



Evaluating factors affecting the operational performance of internal auditors in Zambia's public sector (A case of government ministries in Zambia)

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Abstract

This study evaluated the factors that affected the operational performance of internal auditors in eight selected ministries in Zambia. Adopting a positivist research philosophy, the study employed a quantitative research approach to collect and analyse data. A sample of 115 internal auditors from these ministries was surveyed using structured questionnaires designed to assess various factors influencing their performance, such as political interference, lack of resources, and inadequate training. The data collected were analysed using both descriptive and inferential statistics to examine the relationships between these factors and auditors' operational performance. The findings revealed that political interference, resource limitations, and insufficient training were significant challenges that negatively impacted audit performance. Political interference, in particular, was found to have a strong and detrimental effect on auditors' objectivity and independence, which are critical to ensuring the integrity of the audit process. Furthermore, the lack of resources, such as inadequate staffing and outdated technology, was identified as a major hindrance to auditors' ability to effectively carry out their duties. The study also highlighted that the lack of ongoing professional development and training for internal auditors contributed to the challenges faced in maintaining high standards of performance. The study concluded that addressing these issues was essential for improving the operational performance of internal auditors in the public sector. The research made several recommendations to enhance audit performance, such as improving resource allocation, strengthening the independence of auditors, and investing in comprehensive training and development programs. These recommendations aimed at improving the efficiency and effectiveness of the auditing process, which would, in turn, contribute to greater accountability in the public sector. Overall, the study contributed to a deeper understanding of the operational challenges faced by internal auditors in Zambia and offered practical insights for enhancing audit effectiveness and accountability within the public sector.

Keywords: Internal Audit, Public Sector, operational, Performance and challenges

Introduction

Chapter One of this study provides a comprehensive introduction to the research on evaluating factors affecting the operational performance of internal auditors in Zambia's public sector. This chapter begins by outlining the background and significance of internal auditing within the public sector, emphasizing its critical role in ensuring transparency, accountability, and proper resource utilization in government agencies. It highlights the importance of effective internal auditing in promoting good governance and fostering public trust in government operations.

The chapter further presents the problem statement, identifying the challenges that hinder the optimal performance of internal auditors in Zambia's public sector. It examines the contextual factors that may influence auditors' ability to carry out their duties effectively, including institutional constraints, resource limitations, and organizational barriers. This section sets the foundation for the research by specifying the gaps in existing literature and the need for a focused study on Zambia's public sector environment.

Additionally, the chapter defines the research objectives and the study's scope. It outlines the research questions that guide the investigation and discusses the significance of the study in terms of its potential impact on policy, practice, and improvements in internal audit operations. The chapter concludes with an overview of the study's structure, offering a roadmap for the following chapters that delve into the methodology, literature review, data analysis, findings, and recommendations.

In essence, Chapter One serves as an introduction to the study, establishing the context, importance, and goals of the research while preparing the reader for a deeper exploration of the factors influencing internal audit performance in Zambia's public sector.

Background

Despite the establishment of a fully-fledged Internal Audit unit in Zambia's public sector, the Auditor General's Reports from 2019 to 2022 consistently reveal significant operational inefficiencies, including misappropriated funds, uncollected revenue, and failure to meet revenue targets (Bank, 2004^[5]; Le, Raballand, & Palale, 2014; PRMC, 2021). These weaknesses often reflect systemic issues such as political pressures and managerial interference, which compromise auditor independence and objectivity (Mupeta, 2017^[18]; Mwanza & Kaira, 2022). Internal auditors are also burdened with expanding responsibilities beyond traditional auditing, including roles in risk management and fraud detection, which further complicate their ability to perform effectively (Gramling & Karapanos, 2008^[9]; Kovač, 2011^[12]).

These operational challenges lead to serious consequences, including loss of public trust, financial mismanagement, and hindrances to economic, environmental, and social development (Mupeta, 2017^[18]; Mwanza & Kaira, 2022). Inefficiencies in internal audit functions exacerbate the risk of poor public sector accountability, resulting in missed opportunities for reform and greater transparency. While existing studies have explored the broader role of internal

audits, few have addressed the specific challenges faced by internal auditors in Zambia's public sector, particularly within ministries (Mupeta, 2017^[18]; Mwanza & Kaira, 2022).

Additionally, although external audits often highlight systemic weaknesses, there is a lack of research on how these challenges affect the daily operations of internal auditors and their ability to improve audit quality and foster meaningful change within the ministry. This gap in knowledge must be addressed to improve the operational performance of internal auditors and ensure better governance and public sector accountability.

Failure to explore and resolve these issues will lead to continued inefficiencies, financial losses, and a loss of public trust. It may also hinder critical development initiatives, particularly in sectors such as land management, environmental conservation, and socio-economic development. This study aims to identify the operational challenges facing internal auditors in Zambia's public sector and propose actionable solutions to enhance audit effectiveness, improve public financial management, and contribute to national development goals.

Statement of the problem

Despite the establishment of a fully-fledged Internal Audit unit in Zambia's public sector, the Auditor General's Reports from 2019 to 2022 consistently reveal significant operational inefficiencies, including misappropriated funds, uncollected revenue, and failure to meet revenue targets (Bank, 2004^[5]; Le, Raballand, & Palale, 2014; PRMC, 2021). These weaknesses often reflect systemic issues such as political pressures and managerial interference, which compromise auditor independence and objectivity (Mupeta, 2017^[18]; Mwanza & Kaira, 2022). Internal auditors are also burdened with expanding responsibilities beyond traditional auditing, including roles in risk management and fraud detection, which further complicate their ability to perform effectively (Gramling & Karapanos, 2008^[9]; Kovač, 2011)^[12].

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development. This study aims to identify the operational challenges facing internal auditors in Zambia's public sector and propose actionable solutions to enhance audit effectiveness, improve public financial management, and contribute to national development goals.

Objectives of the research

Research Objectives:

1. To assess the current operational performance by internal auditors in the public sector in Zambia.
2. To identify the key challenges faced by internal auditors in the public sector in Zambia.
3. To propose actionable recommendations for addressing the identified challenges.

Significance of the study

This study was significant for several reasons, particularly in enhancing the understanding of the internal audit function within Zambia's public sector. First, it provided a detailed analysis of the operational challenges faced by internal auditors in the public sector. By identifying the factors that hindered the efficiency and effectiveness of internal audits, the study offered valuable insights into how the auditing process could be strengthened, which was crucial for improving public sector governance and accountability. Second, the study highlighted the critical role of internal auditors in ensuring the proper management of public resources. Given the ministries' responsibilities for land and natural resource management, the findings helped improve how resources were allocated, managed, and audited, ultimately contributing to better public financial management. Additionally, the research was valuable for policymakers, administrators, and government officials, as it provided evidence-based recommendations to address the issues identified in the ministries' internal audit operations. This could inform reforms and the development of more effective policies, particularly in relation to enhancing auditor independence, providing adequate resources, and improving training and capacity building for auditors. Furthermore, the study contributed to the academic body of knowledge on public sector auditing, particularly in developing countries like Zambia. By filling a gap in the existing literature, it added a unique perspective on the challenges of internal auditing within Zambia's ministries, offering a case study that could be referenced by future research or used to draw comparisons with other regions or countries facing similar issues.

Literature review

The theoretical framework for this study on evaluating the factors affecting the operational performance of internal auditors in Zambia's public sector draws on several key concepts related to auditing, governance, and organizational performance. This framework integrates various theories that explain the factors influencing internal audit effectiveness, with particular attention to political interference, lack of resources, and inadequate training, which are the central focus of this research.

The Agency Theory

Agency theory, developed by Jensen and Meckling (1976), is foundational in understanding the relationship between the internal auditors (agents) and the public sector organizations (principals). According to agency theory,

internal auditors are employed to act in the best interests of the organization by ensuring the proper use of public resources, identifying inefficiencies, and safeguarding against fraud and corruption. However, when principals (political leaders or senior management) interfere with the audit process, such as by exerting pressure or influencing audit results, the agents (internal auditors) may face challenges in maintaining their independence and objectivity. This theory helps explain how political interference in the public sector can undermine the effectiveness of internal auditors by diluting their role in enhancing transparency and accountability (Kovač, 2011)^[12]. Agency theory underscores the importance of aligning the interests of internal auditors with those of the public to reduce conflicts and improve governance.

Resource Dependency Theory (RDT)

Resource Dependency Theory (Pfeffer & Salancik, 1978) posits that organizations depend on external and internal resources to achieve their goals and sustain their operations. In the context of internal auditing, the theory emphasizes the role of resources (financial, human, and technological) in enabling auditors to effectively carry out their duties. According to this theory, when internal audit functions lack sufficient resources, whether in terms of budget, staff, or training, they are less able to perform comprehensive audits and address emerging challenges such as fraud detection, risk management, and operational efficiency (IIA, 2017). Therefore, the lack of resources in Zambia's public sector could result in underperformance of the internal audit function, limiting auditors' capacity to ensure accountability and transparency.

Institutional Theory

Institutional theory, as described by DiMaggio and Powell (1983), explores how organizational behaviors are shaped by the norms, rules, and expectations of the institutions within which they operate. For internal auditors in Zambia's public sector, this theory suggests that the auditing process is influenced by both formal regulations (such as legal and financial frameworks) and informal structures (such as political pressure or organizational culture). Institutional theory highlights how challenges such as political interference and inadequate training may be reinforced by institutional norms or practices, making it difficult for auditors to assert their independence and perform effectively. In Zambia, where political influence is prevalent, the organizational norms within public sector institutions may discourage auditors from reporting discrepancies or conducting audits that challenge powerful interests.

Contingency Theory

Contingency theory (Lawrence & Lorsch, 1967) asserts that there is no one-size-fits-all approach to organizational management. Rather, organizational strategies and structures should be tailored to fit the specific external and internal conditions the organization faces. This theory is relevant to understanding the challenges internal auditors face in Zambia's public sector because it suggests that the effectiveness of internal audits depends on various

situational factors, such as the political environment, resource availability, and organizational structure. In situations where political interference is high, resources are scarce, and auditors lack proper training, the audit function's performance may be suboptimal. The contingency approach helps to frame the study by acknowledging that the internal audit challenges faced by Zambia's public sector are context-specific and require tailored solutions.

Theories of Professionalism

Theories of professionalism, such as those articulated by Abbott (1988), provide insight into the role of professional standards and training in shaping the effectiveness of internal auditors. According to these theories, professional standards and continuous professional development are key to maintaining the quality of the audit process. Inadequate training and development can reduce auditors' ability to apply best practices and innovate within their roles. This theory emphasizes that a lack of specialized skills, particularly in the evolving areas of risk management and fraud detection, can limit the ability of auditors to address complex public sector challenges effectively. It also points to the need for institutionalized professional development programs to enhance the competencies of auditors in line with emerging demands.

Public Sector Governance Theory

Public Sector Governance Theory focuses on the role of internal controls, transparency, and accountability in the effective management of public resources. This theory is particularly relevant to the study, as it underscores the significance of a strong and independent internal audit function in achieving good governance outcomes within the public sector. According to this theory, effective governance requires internal auditors to possess the autonomy, resources, and support necessary to carry out their work without undue external influence (Knechel *et al.*, 2013)^[11]. Public sector governance theory provides the foundation for understanding the consequences of inadequate internal auditing and how this undermines public sector objectives such as transparency, accountability, and efficient resource management.

Integration of Theories in Context

The integration of these theories in the context of Zambia's public sector highlights the multifaceted nature of the challenges faced by internal auditors. Political interference, resource constraints, and lack of training can be understood through the lens of agency theory, which explains conflicts between principals and agents, and resource dependency theory, which highlights the importance of adequate resources. Additionally, institutional theory emphasizes the influence of organizational culture and norms, while contingency theory suggests that solutions should be tailored to Zambia's unique political and resource environment. Professionalism theory and public sector governance theory provide further insights into the need for better-trained auditors and stronger governance frameworks to improve internal auditing in Zambia's public sector.

Empirical literature

Political interference

Globally, internal auditors in public institutions have long been confronted with several obstacles that hinder the effectiveness of the audit process. A major challenge is political interference, which compromises auditor independence and objectivity. In a study conducted by Kovač (2011) ^[12], it was found that political pressures in developing countries often force internal auditors to overlook discrepancies or manipulate audit findings to align with political objectives. This interference undermines the integrity of the audit function and impacts the overall governance and transparency of public institutions. This challenge is not unique to developing countries, as political interference has been documented in more developed nations as well. A study by Schilder (2009) ^[22] noted that political pressures could shape the conclusions of internal auditors, even in advanced economies. Political motivations may lead to auditors making decisions that align with governmental or political priorities, ultimately diluting the independence of the audit function.

Challenges with resources

Moreover, lack of resources has been identified as a key issue for internal auditors worldwide. In a report by the Institute of Internal Auditors (IIA) (2017), it was highlighted that many internal audit units in the public sector are underfunded, which limits their ability to employ modern tools and technologies essential for comprehensive audits. Internal auditors often face resource constraints in terms of both financial support and access to appropriate audit technologies, making it difficult to detect fraud and improve operational efficiency. This limitation is particularly evident in smaller public institutions, where the lack of adequate infrastructure makes it challenging for internal auditors to conduct thorough examinations (Gramling & Karapanos, 2008) ^[9]. In addition to the financial constraints, the lack of human resources is a pressing issue. Many public sector audit teams are understaffed, leading to an overburdening of auditors and, consequently, suboptimal performance (Brazel, Agogino, & Hite, 2018) ^[7]. The issue of understaffing is particularly problematic in large-scale governmental organizations, where the volume of transactions and the complexity of audits exceed the capacity of available audit personnel.

Lack of training for internal auditors

Another significant barrier is the lack of training for internal auditors globally. According to a study by Fadzil *et al.* (2005) ^[8], many auditors lack specialized training in areas such as risk management and fraud detection, which are increasingly becoming part of the internal audit function. As the role of internal auditors evolves in response to new challenges, there is an increased need for auditors to possess advanced skills in areas such as information technology auditing, forensic accounting, and data analytics (Alles, 2015) ^[4]. The lack of training and continuous professional development in these areas leaves auditors ill-prepared to deal with the complexities of modern public sector audits. Furthermore, a study by Knechel *et al.* (2013) found that inadequate training results in auditors being unable to effectively identify systemic issues such as fraud, inefficiencies, and weaknesses in governance structures.

Lack of auditor independence

In addition to these challenges, lack of auditor independence is a global issue that hampers the effectiveness of the internal audit function. According to the International Federation of Accountants (IFAC) (2010), auditors are sometimes subjected to undue influence from senior management or political leaders, which diminishes their ability to exercise independent judgment. This lack of independence is particularly concerning in the public sector, where auditors are expected to play a crucial role in ensuring accountability and transparency in the use of public funds. A study by Alzeban and Sawan (2013) ^[2] found that the extent of management influence negatively impacts the effectiveness of internal audits, leading to compromised audit quality and weak financial management in public organizations.

Cultural factors

Additionally, **cultural factors** often affect the role and impact of internal auditors globally. In some countries, a culture of non-disclosure and lack of transparency poses significant challenges to the internal audit function. For example, in some Asian and Middle Eastern countries, cultural norms around hierarchy and respect for authority can discourage whistleblowing and hinder the reporting of audit findings (Watkins & Haller, 2014). Such cultural issues may lead to an environment where auditors fear retaliation or punishment for exposing wrongdoing, further weakening the audit process.

Legal and regulatory challenges

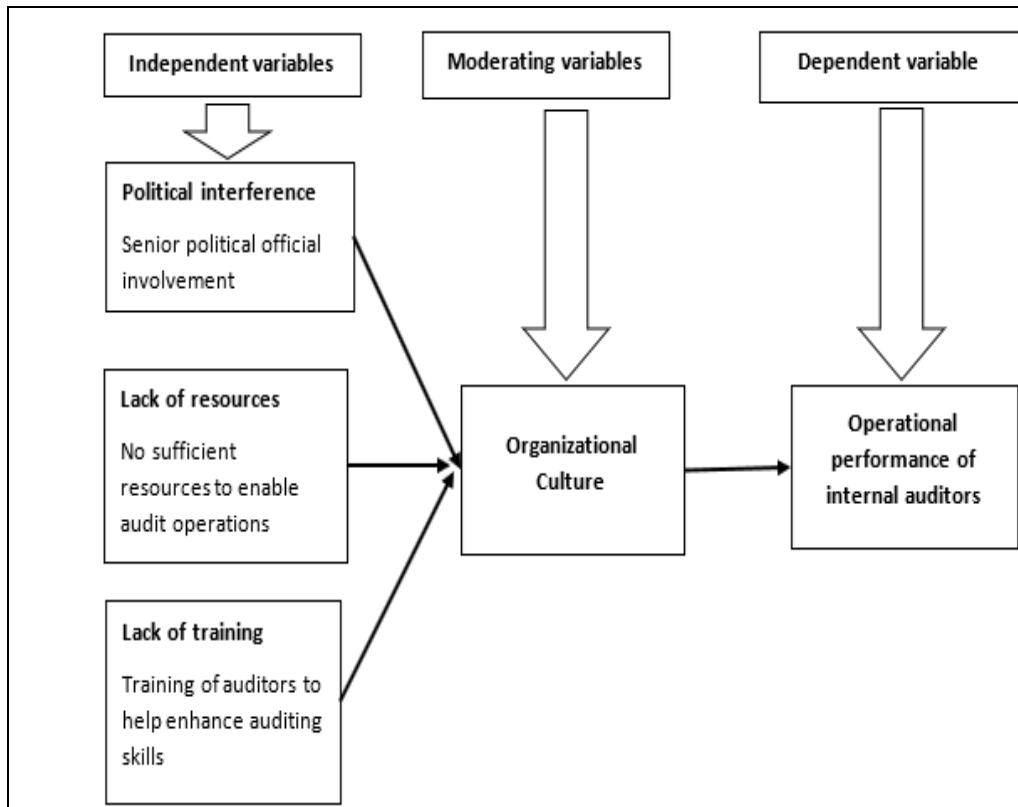
Legal and regulatory challenges also complicate the work of internal auditors in public institutions globally. In some countries, there is insufficient legislation and regulatory frameworks to support the independence and effectiveness of internal auditors. According to Ziegenfuss (2000) ^[26], in many developing countries, the legal frameworks around auditing are either weak or not consistently enforced, resulting in a lack of accountability and poor governance outcomes. Even in more developed nations, evolving legal and regulatory requirements often create challenges for auditors to stay compliant with new rules, particularly in areas such as data privacy and cybersecurity (Beasley *et al.*, 2009) ^[6].

The complexity of public sector operations

The complexity of public sector operations further complicates the role of internal auditors. Government agencies often operate across multiple sectors with different sets of regulations, making it challenging for auditors to understand and navigate all the relevant policies and procedures. A study by Memon (2017) ^[16] emphasized that public institutions, especially at the national level, are increasingly involved in complex activities such as large infrastructure projects, procurement processes, and international trade agreements, all of which demand specialized auditing expertise and knowledge. Without proper support and training, auditors may struggle to effectively audit such multifaceted operations.

Conceptual framework

The conceptual framework provides a clear understanding of the study's independent and dependent variables.



Source: Author

Fig 1: Conceptual framework

Research Methodology

This section presents the research methods such as the research design, sources of data, sample size, sampling methods as well as methods of data collection, reliability of data, validity of data and ethics that would be used in this study.

Research Design

The descriptive research design was chosen because it allows for the systematic collection of data, providing a clear understanding of the existing operational issues within the Ministry's internal audit function. This design enables the researcher to capture detailed information from a wide sample of internal auditors, audit managers, and other relevant stakeholders involved in or affected by the internal audit process (Bryman, 2016). The use of surveys and questionnaires ensures that the data collected is both quantitative and qualitative, enabling the researcher to derive meaningful insights into the specific challenges faced by auditors in terms of political interference, lack of resources, and inadequate training, among other factors (Flick, 2018).

Research Philosophy

The study adopted a positivist research approach. Positivism is typically associated with quantitative research and posits that knowledge is derived from observable, empirical phenomena. In line with positivism, this study focused on the collection of measurable, objective data to identify patterns, relationships, and generalizable findings that reflect the reality of the internal audit function in Zambia's public sector. Positivism assumes that objective reality exists independently of human perception and that research should be value-free, meaning that the researcher's biases

should not influence the data collection or analysis process. This philosophy emphasizes the use of scientific methods such as hypothesis testing, statistical modeling, and experimentation to identify causal relationships and draw conclusions about broader trends (Creswell, 2014). In the context of this study, a positivist approach is appropriate because it allows for the examination of factors influencing internal audit performance through quantitative data, providing a reliable basis for understanding the challenges and issues that affect internal auditors' ability to perform their duties effectively.

Research Approach

The quantitative approach for this study involved the use of structured questionnaires to collect numerical data on specific variables influencing the performance of internal auditors within the eight selected ministries. The structured nature of the questionnaires ensured that data was collected consistently across all respondents, allowing for the application of statistical analysis techniques to identify trends and relationships. The survey design was particularly effective in gathering data from a diverse range of internal auditors, management staff, and other key stakeholders, enabling the researcher to identify key challenges such as political interference, resource limitations, and the need for further training and professional development. Data collected from the survey was subjected to rigorous statistical analysis using descriptive and inferential statistics. Descriptive statistics, such as frequencies, percentages, helped summarize the data and provide an overview of respondents' perspectives. Inferential statistics, including correlation analysis, were used to assess the relationships between different variables, enabling the researcher to draw

conclusions about the factors that most significantly impact the operational performance of internal auditors.

By focusing on a quantitative approach, this study aimed to provide objective and measurable evidence regarding the operational performance of internal auditors in Zambia's public sector. The results are expected to provide insights into the underlying factors that impede the effectiveness of internal auditing and suggest practical recommendations for improving the audit function in the public sector in Zambia.

Sampling Techniques

In this study, convenience sampling was employed as the sampling technique. This non-probability sampling method was chosen because it allows for the selection of participants based on their availability and accessibility, making it an efficient way to gather data within the time and resource constraints of the study (Etikan, Musa, & Alkassim, 2016). Convenience sampling enabled the researcher to easily access a range of internal auditors, audit managers, and relevant stakeholders from the selected public sector ministries who were readily available to participate in the study. While this method may not guarantee a fully representative sample, it provided practical advantages in obtaining data from a broad group of respondents, which was crucial for addressing the research objectives related to the operational performance and challenges faced by internal auditors in the public sector (Marshall, 1996).

Sample Size

The sample size for this study was determined using the Cochran sample size formula, a widely used method for calculating sample sizes in research studies. This formula allows for the estimation of an ideal sample size based on the desired confidence level, margin of error, and estimated proportion of the target population. For this study, a confidence level of 95% and a margin of error of 5% were selected, ensuring that the findings will be statistically reliable and representative of the broader population of internal auditors and stakeholders in the public sector.

The sample was drawn from internal auditors working within the Ministries, as well as managers and senior officials who are involved in or impacted by the internal audit process. This sampling approach ensures that the study captures a comprehensive view of the challenges faced by auditors at various levels, from operational staff to senior management. By applying this methodology, the study will produce data that reflects the experiences and perceptions of a wide range of individuals involved in the audit process, allowing for an in-depth analysis of the factors influencing internal audit performance in Zambia's public sector.

With the application of the Cochran formula, the target population for this study was identified as employees in the following ministries under control unit and audit departments: The Ministry of Lands and Natural resources, Ministry of Home Affairs, Ministry of Agriculture, Ministry of Health, Ministry of Education, Ministry of Foreign Affairs, Ministry of Justice and Ministry of works and supply, The average having 20 employees each including internal auditors, senior management, and managers from various departments, which totalled 160 employees. Using the Cochran formula and assuming a 95% confidence level and a 5% margin of error, the study determined that the sample size needed to obtain statistically significant results

was 115 respondents. This sample size was carefully selected to ensure the robustness of the findings and to provide a representative and reliable analysis of the challenges faced by internal auditors in the Ministry. The selection of 115 respondents was aimed at ensuring that the data collected would be both representative of the broader population and sufficient to allow for meaningful statistical analysis.

n_0 = Sample size and n = True sample

$$n_0 = \frac{Z^2 P(1-p)}{e^2}$$

$$= \frac{1.96^2(0.5)(1-0.5)}{0.05^2} = 384.16$$

$$n = \frac{n_0}{1 + \frac{n_0 - 1}{N}}$$

$$n = \frac{384.16}{1 + \frac{384.16-1}{160}} = 113$$

respondents and applying an ideal number of 115 respondents

Data collection method

Primary sources were utilized to collect firsthand data directly from the field and from selected respondents from the eight ministries. These sources enabled the researcher to directly address the research questions posed in the study. In terms of data collection methods, questionnaires were the primary tool used, consisting mostly of close-ended questions administered in person to ensure a systematic and structured approach. According to Dantzer and Hunter (2000), self-administered questionnaires are an effective method for collecting self-reports on opinions, attitudes, beliefs, and values. Secondary data was also collected from published sources such as textbooks, journals, reports, and corporate websites, to supplement the primary data and provide a broader context for the research.

The questionnaire used in this study featured close-ended questions that employed a five-point Likert scale. The first section of the questionnaire gathered demographic information from the participants, including details such as age, gender, and job position within the organization. For each statement, respondents were asked to indicate their level of agreement, with options ranging from 1 (strongly disagree) to 5 (strongly agree). Secondary data was also sourced from published literature, including books, academic articles, journals, and relevant organizational reports, all of which provided important background information and further enriched the study.

Data collection procedure

The data collection process involved the use of a self-administered structured questionnaire. The researcher first obtained permission from the The Ministry of Lands and Natural resources, Ministry of Home Affairs, Ministry of Agriculture, Ministry of Health, Ministry of Education, Ministry of Foreign Affairs, Ministry of Justice and Ministry of works and supply to carry out the study within their premises. Once permission was granted, the researcher

approached the selected respondents and briefed them on the study's objectives. Participants were informed of the study's purpose and assured of confidentiality before completing the questionnaire. The questionnaires were distributed during business hours, and respondents were given adequate time to fill them out at their convenience. To ensure completeness and minimize data loss, the researcher provided follow-up reminders for any missing or incomplete responses.

Data analysis

A quantitative method was used to analyze the collected data, facilitated by the Statistical Package for Social Sciences (SPSS) software. SPSS is a widely used tool for managing and analyzing quantitative data, offering robust tools for both descriptive and inferential statistical analysis. Once the data was entered into SPSS, the initial step involved summarizing the data using frequency tables, which outlined the distribution of responses across various questions. This step provided an overview of the data's general trends.

The data was then categorized into common themes based on the responses, allowing for further analysis of patterns and relationships. Descriptive statistics, including frequencies, percentages, and central tendency measures (mean, median, mode), were used to analyze the data. Additionally, inferential statistics, such as correlation analysis, were employed to examine relationships between variables and assess the statistical significance of the observed patterns. The findings were then presented through visual aids such as graphs and charts, which provided a clear and accessible representation of the results.

Validity

Validity in this study refers to the extent to which the research instruments accurately measure what they are intended to measure. According to Kothari (2004), validity involves the accuracy and appropriateness of the measuring instrument in addressing the research objectives. The study used face validity as the primary type of validity, which was established through pre-testing, rewording, and re-evaluation of the instruments used for data collection (Hardy & Bryman, 2004). A pilot study was conducted prior to the main data collection, which revealed that respondents required additional time to complete the questionnaires and frequent reminders. This feedback was taken into consideration to refine the data collection process for future use, enhancing the efficiency and effectiveness of the survey.

Ethical considerations

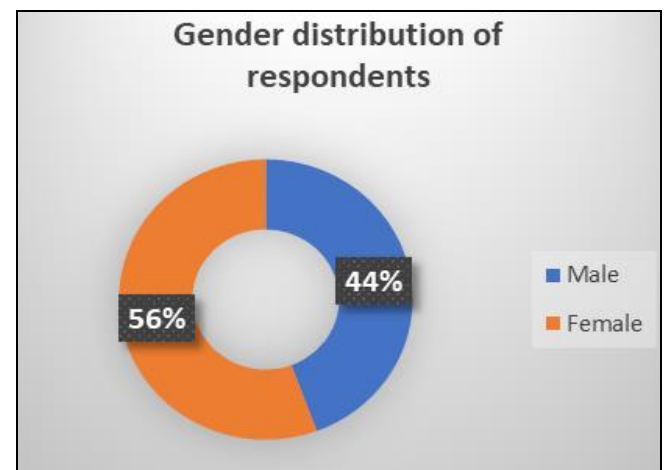
The research adhered strictly to ethical standards, ensuring that the study was conducted in an ethical, transparent, and respectful manner. Before data collection began, the respondents were fully informed of the study's objectives and purpose. They were assured that their participation would be voluntary, their responses would remain confidential, and their anonymity would be protected. Ethical guidelines were maintained throughout the study to safeguard the well-being of all participants. The researcher ensured that no harm was caused to participants, and no personal or sensitive information was disclosed beyond what was necessary for the study.

An introductory letter was obtained from the eight ministries to facilitate the research process. This letter served to clarify the researcher's intentions and ensure transparency with both participants and the institution. The researcher also adhered to intellectual property rights, properly citing and referencing all materials and works referred to throughout the study to uphold academic integrity.

Results

Demographic information

In the figure below, the gender distribution of the sample consists of 51 males and 64 females, with a total of 115 respondents. Males represent 44.3% of the total sample, while females account for 55.7%. The cumulative percentage reaches 100%, indicating that all respondents are accounted for. The data suggests a higher representation of females in the sample compared to males. This gender distribution provides insights into the sample's demographic composition, which could be relevant for understanding gender-related trends or disparities in the context under study.



Age category

The age distribution of the sample is as follows: 15 individuals (13.0%) are under 25 years of age, 20 individuals (17.4%) fall within the 25 to 34-year age range, and 42 individuals (36.5%) are between the ages of 35 and 44 years. In addition, 16 individuals (13.9%) are within the 45 to 54-year age bracket, and 22 individuals (19.1%) are above 55 years of age. The cumulative percentage reaches 100%, indicating that all 115 respondents are accounted for. The largest group within the sample is the 35-44 age range, representing the highest proportion of respondents. The age distribution shows a diverse spread across different age categories, with a notable concentration of individuals within the middle-age groups.

Inferential statistics

Correlation between auditors' performance and lack of resources

The correlation between auditors' performance and the lack of resources is represented by a Pearson correlation coefficient of -0.635, which indicates a strong negative relationship between the two variables. This means that as the lack of resources increases, the operational performance of auditors tends to decrease. The correlation is statistically

significant, with a p-value of 0.000, which is less than the 0.01 significance level. Therefore, we can confidently conclude that the lack of resources has a significant negative impact on the operational performance of auditors in this study. This finding aligns with previous research that has indicated

that inadequate resources such as insufficient staffing, training, and technological tools can severely hinder the effectiveness of internal audit operations (Hassan, 2016; Lee & Lee, 2019). In contexts where auditors face resource constraints, they are less able to carry out comprehensive audits, which ultimately affects their overall performance.

Table 1: Operational performance and lack of resources

Correlations			
		Operational Performance of auditors	Lack of resources
Operational Performance of auditors	Pearson Correlation	1	-.635**
	Sig. (2-tailed)		.000
	N	115	115
Lack of resources	Pearson Correlation	-.635**	1
	Sig. (2-tailed)	.000	
	N	115	115

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

Correlation between auditors' performance and organizational culture

The correlation between auditors' performance and organizational culture is represented by a Pearson correlation coefficient of 0.771, indicating a strong positive relationship between the two variables. This means that as

organizational culture improves, the operational performance of auditors tends to increase. The correlation is statistically significant, with a p-value of 0.000, which is well below the 0.01 significance level, confirming the strength and reliability of the relationship.

Table 2: Operational performance and organizational culture.

Correlations			
		Operational Performance of auditors	Organizational culture
Operational Performance of auditors	Pearson Correlation	1	.771**
	Sig. (2-tailed)		.000
	N	115	115
Organizational culture	Pearson Correlation	.771**	1
	Sig. (2-tailed)	.000	
	N	115	115

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

Correlation between operational performance and political interference

The correlation between operational performance and political interference is represented by a Pearson correlation coefficient of -0.153, which indicates a weak negative relationship between the two variables. This means that as political interference increases, operational performance

tends to decrease slightly. However, the correlation is not statistically significant, as the p-value is 0.102, which is greater than the 0.05 significance level. This suggests that there is insufficient evidence to conclude that political interference has a meaningful impact on auditors' performance in this particular sample.

Table 2: Operational performance and political interference.

Correlations			
		Operational Performance of auditors	Political interference
Operational Performance of auditors	Pearson Correlation	1	-.153
	Sig. (2-tailed)		.102
	N	115	115
Political interference	Pearson Correlation	-.153	1
	Sig. (2-tailed)	.102	
	N	115	115

Conclusions

The conclusion of this study highlights the critical factors influencing the operational performance of internal auditors in the public sector in Zambia. The study found that political interference, lack of resources, and insufficient training are key challenges affecting the effectiveness of internal audit operations. The results indicate a strong negative relationship between the lack of resources and auditors' performance, suggesting that resource constraints, including insufficient staffing, funding, and technological support, significantly hinder auditors' ability to conduct thorough and effective audits. This finding aligns with existing literature, which highlights the impact of resource limitations on the quality and scope of audits in the public sector. Additionally, the study revealed that political interference is perceived by most respondents as a significant barrier to audit effectiveness, supporting previous research that underscores how political pressure can compromise the independence and objectivity of internal auditors. Furthermore, the lack of professional training was identified as another critical challenge, with many respondents reporting inadequate training opportunities, which limits their ability to stay updated on the latest auditing techniques and best practices.

The findings of this study have important implications for the ministries in the public sector in Zambia, as well as for other public sector organizations facing similar challenges. It is clear that addressing these barriers is essential to improving the operational performance of internal auditors. First, reducing political interference through stronger institutional safeguards and promoting the independence of auditors can enhance the credibility and effectiveness of audits. Second, providing adequate resources such as sufficient staffing, funding, and modern audit tools will enable auditors to carry out their work more efficiently and thoroughly. Finally, investing in continuous professional development and training will equip auditors with the skills necessary to meet the evolving demands of their roles.

Recommendations

Based on the findings of this study, several recommendations can be made to improve the operational performance of internal auditors in the public sector in Zambia and other similar public sector organizations:

Enhancing Auditor Independence: To address the issue of political interference, it is crucial to establish stronger institutional frameworks that protect the independence of internal auditors. Clear policies and regulations should be implemented to limit external influence, ensuring that auditors can perform their duties without fear of political pressure. Regular audits of political influence on auditing processes should also be conducted to detect and prevent any undue interference.

Resource Allocation: The study has shown that a lack of resources significantly impedes the operational performance of auditors. It is, therefore, essential for the Ministry to allocate sufficient resources for internal auditing activities. This includes increasing the budget for audit functions, providing adequate staffing levels, and ensuring access to modern audit tools and technologies. Adequate resources will enable auditors to perform comprehensive audits, reducing inefficiencies and improving the quality of audit outcomes.

Investing in Professional Training: A lack of training was identified as a key challenge for internal auditors. To improve their effectiveness, the Ministry should invest in regular and targeted professional development programs. These programs should focus on enhancing auditors' technical skills, knowledge of auditing standards, and familiarity with the latest audit technologies. Furthermore, auditors should be trained on best practices for navigating complex audit environments and developing expertise in specialized areas, such as data analytics and risk management.

Strengthening Organizational Culture and Leadership

An organizational culture that supports transparency, accountability, and professional ethics is crucial for enhancing audit performance. The leadership within the Ministry should promote an audit-friendly environment, where internal auditors are valued and empowered to perform their roles effectively. Fostering a culture of trust and collaboration between auditors and management can help mitigate potential conflicts and improve overall audit quality.

Promoting Stakeholder Awareness and Engagement

To ensure that the internal audit function is adequately supported, it is important to engage key stakeholders, including government officials, policymakers, and the public, in discussions about the importance of robust internal auditing systems. Raising awareness of the role of internal audits in ensuring accountability and transparency in public sector organizations can garner greater support for the resources and autonomy that auditors need to perform their work effectively.

Monitoring and Evaluation of Audit Processes

Implementing a system for regular monitoring and evaluation of the internal audit function is essential to assess its effectiveness and identify areas for improvement. This system should include performance metrics, feedback from stakeholders, and periodic assessments of audit outcomes. By continuously reviewing audit processes, the Ministry can ensure that internal audits remain responsive to the evolving needs of the organization and effectively address emerging risks.

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