ & \text{auditors} + \delta_6 \text{Audit Outsourcing} + e \quad (2) \end{aligned}$$

### 3.6.1 Measurement of Variables

The study adapts extant researches using a 5-point scaling indicator where one corresponds to strongly disagree, and five strongly agrees (Alzeban and Gwilliam, 2014; Brandon, 2010; Cohen and Sayad, 2010; Davidson et al., 2013; Gamayuni, 2018; Pickett, 2010; and Sulub et al., 2020).

#### *Dependent Variable*

It is not simple to evaluate internal audit effectiveness at GPS. Thus, the researcher relied on the current literature of Salehi (2016), and Shamki and Alhajri (2017) to

operationalize internal audit effectiveness (IAE). However, the researcher adapted six (6) perceived constructs or survey items used by Salehi (2016) to assess the effectiveness of internal audits. Table 3.1 provides the measures for the internal audit effectiveness.

**Table 3.1: Internal Audit Effectiveness Measures**

	<b>Indicators</b>	<b>Source</b>
1	Internal auditors determine the yearly audit plan for the company.	Salehi (2016)
2	The internal audit's financial and other areas reviewed and audited are significant to the company.	Salehi (2016)
2	Internal auditors can review and audit all units or departments and company matters.	Dellai and Omri (2016)
4	The internal audit responses on matters raised in the audit process are submitted to management in writing and are all-inclusive and relevant.	Salehi (2016)
5	Internal audit staff regularly follow-up issues raised and scrutinize actions taken to correct the issues raised.	Mustika (2015)
6	Internal auditors perform other activities like evolving financial processes and conducting financial and economic audits.	Shamki and Alhajri (2017)



### ***Independent Variables***

The first independent variable, audit objectivity, is measured using seven (7) survey items or indicators by Brandon (2010), Gamayuni (2018), and Pickett (2010). These indicators are unbiased attitude, impartial attitude, and avoiding conflict of interest.

Regarding the audit independence, nine (9) indicators used by Alzeban and Gwilliam (2014) and Cohen and Sayag (2010) are adapted for the study. These perceived measures are independence, the performance of non-audit activities levels; removal of the head of internal auditing; direct contact with the board and senior management interference conflicts of interest; and appointment and easy access to information from all departments and employees.

Table 3.2 provides the measures for the independent variables (independence and objectivity).

**Table 3.2: Independence and Objectivity Measures**

S/N	Indicators	Sources
<b><i>Independence Measures</i></b>		
1	Internal auditors are independent in performing their professional duties and responsibilities.	Cohen and Sayag (2010)
2	The HOD of internal audit reports to authorities within the company, giving the internal audit chance to fulfill their obligations.	
3	The HOD of internal audit directly links the CEO, top officers, or board of directors of the company.	

- 
- |   |                                                                                                                  |                             |
|---|------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 4 | The internal audit unit directly links with top managers other than the finance officer.                         | Alzeban and Gwilliam (2014) |
| 5 | No conflict of interest exists during the activities of the internal audit.                                      |                             |
| 6 | Management of the company does not interfere with the works of internal audits.                                  |                             |
| 7 | The staff in the internal audit unit have unrestricted access to all sections or units and staff in the company. |                             |
| 8 | The head approves the employment and replacement of the head of internal audit.                                  |                             |
| 9 | The internal audit staff does not perform other functions that are not auditing issues.                          |                             |

#### ***Objectivity Measures***

- |   |                                                                                                                   |                 |
|---|-------------------------------------------------------------------------------------------------------------------|-----------------|
| 1 | The institution's internal auditor(s) is/are honest in the institution's operation.                               |                 |
| 2 | The internal auditors disclose all material facts.                                                                | Brandon (2010)  |
| 3 | The internal auditors are careful in using and maintaining all information obtained in the audit.                 | Gamayuni (2018) |
| 4 | The internal auditors do not accept bribes and have unbiased attitudes.                                           | Pickett (2010)  |
| 5 | The internal auditors do not use information obtained from the institutions for their benefit.                    |                 |
| 6 | The auditor that has worked in the auditee office is not involved in the examination of the audit procedures      |                 |
| 7 | The internal auditors do not participate in activities in the institution that may lead to conflicts of interest. |                 |
- 

#### ***Control Variables***

Table 3.3 provides the summary indicators for the control variables. The study adopts the six (6) measures of Cohen and Sayad (2010) and Gamayuni (2018) to measure the management's support. They include the following: supporting internal audit to perform its duties and responsibilities; involvement in the internal audit plan; reports on the work of the internal audit team to the management; management's response to internal audit reports; and the resources of the internal audit unit.

Regarding the relationship between internal and external auditors, the study also adapts nine (9) indicators from the studies of Alzeban and Gwilliam, 2014. The specific indicators are attitude towards external auditors; coordination, including discussing mutual interests; discussion of the audit plan; consultation among internal and external auditors; external auditors' reliance on the work of the internal audit; frequency of meetings; sharing working papers; and management's promotion of the relationship between internal and external auditors.

**Table 3.3: Control Measures**

S/N	Indicators	Sources
<b><i>Management Support Measures</i></b>		
1	Top managers support internal audit staff operations and activities in the company.	Cohen and Sayag (2010)
2	The internal audit unit has enough budget or funds to successfully carry out its operations and activities.	
3	Its internal audit unit staff is adequate to successfully carry out its operations and activities.	



---

4 Top managers' response to reports done by the internal audit is reasonable. Gamayuni (2018)

5 Internal auditors give top managers an accurate and fair view of the company operations and provide appropriate suggestions and recommendations.

6 Top managers are part of the internal audit processes.

***Relationship between Internal and External Auditors Measures***

1 The external auditors are cordial and support the activities of internal auditors.

2 There is a good relationship between the internal and external auditors. Alzeban and Gwilliam (2014)

3 The internal auditors are given a chance by external auditors to explain specific issues to them.

4 There is timely consultation of operations between internal and external auditors, and also there is a mutual interest among them.

5 Internal auditors discuss the plans of external auditors.

6 External auditors rely upon the reports and the works of internal auditors.

7 Internal and external auditors share working papers.

8 Internal and external auditors have meetings regularly.  
The company's top managers help to ensure practical cordial cooperation among the external and internal auditors.

---

Recently, information technology has assisted internal auditors in improving the effectiveness of audit procedures. Research shows that technology enhances the

efficiency of accountants, auditors, financial officers, administrators, and managers of institutions. Thus, the researcher control technology, which is a dummy variable. If internal audit uses ICT or computers to process and retrieve information for their operations equals one (1), zero (0) otherwise. Finally, the outsourcing of auditors for the company is also a dummy variable. A value of one if GPS uses outsourced internal audit services and zero (0) otherwise.

### **3.7 Validity and Reliability**

The research questions are derived from an in-depth review of the literature in the subject area. Additionally, descriptive, interpretative, and theory validity are considered. The extent to which an empirical measure replicates the meaning of the concepts under investigation (Babbie, 2013). De Vaus (2002) defines validity as the degree to which a measurement corresponds to the concept it is intended to measure. According to De Vaus (2002), validity is the assurance that a specific result demonstrates what it claims to demonstrate, that is, its similarity to reality. Reliability is proof of the uniformity of the outcomes obtained with a given instrument. It is the guarantee that empirical findings can be repeated.

A study is reliable if or when it can be repeated under the same conditions, with the same population, and using the same methods and produces the same results. Reliability indicates the probability that a given measurement technique will produce the same identical description of a given phenomenon on multiple occasions ((De Vaus, 2002). The essence of reliability is the reduction of errors and biases (Bryman and Bell, 2015).

Using Cronbach Alpha analysis, the internal consistency reliability of the study constructs is determined. Cronbach Alpha, Variance Inflation Factor (VIF), and pairwise tests (Pearson Correlation) are examined to determine multicollinearity between explanatory variables in regression models.

The Cronbach reliability test for queries regarding the factors that influence audits (independent variables) and the effectiveness of internal auditing (dependent variable) is greater than 0.70. Acceptable Cronbach's Alpha values exceed 0.700 (Cohen and Sayag, 2010). Consequently, the study minimizes bias or error in the dependent and independent variable measures.

In addition, the study concludes that a variable is affected by multicollinearity if the value of the VIF exceeds 10. In addition, multicollinearity exists between two explanatory variables if the Pearson correlation matrix is greater than or equal to 0.70. According to Saunders et al. (2015), if the tolerance level on the sample data variable is less than 2, there is no collinearity and the data is valid and trustworthy. When the VIF is less than 4, Saunders et al. (2015) conclude that information is accurate and trustworthy. And neither multicollinearity nor collinearity poses a problem. As a result, the study's data are valid and trustworthy, as the VIF for all variables is less than four. All indicator tolerance levels are less than four, and all correlation coefficient r-values are less than 0.70. The fourth chapter discusses Cronbach's alpha, the Pearson correlation matrix, and the variance inflation factor.



### 3.8 Profile of Ghana Police Service

The Inspector General of Police [IGP], who is responsible for carrying out general daily oversight and supervision over the Management and Operation of the Police Service, is the head of the Police Service, a single cohesive unit organized on a national scale with a unified command. The Police Service, which has a relatively lean yet adaptable organizational structure, always strives to fulfill the Service's goal.

The service's primary duties are as follows: the defense of people and property, crime detection and prevention, capture and prosecution of criminals, keeping the peace and maintaining order, and all laws, decrees, and other rules that directly pertain to it are enforced.

The Vision of the GPS is “to be a world-class Police Service capable of delivering Planned, Democratic, Protective and Peaceful services up to standards of international best practice, and the mission is —to deliver services in Crime Prevention Detection, Apprehension and Prosecution of offenders consistent with the expectations of Ghana stakeholders for Maximum Protection, Safe, Secure and Peaceful Communities.

Some of the values of GPS is to honest in activities, value human life, firm but fair, be impartial, work in partnership with the community, respect the dignity of each individual and render service with courtesy and civility, be disciplined, be confidential, be respectful, open and accountable to the community, and serve with excellence.

The below is the Organogram of GPS:



## **CHAPTER FOUR**

### **RESULTS AND DISCUSSIONS**

#### **4.0 Introduction**

The chapter discusses the results in line with the research objectives. First, the section discusses the demographic characteristics of the respondents. Second, the chapter discusses the results for the descriptive statistics of the model variables of the study. Third, the study examines the effects of the correlations and other inferential statistics to ascertain whether the problem of multicollinearity or collinearity exists, and the variables are reliable and valid for discussion. Fourth, the study presents the Ordinary Least Square (OLS) regression results for discussion, and finally, the chapter presents the robustness test results using logit regression to confirm the OLS results.

#### **4.1 Demographics Statistics**

This section presents respondents' background, such as gender, education, professional qualification, department, and working experiences. The following subsection presents and discusses each of the demographics of the responses or sample of the study.

##### **4.1.1 Gender**

Regarding the 90 responses or sample, males are 53, representing approximately 59%, and females are 37, representing 41%. The result suggests that the males dominate at GPS than the females. Table 4.1 presents the results for the descriptive statistics for gender.



**Table 4.1: Gender**

	Frequency	Percent	Cumulative Percent
Male	102	53	53
Female	92	47	100
Total	194	100	

*Source: Field Survey (2023)*

#### 4.1.2 Age

The result in Table 4.2 shows that most of the respondents are within age ranging from 40 to 49 years (n = 73, 38%); followed by an age group of 30 to 39 years (n = 58, 30%); age group of above 50 years (n = 33, 17%); and a minority age group of between 18-29 (15% of the total sample). The result suggests that GPS have a young team over the aging workforce.

**Table 4.2: Age of Respondents**

Years	Frequency	Percent	Cumulative Percent
18 – 29	30	15	15
30 – 39	58	30	45
40 – 49	73	38	83
Above 50	33	17	100
Total	194	100	

*Source: Field Survey (2023)*

#### 4.1.3 Education

The result in Table 4.3 shows that the majority (n = 98, 51%) of the sample working at GPS have diploma, followed by 55 Bachelor's holders representing 28%. 39 of the respondents representing 20% have Master's certificate, and only 2 have Doctorate degrees representing 1%. These results indicate that the respondents working at the GPS are somehow educated since 49% have Bachelor's, Master's, and Doctorate Degrees.

**Table 4.3: Education**

	Frequency	Percent	Cumulative Percent
Diploma/HND	98	51	51
Bachelor's Degree	55	28	79
Master's Degree	39	20	99
Doctorate Degree	2	1	100
Total	194	100	

*Source: Field Survey (2023)*

#### 4.1.4 Professional Qualification

Table 4.4 presents the statistics for the respondents' professional qualification results. Surprisingly, most of the respondents (n = 163, 84%) did not respond to the survey question on professional qualification. This situation suggests that they may not have a professional qualification, and the study considers them as none. For the remaining thirty-one (31) respondents, twenty (20) are members of the Institute of Chartered Accountant, Ghana (ICAG), and seven (7) are associates each of the Association of Certified Accountants (ACCA), and four (4) are Certified Professional Internal Auditors (CPIA).

**Table 4.4: Professional Qualification**

	Frequency	Percent	Cumulative Percent
ICAG	20	10	10
ACCA	7	4	14
CPIA	4	2	16
None	163	84	100
Total	194	100	

*Source: Field Survey (2023)*

#### 4.1.5 Department

In terms of the departments, 132 respondents representing 68%, work at the finance and accounting units. This result is followed by those working at the stores or logistics unit ( $n = 35$ , 18%). The audit department's staff are 27, representing 14% at GPS. Table 4.5 presents the results for the descriptive statistics for the department.

**Table 4.5: Department**

	Frequency	Percent	Cumulative Percent
Finance	132	68	68
Audit	27	14	82
Logistics	35	18	100
Total	194	100	

*Source: Field Survey (2023)*

#### 4.1.6 Working Experience

Table 4.6 shows the final demographic analysis for the working experience of respondents at GPS. The result shows that most ( $n = 88$ , 44%) of the respondents have worked at GPS within 11 to 15 years, followed by 73 with working experience between 6 to 10 years, representing 38%. Seventeen of the sample representing 9%, have working experiences below five years. Also, 11 respondents representing 6%, have working experiences within 16 to 20 years, and only five have worked above 20 years, representing 3%.

**Table 4.6: Working Experience**

Years	Frequency	Percent	Cumulative Percent
Below 5	17	9	9
6 – 10	73	38	47
11 – 15	88	44	91
16 – 20	11	6	97
Above 20	5	3	100
Total	194	100	



## 4.2 Descriptive Statistics of Variables

Table 4.7 shows the descriptive statistics of the composite values of the independent and control variables of the study. As stated earlier in chapter three, the study uses a 5-point scaling indicator where one corresponds to strongly disagree, and five strongly agree.

**Table 4.7: Statistics of Variables (N = 194)**

	Mean	SD	Min	Max
Independence	4.171	0.726	1	5
Objectivity	4.114	0.711	1	5
Management Support	4.067	0.794	1	5
Technology	0.856	0.353	0	1
Relationship between Internal and External Auditors	3.742	0.708	1	5
Audit Outsourcing	0.389	0.490	0	1

*Source: Field Survey (2023)*

From Table 4.7, the result indicates that the respondents agree (mean = 4.171, SD = 0.725) that the internal auditors are independent at GPS. The result implies that the respondents agree that internal auditors are independent in performing their professional duties and responsibilities at GPS. Also, the head of the internal audit unit reports directly to top management, authorities, and top stakeholders without conflicting interests. Further, top managers do not interfere with internal audits, and staff in the internal audit unit have unrestricted access to all sections or units and staff at GPS. Moreover, the result shows that the respondents agree (mean = 4.114, SD = 0.711) that the internal auditors are objective in their obligations at GPS. The result suggests that GPS's internal auditor is honest and discloses all material facts that do

not conflict with their obligations. Again, the internal auditors do not; (1) accept bribes and have unbiased attitudes, (2) use information obtained from the divisions for their benefit, and (3) participate in activities in the institution that may lead to conflicts of interest.

In terms of the management support, the result shows that the respondents also agree (mean = 4.067, SD = 0.794) the internal auditors at GPS receive the necessary support from top management for their operations. Again, there is an adequate staff at the internal audit unit, and the audit unit has enough budget to carry out its operations and activities successfully. In addition, top managers' response to reports done by the internal audit is reasonable, and internal auditors also give top managers an accurate and fair view of the operations and provide appropriate suggestions and recommendations at GPS. Regarding technology usage, the result (mean = 0.856) suggests that approximately 86% of the respondent agree that the internal audit unit uses information technology devices to operate in GPS. However, the mean of 0.389 for the outsource variable shows that GPS does not outsource external auditors or third-party providers to do their internal audit operations. For the relationship between the external and internal auditors, the result (mean = 3.742, SD = 0.708) shows that the respondents somehow agree that there is a reasonable relationship between the external and internal auditors. The result also indicates that the internal auditors are given a chance by external auditors to explain specific issues to them, and there is timely consultation of operations among external and internal auditors. Lastly, the internal auditor discusses the plans and shares working papers with external auditors, and the external auditors rely upon the reports and the works of internal auditors.

### 4.3 Correlations and Multicollinearity Tests

The section tests the Cronbach Alpha, Variance Inflation Factor (VIF), and pair-wise tests (Pearson and Spearman Correlations) to check multicollinearity between the explanatory variables in the regression models.

#### 4.3.1 Correlation

Table 4.8 shows the Spearman and Pearson correlation tests results. Saunders et al. (2015) assert that there is multicollinearity between two explanatory variables if the r-value of Pearson or Spearman correlation matrix is more than 0.70. From Table 4.8, the highest r-value for Spearman's correlation is 0.612 between management support and the nexus between external and internal auditors. This result suggests near multicollinearity; however, none of the r-values exceeded the threshold values greater than 70% (r-value < 0.70), indicating no multicollinearity problem.



**Table 4.8. Spearman and Pearson Correlations (N = 194)**

Variable	1.	2.	3.	4.	5.	6.
1. Objectivity	1.0000	0.1542	0.3502*	0.3337*	0.0799**	0.2264*
2. Independence	0.213**	1.0000	0.4898*	0.4565*	0.3324*	-0.3585*
3. Relationship between internal and external auditors	0.322***	0.528***	1.0000	0.5088*	0.1797*	-0.3126*
4. Management Support	0.189**	0.519***	0.621***	1.0000	0.4898**	-0.4490**
5. Technology	0.121**	0.312***	0.248**	0.497***	1.0000	-0.4601**
6. Audit Outsourcing	-0.204**	-0.478***	-0.427***	-0.459***	-0.460***	1.0000

Key: The shaded region are the r-values for the Pearson correlation test.

Significant levels: \*\*\* p-value < 0.01

\*\* p-value < 0.05

\* p-value < 0.1

### 4.3.2 Cronbach Alpha

The Cronbach reliability test for the questions on factors that affect audit (independent variables) and the effectiveness of internal auditing (dependent variable) is more significant than 0.70. According to Cohen and Sayag (2010), Cronbach's Alpha value greater than 0.700 is very acceptable. From Table 4.9, the composite measure for objectivity ( $\alpha = 0.8706$ ), independence ( $\alpha = 0.7710$ ), relationship between internal and external auditors ( $\alpha = 0.7849$ ), management support ( $\alpha = 0.7499$ ), technology ( $\alpha = 0.8228$ ), outsourcing ( $\alpha = 0.8115$ ), and the dependent variable, internal audit effectiveness ( $\alpha = 0.7651$ ) record Cronbach Alpha ( $\alpha$ ) greater than 0.70. Thus, the model variables are reliable and valid used to achieve the study's objectives.

**Table 4.9: Cronbach Alpha**

	Obs	Alpha ( $\alpha$ )
Independence	194	0.7710
Objectivity	194	0.8706
Management Support	194	0.7499
Technology	194	0.8228
Relationship between Internal and External Auditors	194	0.7849
Audit Outsourcing	194	0.8115
Internal Audit Effectiveness	194	0.7651
Test scale		0.8251

*Source: Field Survey (2023)*

### 4.3.3 Variance Inflation Factor (VIF)

Variance Inflation Factor is another indicator to confirm the reliability and validity of the variables used for the study. Saunders et al. (2015) posit that if the tolerance level

on the sample data variable is less than 2, there is no collinearity and shows that the data is valid and reliable. Saunders et al. (2015) also conclude that response is accurate and reliable when the VIF is less than 4. From Table 4.10, the study reports a mean VIF of 1.932. All the variables VIF is less than 4, indicating that the independent variables are valid and can be used to predict internal audit effectiveness using the regression models. The following section presents the regression results for discussion.

**Table 4.10: Variance Inflation Factor (VIF)**

	VIF	1/VIF
Independence	2.27	0.472
Objectivity	1.12	0.970
Management Support	1.30	0.972
Technology	1.69	0.585
Relationship between Internal and External Auditors	3.82	0.259
Audit Outsourcing	1.39	0.713
Mean VIF	1.932	

*Source: Field Survey (2023)*

## 4.4 Regression Results

### 4.4.1 Model Results

The study uses the Ordinary Least Square (OLS) regression analysis to examine the nexus between objectivity, independence, and internal audit effectiveness at GPS. Table 4.11 and Table 4.12 shows the regression results. The results for Model 2 in Table 4.12 record a high R-squared value of 0.6451, and the probability of models significance is less than 1% ( $p = 0.0000$ ). These results show a minor variation of 35% of other variables not included in the regression models. However, Model 1 without controls variables has a low R-squared of 0.3546, but the model significant



probability value is less than 1% ( $p = 0.0000$ ). Also, the models' significance model has some relevant explanatory power that determines the factors that predict internal audit effectiveness at GPS.

**Table 4.11: Regression results (without control variables)**

Variable	Coef. ( $\beta$ )	SE	T	p-value
Independence	0.645	0.077	8.377	0.000
Objectivity	0.151	0.093	1.62	0.214
_Constant	0.509	0.422	1.21	0.310
N	194			
Prob > F	0.000			
R-squared	0.3546			
Adjusted R-squared	0.3439			

*Source: Field Survey (2023)*

**Table 4.12: Regression results (with control variables)**

Variable	Coef. ( $\beta$ )	SE	t	p-value
Independence	0.291	0.083	3.51	0.000
Objectivity	0.152	0.110	1.38	0.119
Management Support	0.529	0.130	4.07	0.000
Technology	0.402	0.181	2.22	0.033
Relationship between internal and external auditors	-0.215	0.140	-1.54	0.087
Audit Outsourcing	-0.341	0.116	-2.93	0.004
_Constant	0.720	0.429	1.68	0.106
N	90			
Prob > F	0.000			
R-squared	0.6451			
Adjusted R-squared	0.6210			

*Source: Field Survey (2023)*

In Model 1 that excludes the control variables, the result shows that objectivity ( $\beta = 0.151$ ,  $p\text{-value} = 0.093$ ) does not influence internal audit effectiveness. However, the internal auditor's independence contributes to internal audit effectiveness ( $\beta = 0.645$ ,  $p\text{-value} = 0.000$ ) at GPS. Including the control variables, we report similar results that internal auditor's independence ( $\beta = 0.291$ ,  $p\text{-value} = 0.000$ ) affects internal audit effectiveness, but not the objectivity of the internal auditor ( $\beta = 0.152$ ,  $p\text{-value} = 0.119$ ). Also, management support ( $\beta = 0.529$ ,  $p\text{-value} = 0.000$ ), and the use of information technology ( $\beta = 0.402$ ,  $p\text{-value} = 0.033$ ) increases internal audit effectiveness at GPS. Outsourcing ( $\beta = -0.341$ ,  $p\text{-value} = 0.004$ ), on the contrary, rather decreases effectiveness of internal audit, and relation between external and internal auditors ( $\beta = -0.215$ ,  $p\text{-value} = 0.087$ ) also decreases the effectiveness of internal audit, but insignificant at 5%.

#### **4.4.2 Discussion of Regression Results**

##### **Independence and Internal audit effectiveness**

Returning to Table 4.12, the coefficient for independence is positive ( $\beta = 0.291$ ) and significant at 1% probability level ( $p = 0.000$ ). The implication is that there is a 29% increment of internal audit effectiveness if internal auditors are independent. Henceforth, the study concludes that internal auditors' independence positively relates to internal audit effectiveness or quality at GPS. The result agrees with extant literature that found a positive relationship (Ahmad et al., 2016; Alzeban and Gwilliam, 2014; George et al., 2015; Tackie et al., 2016; Iwasaki, 2012) between audit independence and effectiveness of the internal audit. Therefore, internal auditors' independence in performing their obligations increases internal audit effectiveness. Also, suppose the head of the internal audit unit reports directly to top

management without unrestricted access to information and conflicting interests to support internal audit effectiveness at GPS.

### **Objectivity and Internal audit effectiveness**

In terms of objectivity, the OLS regression reports a positive coefficient ( $\beta = 0.152$ ) but not significant at 5% probability level ( $p = 0.119$ ). The study implies that internal auditors' objectivity does not affect internal audit effectiveness at GPS. The result disagrees with extant literature that found a positive relationship (Awual et al., 2015; Dellai and Omri, 2016; Gamayuni, 2018; and Zhang et al., 2007).

Regarding the management support, the study record a significant positive relationship ( $\beta = 0.529$ ,  $p\text{-value} = 0.000$ ), indicating that when internal auditors receive the necessary support in terms of logistics, enough budgets or funds, adequate staff, and prompt responses from top management increases internal audit effectiveness at GPS. This result disagrees with Tackie et al. (2016) that report an inverse relationship between management support and internal audit effectiveness. However, the result agrees with the studies of Hailemariam et al. (2014), Misrat and Yismaw (2007), Ahmad et al. (2016), Alzeban and Gwilliam (2014), and George et al. (2015) that report that adequate support from top management to internal auditors enhances internal audit effectiveness.

For the technology variable, the result also shows a significant positive relationship ( $\beta = 0.402$ ,  $p\text{-value} = 0.033$ ) with internal audit effectiveness, indicating that using technology devices or information at the internal department increases internal audit



effectiveness. The result disagrees with Awuah et al.'s (2015) study that reports an inverse relationship between technology and internal audit effectiveness.

Moreover, the coefficient for the relationship between internal and external auditors ( $\beta = -0.215$ ) and insignificant at 5% probability level ( $p > 0.05$ ) indicates that whether there is a good or bad interaction between the internal and external auditors does not influence internal audit effectiveness at GPS. The result disagrees with Alzeban and Gwilliam (2014) that support that having a cordial relationship between internal and external auditors positively affects the quality or effectiveness of internal audits at an institution. However, the study reports a significant negative coefficient for audit outsourcing ( $\beta = -0.341$ ,  $p\text{-value} = 0.004$ ). The implication is that suppose GPS outsources its internal audit duties or obligations to outsource external auditors or third-party providers will decrease internal audit effectiveness. This finding disagrees with Saleli's (2016) study that reports a significant positive nexus between audit outsourcing and internal audit effectiveness.

This section answers the last research questions to explore the challenges affecting the internal audit effectiveness at GPS. Table 4.13 presents the results. Respondents were given six challenges of internal audit effectiveness for them to indicate the extent to which they agree using five-point Likert scales ranging from 5-strongly agree to 1-strongly disagree. Based on the average scores, the respondents rank poor condition of service (mean = 4.011, SD = 1.107) as the critical challenge facing the implementation of an effective or quality internal audit at GPS. Secondly, the respondents agree that most accounting, finance, or audit staffs at GPS are not familiar with international auditing standards such as International Public Sector

Accounting Standards (IPSAS), International Financial Reporting Standard (IFRS), and other applicable policies for internal audit effectiveness.

However, the respondents were unsure whether there was a lack or no management support (mean = 3.156, SD = 1.572) and inadequate funding (mean = 3.250, SD = 1.472). The implication is that the respondents somehow agree that there is management support to implement internal audit effectiveness. This finding also supports both descriptive and regression results that argue that there is support from top management in terms of adequate funds, staff, or logistics for internal audit issues. Similarly, the respondents could not there whether there was political interference (mean = 3.289, SD = 1.567) at GPS. This finding suggests no political meddling of the affairs of internal audit practices at GPS. Finally, the respondents also were unsure whether there was a lack of capacity building among internal auditors (mean = 3.573, SD = 1.242).

**Table 4.13: Challenges of Internal Audit Effectiveness (N = 194)**

Statement	Mean	SD	Min	Max
Political Interference	3.289	1.567	1	5
Inadequate	3.250	1.472	1	5
Lack of capacity building among internal auditors	3.573	1.242	1	5
Poor condition of service	4.011	1.107	1	5
Lack of management support	3.156	1.572	1	5
Unfamiliarity with international auditing standards such as IPSAS, IFRS, and others	3.978	1.031	1	5

*Source: Field Survey (2023)*

#### 4.5 Challenges of Internal Audit Effectiveness

This section answers the last research questions to explore the challenges affecting the internal audit effectiveness at GPS. Table 4.13 presents the results. Respondents were given six challenges of internal audit effectiveness for them to indicate the extent to which they agree using five-point Likert scales ranging from 5-strongly agree to 1-strongly disagree. Based on the average scores, the respondents rank poor condition of service (mean = 4.011, SD = 1.107) as the critical challenge facing the implementation of an effective or quality internal audit at GPS. Secondly, the respondents agree that most accounting, finance, or audit staffs at GPS are not familiar with international auditing standards such as International Public Sector Accounting Standards (IPSAS), International Financial Reporting Standard (IFRS), and other applicable policies for internal audit effectiveness.

However, the respondents were unsure whether there was a lack or no management support (mean = 3.156, SD = 1.572) and inadequate funding (mean = 3.250, SD = 1.472). The implication is that the respondents somehow agree that there is management support at GPS to implement internal audit effectiveness. This finding also supports both descriptive and regression results that argue that there is support from top management in terms of adequate funds, staff, or logistics for internal audit issues. Similarly, the respondents could not tell whether there was political interference (mean = 3.289, SD = 1.567) at GPS. This finding suggests no political meddling of the affairs of internal audit practices at GPS. Finally, the respondents also were unsure whether there was a lack of capacity building among internal auditors (mean = 3.573, SD = 1.242).



## CHAPTER FIVE

### SUMMARY, CONCLUSION, AND RECOMMENDATIONS

#### 5.0 Introduction

The chapter summarizes the study's findings, the conclusion, and the study's implications and recommendations.

#### 5.1 Summary of Findings

This study investigates whether internal auditors' independence and objectivity affect internal audit effectiveness at Ghana Police Service (GPS). Further, the study evaluates the challenges associated with the independence and objectivity of internal auditors at GPS. The study uses a survey strategy and quantitative analysis to achieve the research objectives. The researcher adapts prior studies questionnaire items from Alzeban and Gwilliam (2014), Brandon (2010), Cohen and Sayad (2010), Davidson et al. (2013), Gamayuni (2018), Pickett (2010), and Sulub et al. (2020) and collects data from respondents from finance and other related departments at GPS. The summaries of the findings of the 194 sample using OLS regression and other statistics are as follows.

The first objective is to examine whether the objectivity of internal auditors affects the internal audit effectiveness of GPS. The study finds that the objectivity of internal auditors does not affect internal audit effectiveness at GPS. The descriptive result shows that the internal auditors are objective in their obligations at GPS. Also, the descriptive statistics again show that the internal auditor is honest and discloses all material facts that do not conflict with their obligations, and they do not; (1) accept

bribes and have unbiased attitudes, (2) use information obtained from GPS for their benefit, and (3) participate in activities in the institution that may lead to conflicts of interest. However, the study's regression indicates that audit objectivity does not contribute to the effectiveness of internal audits due to an insignificant probability value of 5%.

The second objective also explores whether internal auditors' independence influences the internal audit effectiveness of GPS. The study finds that internal auditors' independence positively relates to internal audit effectiveness or quality GPS. Therefore, internal auditors' independence in performing their obligations increases internal audit effectiveness. Other variables such as management support and technology usage enhance internal audit effectiveness. However, outsourcing the internal audit duties or obligations to third-party providers decrease internal audit effectiveness. And whether there is a good or bad relationship between the internal and external auditors does not influence internal audit effectiveness at GPS.

The last research objective investigates the challenges affecting the internal audit effectiveness at GPS. The result shows that poor service condition is the critical challenge facing the implementation of internal quality audits at GPS. Also, unfamiliar with international auditing standards such as International Public Sector Accounting Standards (IPSAS), International Financial Reporting Standard (IFRS), and other applicable policies is also a challenge at GPS. However, other challenges such as political interference, inadequate funding, lack of capacity building among internal auditors, and lack of management support are not critical challenges facing GPS in enhancing internal audit effectiveness.

## 5.2 Conclusion

Internal audits have recently gained prominence worldwide due to severe bankruptcies, irregular transactions, assets embezzlement, inflated revenues, and corporate fraud in false financial reporting in the public sector. A sound corporate governance systems start with having an effective internal audit. Again, internal audit effectiveness promotes greater accountability, disclosure, and transparency to restore trust, market confidence, and shareholders. To achieve these, contemporary researchers pay attention to the objectivity and independence of internal auditors. This study extends prior studies to investigate whether internal auditors' objectivity and independence affect internal audit effectiveness, knowing the growing public outcry of governance scandal and the ill use of scarce public resources in some law enforcing agencies in Ghana wholly. Further, the study examines the critical challenges affecting internal audit effectiveness at GPS. The study uses 194 respondents from the GPS across various units and departments. The study employs Ordinary Least Square (OLS) models and other inferential and descriptive statistics to achieve the research objectives. The study finds that the objectivity of internal auditors does not influence internal audit effectiveness at GPS. On the contrary, the study finds that internal auditors' independence positively relates to internal audit effectiveness or quality at GPS. Management support and technology usage are the other variables that contribute to internal audit effectiveness. Regarding the challenges, the study concludes that poor service condition is the critical challenge facing the implementation of internal quality effectiveness at GPS. Lastly, most staff at GPS are not familiar with international auditing standards such as International Public Sector



Accounting Standards (IPSAS), International Financial Reporting Standard (IFRS), and other applicable policies that enhance internal audit effectiveness.

### **5.3 Recommendations**

Based on the study's findings, the study recommends the following implications to relevant stakeholders.

Firstly, the study records a significant positive relationship between audit independence and internal audit effectiveness. The study recommends that stakeholders such as directors, supervisors, and other top management at GPS should allow internal auditors to perform their professional obligations without fear independently to increase internal audit effectiveness. For instance, the law enforcing agencies should allow the internal auditors to report directly to top management, authorities, and stakeholders without conflicting interests.

Secondly, top managers should not interfere with internal auditors or staff of the internal audit department. For effective internal audit, they should have access to financial and non-financial printed or electronic information in conducting audit works at every divisions of GPS.

Thirdly, the study recommends that divisions in GPS should conduct regular training and seminars or symposia on internal accounting and auditing standards such as IPSAS, IFRS, and IAS to enable the staff, especially in the finance and auditing units, to report financial information base on the applicable global auditing and accounting standards. Also, management and stakeholders should develop motivation schemes to

encourage staff, especially in the finance and auditing units, to have professional qualifications from certified accounting and auditing associations recognized by the International Federation of Accountants (IFAC).

Fourthly, management should continue to support the internal auditors by providing adequate logistics, staff, and funds for their operations. Also, management at GPS should promptly respond to reports prepared by the internal audit. Internal auditors should also provide leadership at the divisions of GPS with an accurate and fair view of financial and non-financial information. In addition, the internal audit department should equip with modern technological gadgets in planning and conducting auditing procedures.

Finally, one of the critical challenges affecting internal audit effectiveness at GPS is poor service conditions. Effective internal audit prevents corporate fraud in false financial reporting, irregular transactions, assets embezzlement, inflated revenues, and corporate fraud in fraudulent financial reporting in the public sector. Thus, the study recommends that the GPS institute motivation and allowances schemes for staff without considering misuses or embezzles of public funds at law enforcing agencies in Ghana.

## REFERENCES

- Abdel-Khalik, A. R. (1993). Why do private companies demand auditing? A case for organizational loss of control. *Journal of Accounting, Auditing and Finance*, 8(1), 31-52.
- Adams, M. B. (1994). Agency theory and the internal audit. *Managerial Auditing Journal*, 9(8), 8-12.
- Ahmad, L., Suhara, E., and Ilyas, Y. (2016). The effect of audit quality on earning management within manufacturing companies listed on Indonesian Stock Exchange. *Research journal of Finance and Accounting*, 7(8), 132-138.
- Ajani, S. A. (2012). Auditing as a tool for enhancing the principal agent relationship. *Study Guide: Masters in Business Administration, Ahmadu Bello University, Zaria*.
- Ali, O.A., and Owais, W.O. (2013). Internal Auditors' Intellectual (Knowledge) Dimension in Creating Value for Companies Empirical Study of Jordanian Industrial Public Shareholding Companies. *International Business Research*, 6(1), 118-129.
- Alzeban, A. (2020). The relationship between the audit committee, internal audit and firm performance. *Journal of Applied Accounting Research*, 21(3), 437-454.
- Alzeban, A., and Gwilliam, D. (2014). Factors affecting the internal audit effectiveness: A survey of the Saudi public sector. *Journal of International Accounting, Auditing and Taxation*, 23(2), 74-86.
- Anh, T., Thi, L., Quang, H., and Thi, T. (2020). Factors influencing the effectiveness of internal control in cement manufacturing companies. *Management Science Letters*, 10(1), 133-142.



- Arena, M. and Azzone, G. (2009). Identifying organizational drivers of internal audit effectiveness. *International Journal of Auditing* 13(1), 43-60.
- Asare, T. (2009). Internal auditing in the public sector: Promoting good governance and performance improvement. *International Journal on Governmental Financial Management*, 9(1), 15-28.
- Awuah, P. K., Abariga, A. A., and Zayzay, G. (2015). Factors Determining Internal Audit Quality in the Ghanaian Public Sector. *ADRRI Journal (Multidisciplinary)*, 24(24), 1-15.
- Babbie, E. (2013). The practice of social research (International Edition). *Andover: Cengage Learning*.
- Brandon, D. M. (2010). External auditor evaluations of outsourced internal auditors. *Auditing: A Journal of Practice and Theory*, 29(2), 159-173.
- Bravo Urquiza, F., and Reguera Alvarado, N. (2018). Sustainable development disclosure: environmental, social, and governance reporting and gender diversity in the audit committee. *Business Strategy and the Environment*, 28(2), 418-429.
- Brierley, J.A., El-Nafabi, H.M. and Gwilliam, D.R. (2001). The problems of establishing internal audit in the Sudanese public sector. *International Journal of Auditing*, 5(1), 73-87.
- Bryman, A. and Bell, E. (2015). *Business research methods*. Oxford University Press, USA.
- Channar, Z. A., Talreja, S., and Bai, M. (2015). Impact of human capital variables on the effectiveness of the organizations. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 9(1), 228-240.

- Christ, M. H., Eulerich, M., Krane, R., and Wood, D. A. (2021). New frontiers for internal audit research. *Accounting Perspectives*, 20(4), 449-475.
- Cohen, A., and Sayag, G. (2010). The effectiveness of internal auditing: an empirical examination of its determinants in Israeli organisations. *Australian Accounting Review*, 20(3), 296-307.
- Cohen, J., Krishnamoorthy, G. and Wright, A. (2010). Corporate governance in the post-Sarbanes-Oxley era: auditors' experiences. *Contemporary Accounting Research*, 27(3), 751-786.
- COSO, S. (2013). Internal Control—Integrated Framework. *The Committee of Sponsoring Organizations of the Treadway Commission*.
- Davidson, B. I., Desai, N. K., and Gerard, G. J. (2013). The effect of continuous auditing on the relationship between internal audit sourcing and the external auditor's reliance on the internal audit function. *Journal of Information Systems*, 27(1), 41-59.
- Davidson, B.I., Desai, N.K. and Gerard, G.J. (2013). The Effect of Continuous Auditing on the Relationship between Internal Audit Sourcing and the External Auditor's Reliance on the Internal Audit Function. *Journal of Information Systems*, 27(1), 41-59.
- De Vaus, D. (2013). *Surveys in social research*. Routledge.
- Dejnaronk, J., Little, H. T., Mujtaba, B. G. and McClelland, R. (2015). Factors influencing the effectiveness of the internal audit function in Thailand. In *Proceedings of Conference: Business and Social Sciences Research Conference: Research for Development*, Bangkok, Thailand.

- Dellai, H. and Omri, M. A. B. (2016). Factors Affecting the Internal Audit Effectiveness in Tunisian Organizations. *Research Journal of Finance and Accounting*, 7(16), 16-38.
- Demeke, T., and Kaur, J. (2021). Determinants of Internal Audit Effectiveness: Evidence from Ethiopia. *African Journal of Business and Economic Research*, 16(2), 51-72.
- Desai, N., Gerard, G. and Tripathy, A. (2011). Internal audit sourcing arrangements and reliance by external auditors. *Auditing: A Journal of Practice and Theory*, 30(1), 149-171.
- Deumes, R., and Knechel, W. R. (2008). Economic incentives for voluntary reporting on internal risk management and control systems. *Auditing: A Journal of Practice and Theory*, 27(1), 35-66.
- DiMaggio, P. J., and Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 147-160.
- Fanning, K., and Piercey, M. D. (2014). Internal auditors' use of interpersonal likability, arguments, and accounting information in a corporate governance setting. *Accounting, Organizations and Society*, 39(8), 575-589.
- Gamayuni, R. R. (2018). The effect of internal auditor competence and objectivity, and management support on effectiveness of internal audit function and financial reporting quality implications at local government. *International Journal of Economic Policy in Emerging Economies*, 11(3), 248-261.
- George, D., Theofanis, K. and Konstantinos, A. (2015). Factors associated with internal audit effectiveness: Evidence from Greece. *Journal of Accounting and Taxation*, 7(7), 113-122.



- Ghauri, P., Grønhaug, K., and Strange, R. (2020). *Research methods in business studies*. Cambridge University Press.
- Goodwin-Stewart, J., and Kent, P. (2006). Relation between external audit fees, audit committee characteristics and internal audit. *Accounting and Finance*, 46(3), 387-404.
- Gwilliam, D. and El-Nafabi, H. (2002). The possibility of transition to public sector modern auditing techniques and procedures found in developing countries; the case of Sudan. *Accounting Research, the Saudi Accounting Association*, 6(2), 161-196.
- Hailemariam, S. (2014). *Determinants of internal audit effectiveness in the public sector, case study in selected Ethiopian public sector offices* (Doctoral dissertation, Jimma University).
- Iwasaki, I. (2012). *Global Financial Crisis, Corporate Governance, and Firm Survival* (No. 37). RRC Working Paper Series. (37), 1-59.
- Jensen, M. C., and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Jokipii, A. (2010). Determinants and consequences of internal control in firms: a contingency theory based analysis. *Journal of Management and Governance*, 14(2), 115-144.
- Loum, H., and Biçer, A. A. (2021). Effectiveness of Internal Audit in Monitoring Controls for Assessment of Risk: A Gambian Public Sector Case Study. *Working Paper Series*, 3(1), 62-74.
- Meyer, J. W., and Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340-363.

- Miettinen, J. (2011). The role of audit quality on the relationship between auditee's agency problems and financial information quality. Paper presented at the Department of Accounting and Finance, University of Vaasa, Finland.
- Mihret, D. and Yismaw, A. (2007). Internal audit effectiveness: An Ethiopian public sector case study. *Managerial Auditing Journal*, 22(5), 470-484.
- Mihret, D. G., James, K. and Mula, J. M. (2010). Antecedents and organizational performance implications of internal audit effectiveness: some propositions and research agenda. *Pacific Accounting Review*, 22(3), 224-252.
- Mulugeta, S. (2008). Internal Audit: Reporting Relationship in Ethiopian Public Enterprises. M.Sc. Dissertation. Ethiopia: Addis Ababa University. Available online at: <http://etd.aau.edu.et/dspace/bitstream/123456789/1966/1/Samuel%20Mulugeta.pdf>
- Mustika, A. C. (2015). Factors affecting the internal audit effectiveness. *Jurnal Akuntansi dan Auditing*, 12(2), 89-109.
- Oladejo, M., Yinus, S. O., Shittu, S., and Rutaro, A. (2021). Internal audit practice and financial reporting quality: Perspective from Nigerian quoted foods and beverages firms. *KIU Interdisciplinary Journal of Humanities and Social Sciences*, 2(1), 410-428.
- Onumah, J. M., Kuipo, R., and Obeng, V. A. (2012). Effectiveness of internal control systems of listed firms in Ghana. In *Accounting in Africa. Accounting in Africa (Research in Accounting in Emerging Economies, Vol. 12 Part A)*, Emerald Group Publishing Limited, Bingley, pp. 31-49.
- Onumah, J.M., and Yao Krah, R. (2012). Barriers and catalysts to effective internal audit in the Ghanaian public sector. *Research in Accounting in Emerging Economies*, 12 (1), 177-207.

- Panda, B., and Leepsa, N. M. (2017). Agency theory: Review of theory and evidence on problems and perspectives. *Indian Journal of Corporate Governance*, 10(1), 74-95.
- Pickett, K. S. (2010). *The internal auditing handbook*. John Wiley and Sons.
- Rakipi, R., De Santis, F., and D'Onza, G. (2021). Correlates of the internal audit function's use of data analytics in the big data era: Global evidence. *Journal of International Accounting, Auditing and Taxation*, 42, 100357.
- Rudasingwa, J. (2006). The Role of the internal audit function in enhancing risk management in the Rwanda Social Security Fund. *Magister Technologiae Thesis, Tshwane University of Technology, Pretoria, South Africa*.
- Rudhani, L. H., Vokshi, N. B. and Hashani, S. (2017). Factors Contributing to the Effectiveness of Internal Audit: Case Study of Internal Audit in the Public Sector in Kosovo. *Journal of Accounting, Finance and Auditing Studies*, 3(4), 91-108.
- Salehi, T. (2016). Investigation factors affecting the effectiveness of internal auditors in the company: Case study Iran. *Rev. Eur. Stud.*, 8(2), 224.
- Saunders, M., Lewis, P., Thornhill, A. and Wilson, J. (2009). Business research methods. *Financial Times, Prentice Hall: London*.
- Sawyer, L. B. (1995). An internal audit philosophy. *Internal Auditor*, 52 (4), 46-56.
- Shamki, D., and Alhajri, T. A. (2017). Factors influence internal audit effectiveness. *International Journal of Business and Management*, 12(10), 143-154
- Sulub, S. A., Salleh, Z., and Hashim, H. A. (2020). Corporate governance, SSB strength and the use of internal audit function by Islamic banks: Evidence



from Sudan. *Journal of Islamic Accounting and Business Research*, 11(1), 152-167.

Tackie, G., Marfo-Yiadom, E., and Achina, S. O. (2016). Determinants of internal audit effectiveness in decentralized local government administrative systems. *International Journal of Business and Management*, 11(11), 184-184.

Telewa, R. S. (2014). *Sustainable procurement practices in the public water sector institutions in Kenya* (Doctoral dissertation, University of Nairobi).

Vadasi, C., Bekiaris, M., and Koutoupis, A. G. (2021). The impact of audit committee characteristics on internal audit professionalization: empirical evidence from Greece. *Accounting Research Journal*, 34(5), 447-470

Wines, G. (2012). Auditor independence: Shared meaning between the demand and supply sides of the audit services market?. *managerial Auditing Journal*, 27(1), 4-50

Zhang, C. (2019). Intelligent process automation in audit. *Journal Of Emerging Technologies In Accounting*, 16(2), 69-88.

## LIST OF APPENDICES

### APPENDIX A – QUESTIONNAIRE

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES  
SCHOOL OF BUSINESS  
DEPARTMENT OF ACCOUNTING AND FINANCE**

#### QUESTIONNAIRES

**Topic: ADVANCING INTERNAL AUDIT EFFECTIVENESS AT GHANA  
POLICE SERVICE: DO INDEPENDENCE AND OBJECTIVITY OF  
INTERNAL AUDITORS MATTER?**

This study is being undertaken for academic purposes, and any information given will be treated with the highest degree of confidentiality. The survey items are categorized into three sections, A, B, and C. Questions may be answered by ticking [ ☐ ] against response (s) that best suits your opinion or filling the space where appropriate. Thank you for your participation.

#### SECTION A

##### DEMOGRAPHICS OF RESPONDENT

---

1. Gender:

- [ ☐ ] Male  
[ ☐ ] Female

2. Age of respondent

- [ ☐ ] 18 – 29 years  
[ ☐ ] 30 – 39 years  
[ ☐ ] 40 – 49 years  
[ ☐ ] Above 50 years

3. Educational background of respondent

- [ ☐ ] Diploma / HND  
[ ☐ ] Bachelor's Degree  
[ ☐ ] Master's Degree

- ☐ Doctorate Degree  
☐ Please specify others .....

4. Professional qualification

- ☐ Institute of Chartered Accountant, Ghana (ICAG)  
☐ Association of Certified Chartered Accountant (ACCA)  
☐ Chartered Institute of Management Accountant (CIMA)  
☐ Certified Professional Internal Auditor (CPIA)  
☐ Please specify others .....

5. Would you please indicate your department

- ☐ Finance  
☐ Audit  
☐ Stores/Logistics  
☐ Please specify others .....

6. Number of working experience

- ☐ Below 5 years  
☐ 6 – 10 years  
☐ 11 – 15 years  
☐ 16 – 20 years  
☐ Above 20 years

**SECTION B**

**INDEPENDENT AND CONTROL VARIABLES**

On a scale of 1-5, please tick [✓] the response that reflects your level of agreement or otherwise in each of the under-listed statements.

Strongly Agree (SA) = a score value of 5;

Agree (D) = a score value of 4;

Neutral (N) = a score value of 3;

Disagree (D) = a score value of 2; and

Strongly disagree (SD) = a score value of 1.



**PART A: OBJECTIVITY OF INTERNAL AUDITORS**

S/N	STATEMENTS	1	2	3	4	5
7	The internal auditor(s) of the institution is/are honest in the operation of the institution					
8	The internal auditors disclose all material facts					
9	The internal auditors are careful in using and maintaining all information obtained in the audit.					
10	The internal auditors do not accept bribes and have unbiased attitudes.					
11	The internal auditors do not use information obtained from the institutions for their benefit.					
12	The auditor that has worked in the auditee office is not involved in the examination of the audit procedures					
13	The internal auditors do not participate in activities in the institution that may lead to conflicts of interest.					

**PART B: INDEPENDENCE OF INTERNAL AUDIT**

S/N	STATEMENTS	1	2	3	4	5
14	Internal auditors are independent in performing their professional duties and responsibilities.					
15	The HOD of internal audit reports to authorities within the company, giving the internal audit chance to fulfill their obligations.					
16	The HOD of internal audit directly links the CEO, top officers, or board of directors of the company.					
17	The internal audit unit directly links with top managers other than the finance officer.					
18	No conflict of interest exists during the activities of the internal audit.					
19	Management of the company does not interfere with the works of internal audits.					
20	The staff in the internal audit unit have unrestricted access to all sections or units and staff in the company.					
21	The head of the directorate approves the employment and replacement of the head of internal audit.					
22	The internal audit staff does not perform					

	other functions that are not auditing issues.					
--	-----------------------------------------------	--	--	--	--	--

**PART C: RELATIONSHIP BETWEEN INTERNAL AND EXTERNAL AUDITORS**

S/N	STATEMENTS	1	2	3	4	5
23	The external auditors are cordial and support the activities of internal auditors.					
24	There is a good relationship between the internal and external auditors.					
25	The internal auditors are given a chance by external auditors to explain specific issues to them.					
26	There is timely consultation of operations between internal and external auditors, and also there is a mutual interest among them.					
27	Plans of external auditors are discussed with internal auditors.					
28	External auditors rely upon the reports and the works of internal auditors.					
29	Internal and external auditors share working papers.					
30	Internal and external auditors have meetings regularly.					
31	The company's top managers help to ensure effective cordial co-operation among the external and internal auditors.					

**PART D: MANAGEMENT SUPPORT FOR INTERNAL AUDIT**

S/N	STATEMENTS	1	2	3	4	5
32	Top managers support internal audit staff operations and activities in the company.					
33	The internal audit unit has enough budget or funds to successfully carry out its operations and activities.					
34	Its internal audit unit staff is adequate to carry out their operations and activities successfully.					
35	Top managers' response to reports done by the internal audit is reasonable.					
36	Internal auditors give top managers an accurate and fair view of the company operations and provide appropriate suggestions and recommendations.					

37	Top managers are part of the internal audit processes.					
----	--------------------------------------------------------	--	--	--	--	--

38. The internal audit unit uses information technology devices to operate in the company.

[ ] Yes

[ ] No

39. The company outsources external officers or third-party providers to do your internal audit operations for your company.

[ ] Yes

[ ] No

#### **PART E: INTERNAL AUDIT EFFECTIVENESS**

	<b>STATEMENTS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
40	Internal auditors determine the yearly audit plan for the company.					
41	The internal audit's financial and other areas reviewed and audited are significant to the company.					
42	Internal auditors can review and audit all units or departments and company matters.					
43	The internal audit responses on matters raised in the audit process are submitted to management in writing and are all-inclusive and relevant.					
44	Internal audit staff regularly follow-up issues raised and scrutinize actions taken to correct the issues raised.					
45	Internal auditors perform other activities like evolving financial processes and conducting financial and economic audits.					

#### **SECTION C: CHALLENGES OF INTERNAL AUDIT EFFECTIVENESS**

46. Do you think internal auditors of the organization face challenges of being independent and objective? Certainly [ ] Not sure [ ] Not at all [ ]

Please indicate the extent to which you agree to the under listed challenges facing the independence and objectivity of internal auditors at GES; please indicate (by ticking)



the extent to which you decide on them, using the following scale: (5-Strongly Agree, 4-Agree, 3-not sure, 2-Disagree and 1- Strongly disagree).

	Statements	5	4	3	2	1
47	Political interference					
48	Inadequate funding					
49	Lack of capacity building among internal auditors					
50	Poor conditions of service					
51	Little/no management support					
52	Unfamiliarity of international standards such as IPSAS, IFRS, etc.					

Others (please specify).....

