JASAB *Journal of Applied Sciences, Arts and Business*
Published by Christian Service University, Kumasi (Ghana)

Volume 1 (2) 148 – 165, November 2025 | ISSN: 3093-4540 (Online); 3093-4559 (Print)
The article is published with Open Access at: https://jasab.csuc.edu.gh/index.php/jasab/index.
DOI: https://doi.org/10.63882/de3pm325

THE EFFECT OF INTERNAL AUDIT ON THE FINANCIAL AND OPERATIONAL PERFORMANCE AT GHANA HEALTH SERVICE: A CASE STUDY OF SELECTED HOSPITALS IN THE EJISU-JUABEN MUNICIPALITY

Josephine Kyei Baffour[1] (MPhil), Ernest Obeng[2] (PhD) & Prince Charles Boakye Boadu[3] (MSC)

[123] Christian Service University

ABSTRACT

This paper examines the role of internal auditing in improving accountability and transparency within healthcare institutions, particularly focusing on public hospitals. While the significance of internal auditing is acknowledged, its effectiveness in enhancing financial and operational performance has not been thoroughly investigated. A sample size of fifty employees from three selected government hospitals in the Ejisu-Juaben Municipality of the Ashanti Region was used. Statistical analysis tools such as ANOVA, descriptive statistics and regression analysis were used to show the study's findings on tables and diagrams to ensure comprehensive insights into the effectiveness of internal audits. The findings reveal a significant positive correlation between effective internal auditing practices and enhanced financial and operational performance in the healthcare sector. The study underscores the necessity of integrating robust internal auditing practices within the operational frameworks of healthcare institutions to improve service delivery and organizational accountability.

Keywords: *Internal Audit, Operational Performance, Healthcare, Accountability, Transparency*

Publication History
Date received: 28-02-2025
Date accepted: 11-10-2025
Date published: 19-11-2025

Correspondence
Josephine Kyei Baffour
jkbaffour@csuc.edu.gh

1.0 INTRODUCTION

The healthcare sector is essential for individual and community well-being (Klapkiv et al., 2020). Internal auditing has become increasingly important in healthcare organizations to offer independent assurance on the effectiveness of risk management, control and governance processes (Cloete et al., 2020). Internal auditing plays a crucial role in helping healthcare institutions in Ghana achieve their primary objectives and is integral to public sector governance (Oppong et al., 2023). By conducting internal audits, management can enhance internal controls related to operations, reporting and compliance (Tetteh, 2022). This underscores the significance of internal auditing systems in healthcare organizations, which are crucial for establishing effective control mechanisms. Internal audits function as a financial management tool and enhance accountability and transparency resulting in better service delivery and increased patient satisfaction (Tetteh, 2022; Grima et al., 2023).

Internal auditing is crucial in the healthcare sector, yet it has significant lapses and weaknesses in internal controls, including issues like corruption, lack of transparency and accountability (Chernov & Sornette, 2020). These challenges have increased the focus on internal auditing as a vital mechanism for monitoring and preventing mismanagement in the public sector (Owusu & Owusu Boateng, 2023). Although previous studies on the activities and performance of internal auditors have given much focus to public sector (Abdulai et al., 2021; Tetteh, 2022; Osae, 2023; Sakyi et al., 2023), none of them have tried looking at the performance of these professionals in the quasi-public institutions in Ghana, and more specifically public hospitals in the Ejisu-Juaben Municipality in the Ashanti Region. The study focuses on the impact of internal audits on the financial and operational performance of the Ghana Health Service.

The study's findings are of relevance to policymakers and decision-makers within the healthcare sector in Ghana. By evaluating the effectiveness and impact of internal auditing within the GHS, the study identifies areas for improvement and provide recommendations that can inform policymaking and strategic decision-making processes. This can ultimately lead to the development of policies and initiatives aimed at strengthening the internal audit function and enhancing its contribution to the overall performance of the healthcare system.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

The study employs the Agency and the Human Capital Theory.

The agency theory is relevant because the internal audit function serves as a monitoring mechanism to mitigate the agency problem that arises from the separation of ownership and control in organizations (Chang et al., 2019). The Ghana Health Service (GHS) represents the principal, while the selected hospitals and their employees are the agents. This suggests that the internal audit function helps ensure that the agents (hospital staff) act in the best interests of the principal (GHS) by monitoring their activities, assessing the effectiveness of internal controls, and providing recommendations for improvement (Bernhold & Wiesweg, 2021).

The human capital theory highlights that staff training is crucial in linking internal audit functions to the operational and financial performance of hospitals. Internal auditors, viewed as valuable human capital, improve organisational performance through their specialised skills. Investing in their training enhances audit quality and understanding of hospital operations and risks, ultimately increasing the effectiveness of the internal audit function (Paoloni et al., 2020; Alonso et al., 2021; Harnani et al., 2022; Nwaobia et al., 2023).

2.2 Empirical Review

Internal audit activities have evolved to protect against fraud and asset loss as organizations have become larger and more complex, necessitating decentralization (Maulidi & Ansell, 2022). Management now assesses accounting data internally before making decisions (Afiah et al., 2020). The internal audit profession has expanded rapidly due to the Institute of Internal Auditing's growth

and ongoing research (Amare, 2021). Internal audit effectiveness is crucial for ensuring that the internal audit function achieves its objectives and enhances governance, risk management and control processes. It is defined as the ability of internal audits to provide independent, objective assurance and consulting services that add value to an organization's operations (Institute of Internal Auditors, 2022).

Staff training programs equip internal auditors in healthcare institutions with the necessary competencies to conduct comprehensive and effective audits (Barac et al., 2022). Through continuous professional development and training, internal auditors can stay updated with emerging trends, new regulations and evolving audit methodologies enhancing their ability to identify risks, evaluate controls and provide valuable recommendations (Barac et al., 2022; Akinola et al., 2022).

Evaluating the operational and financial performance of healthcare organizations ensures efficient resource utilization, quality service delivery and long-term sustainability. For example, Mosadeghrad (2021) found that patient satisfaction is a key indicator of operational performance in healthcare organizations since it reflects the quality of care, communication and overall patient experience.

Several studies have used quantitative methods, particularly secondary data analysis and econometric models, to investigate the effect of internal audits on organizational performance in healthcare. Akinola et al. (2022) found that higher internal audit quality correlates with lower accrual earnings management, indicating better financial reporting quality and performance. Likewise, Adika and Adjasi (2022) conducted a survey that revealed a significant positive relationship between internal audit effectiveness and financial reporting quality in Ghanaian healthcare institutions.

Kumi and Owusu-Ansah (2021) utilized a descriptive approach, combining survey data and secondary sources, noted that internal audit departments in Ghanaian public universities faced challenges related to resource constraints, lack of independence and organizational culture, which may also be relevant to the healthcare context.

One of the most critical strategies is to ensure adequate resource allocation and support for internal audit departments which includes providing sufficient funding, staffing and access to specialized expertise (Adika & Adjasi, 2022; Barac et al., 2022).

2.3 Conceptual framework

The explanatory variable, Internal Audit (IA), comprises of operational audits, financial audits, compliance audits, risk management audits and quality assurance. The mediating variable yielding the relationship between internal audit functions and operational and financial performance is Staff Training (ST). Operational Performance (OP) and Financial Performance (FP) are the performance metrics used as a proxy of dependent variables. These encompass assessing patient satisfaction, quality care delivery, efficiency of processes, workforce management, profitability, cost management and cash flow and liquidity metrics.

The conceptual framework is also grounded in the theoretical foundations of Human Capital Theory and Agency Theory. These theories posit that developing, investing and leveraging staff training for internal auditors can improve their audit quality, enhance their understanding of the hospital's operations and risks, and ultimately contribute to the performance of the healthcare facility. Figure 2.1 below shows the study’s conceptual framework.

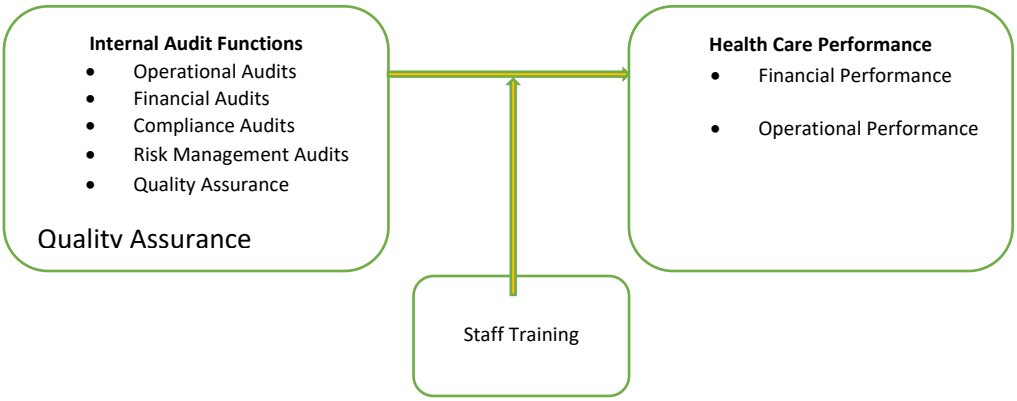

Figure 2.1: Conceptual Framework

3.0 METHODOLOGY

3.1 Study setting

The Ejisu-Juaben Municipality is a vibrant and rapidly developing area located in the Ashanti Region of Ghana. The Municipality has a population of 243,917 inhabitants, with agriculture and trading being the main economic activities (Ghana Statistical Service, 2022). The healthcare infrastructure in the Ejisu-Juaben Municipality is served by a network of public and private healthcare facilities including Onwe Government Hospital, Ejisu Government Hospital and Juaben Government Hospital.

3.2 Study Design, participants and sampling

Population encompasses all employees of the Onwe, Ejisu and Juaben Government Hospitals. Hence, 57 employees make up the population. This study used Bukhari's (2020) model below to determine the sample size. A sample size of 50 was chosen. According to Giner-Sorolla et al. (2019), a sample size ranging from 30 to 500 is suitable for most research.

Hospital	Respondents (n)	Percent (%)
Onwe Government Hospital	15	30.00
Ejisu Government Hospital	20	40.00
Juaben Government	15	30.00
Total	**50**	**100**

Table 3.1: Sample Size Distribution in Selected Hospitals

3.3 Data collection

Data for the study was gathered from primary and secondary sources. Secondary data was gathered from several sources, including publications, journals and articles, and a well-structured questionnaire for the primary data.

3.4 Data Analysis

The main tool used to analyze the study's quantitative data was the Statistical Package for the Social Sciences (SPSS). Statistical analysis tools such as ANOVA, descriptive statistics and regression analysis were used to show the study's findings on tables and diagrams. With this, the following mean value ranges were used on the 5-point Likert scale items on the survey questionnaire: 1.0 – 1.4 = very low, 1.5 – 2.4 = low, 2.5 – 3.4 = average, 3.5 – 4.4 = high, and 4.5 – 5.0 = very high. Furthermore, NVivo, one of the advanced computer-based software for thematic analysis was used to analyze the qualitative data. With this, qualitative data were given codes and categorized into themes using auto-coding and matrix-coding tools.

This study developed an econometric model to analyze the direction and magnitude of staff training mediating the relationship between internal audit functions and operational and financial performance.

The general regression model used is presented below.

$Y_i = \beta_0 + \beta X_i + \varepsilon_i$…… (1)

Where:

$\mathbf{Y_i}$ denotes the dependent variable.

$\boldsymbol{\beta_0}$ denotes the intercept.

The independent research variables, represented by X and their coefficients β, were incorporated into equation (1) to generate the estimated models (2) and (3).

$FP_i = \beta_0 + \beta_1(IA)_i + \beta_2(ST)_i + \varepsilon_i$…… (2)

$OP_i = \beta_0 + \beta_1(IA)_i + \beta_2(ST)_i + \varepsilon_i$…… (3)

Where:

FP denotes Financial Performance

OP denotes Operational Performance

$\boldsymbol{\beta_0}$ denotes the constant term

$\boldsymbol{\beta_1}$ and $\boldsymbol{\beta_2}$, denote the coefficients for the respective explanatory variables.

IA denotes Internal Audits

ST denotes Staff Training, and

ε_i is the error term for omitted variables in the model.

4.0 DISCUSSION

4.1 Demographics

Descriptive and multivariate regression analyses were performed. Of the 50 questionnaires distributed, 46, representing 92%, were considered valid and useful for research analysis (Wu et al., 2022).

Element	Category	Percent
Gender	Male	63.04%
	Female	36.96%
Age (Years)	18 - 30	17.39%
	31 - 40	43.48%
	41 - 50	30.43%
	51 +	8.70%

Table 4.1: Gender and Age Characteristics of Respondents

Table 4.1 presents that the majority (63.04%) of the respondents are males and 36.96% constitute females. This is consistent with a study by Smith et al. (2021) which found that 63% of internal auditors are male. This suggests that the historical gender imbalances in accounting and finance contributed to fewer women in senior internal audit roles.

Furthermore, Table 4.1 indicates that about 82% of the respondents are adults over 30 years. This suggests that most of the employees exceed the age of 30 years.

Highest Education Qualifications of Respondents

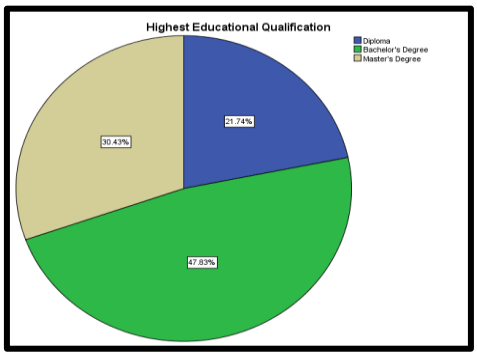

Figure 4.1: Educational Level of Respondents

The majority, representing 47.83% of the respondents, have a bachelor's degree, 30.43% with a master's degree, and 21.74% with diplomas certificates. This supports the findings of earlier studies (Patel, 2021; Thompson & Smith, 2022), which indicate a growing trend toward higher academic qualifications in internal auditing—particularly at the postgraduate level. This shift is likely linked to the increasing complexity and professional demands of the role.

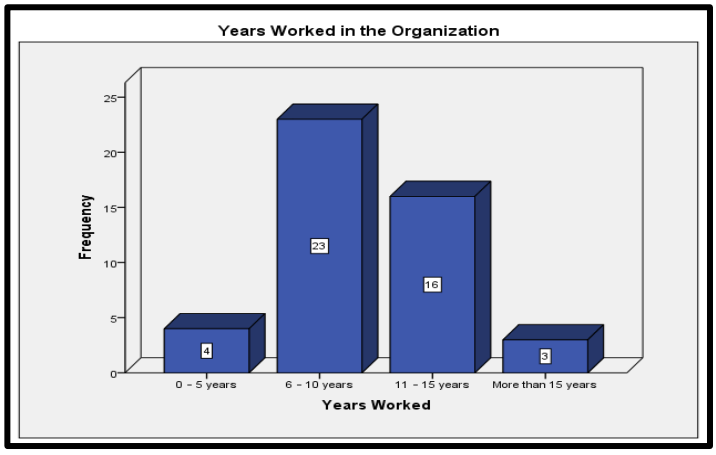

Figure 4.2 depicts the years that respondents have worked in the selected hospitals

The data in Figure 4.2 indicates that 50% of respondents have been with their current organization for 6 to 10 years, while 34.78% have been there for 11 to 15 years. Additionally, 8.70% have been with the organization for 0 to 5 years, and 6.52% for over 15 years. Overall, about 91.30% of respondents have more than 5 years of experience in their current organization and the audit profession, making their insights valuable for understanding the internal auditing environment and the research objective.

Variable	Category	Frequency	Percent (%)
Hospital	Onwe Government Hospital	15	32.61%
	Ejisu Government Hospital	17	36.96%
	Juaben Government Hospital	14	30.43%
Department	Management & Administration	4	8.70%
	Audit Management & Supervision	35	76.09%
	Accounts & Finance	7	15.21%
	Others	0	-

Table 4.2: Other Characteristics of Respondents

Table 4.2 reveals that the respondents were distributed across three different government hospitals in the Ejisu-Juaben Municipal: Onwe (32.61%), Ejisu (36.96%), and Juaben (30.43%). The respondents were classified into three different departments within each hospital: Management & Administration (8.70%), Audit Management & Supervision (76.09%), and Accounts & Finance (15.21%).

4.2 Reliability Test

Cronbach's alpha reliability test was used to test the reliability and validity of the research variables included in the analysis. Cronbach's Alpha values below 0.6 suggest poor survey data, between 0.6 and 0.7 are questionable, the acceptable range is 0.7 - 0.8, and above 0.8 indicate strong survey data (DeVellis, 2017).

Construct	Number of items	Cronbach's Alpha
Internal Audit Effectiveness	10	.924
Impact of Internal Audit Functions		
Financial Performance	5	.862
Operational Performance	5	.916
Staff Training	5	.928
Challenges Affecting Internal Audits	7	.920
Overall Reliability Statistics		**.896**

Table 4.3: Reliability Test using Cronbach's Alpha

The Cronbach's alpha values in the table range from 0.862 to 0.928, demonstrating good internal consistency reliability, as they exceed the accepted threshold of 0.7 (DeVellis, 2017). The overall Cronbach's alpha for the survey data is 0.896, indicating an internal consistency of 89.6%. This suggests that the survey questions are effectively measuring the same broader concept, reflecting excellent reliability in the data analysis.

Objective 1: Effectiveness of Internal Audit Functions in Government Hospitals

The study used statistical elements such as mean and standard deviation values to interpret the data. The first statement, "*The internal audit function at this hospital effectively identifies financial irregularities,*" received a mean score of 4.22 with a standard deviation of 0.728. This high mean score suggests that respondents generally agree with the statement, indicating a strong perception that internal audits detect financial discrepancies. The relatively low standard deviation implies a consistent view among participants, reinforcing the reliability of this finding. This result demonstrates the internal audit function's role in maintaining financial integrity within these hospitals.

Statements	Mean	Std. Deviation
The internal audit function at this hospital effectively identifies financial irregularities.	**4.22**	**0.728**
Internal audits at this hospital provide actionable recommendations to improve operations.	**4.09**	**0.883**
The internal audit department communicates audit findings promptly to hospital management.	**4.25**	**0.639**
There is adequate follow-up on implementing recommendations made by internal audits.	**4.05**	**0.887**
The internal audit function at this hospital operates independently and without undue influence.	**4.00**	**0.649**
Internal audits conducted here are comprehensive and cover all critical areas of hospital operations.	**4.02**	**0.691**
Hospital staff perceive the internal audit function as valuable for improving hospital performance.	**4.35**	**0.363**
Internal auditors at this hospital possess the necessary skills and knowledge to perform their duties effectively.	**4.83**	**0.437**
The internal audit function contributes to the hospital's compliance with legal and regulatory requirements.	**3.89**	**0.417**
Management at this hospital takes internal audit reports seriously and acts upon the findings.	**4.46**	**0.751**

Table 4.4: Assessing the Effectiveness of Internal Audit Functions

Regarding the statement, "*Internal audits at this hospital provide actionable recommendations to improve operations",* the mean score of 4.09 (standard deviation 0.883) indicates that respondents generally agree that internal audits fulfill this role effectively.

Table 4.4 shows that the communication of audit findings to hospital management scored a high mean of 4.25 with a low standard deviation of 0.639, indicating effective and consistent communication to decision-makers. In contrast, the mean score for adequate follow-up on audit recommendations was 4.05 (standard deviation 0.887), suggesting a slightly less favorable outcome and potential areas for improvement. The higher standard deviation in this area indicates varied experiences or perceptions, likely due to differing follow-up procedures across departments or management levels.

The findings reveal that the internal audit function independence has a mean score of 4.00 and a standard deviation of 0.649. This indicates that respondents generally view internal audit function as free from undue influence, which is essential for ensuring objectivity and credibility in audits. The low standard deviation suggests a consistent perception of audit independence among respondents.

The internal audits of hospital operations scored a mean of 4.02, indicating they are comprehensive and cover various critical areas, although there is potential for improvement in ensuring all areas are consistently audited. Additionally, the internal audit function is perceived as valuable for enhancing hospital performance, receiving a high mean score of 4.35 and a low standard deviation of 0.363. This strong and consistent recognition among hospital staff can lead to improved cooperation and better implementation of audit recommendations.

The internal auditors received a high mean score of 4.83 (standard deviation 0.437) for their skills and knowledge, underscoring their competence and professionalism, which are vital for the audit function's effectiveness. The contribution of internal audits to compliance with legal and regulatory requirements scored slightly lower at 3.89 (standard deviation 0.417), indicating potential areas for improvement in this increasingly important area within the healthcare sector.

Additionally, the seriousness with which management addresses internal audit reports scored 4.46 (standard deviation 0.751), reflecting strong management support and responsiveness to audit findings, which is essential for the internal audit function's overall effectiveness.

According to a Senior Hospital Administrator, "*The hospital's risk management team collaborates with internal auditors to identify high-risk areas for thorough examination, enhancing the effectiveness of internal audits. This collaboration ensures audits focus on critical operational aspects, making them more relevant and impactful. The team also interprets audit findings within organizational risks.*" This emphasis on risk management underscores the importance of a strategic approach to auditing. This risk-based approach enhances the relevance and impact of audit findings, making them more valuable to the organization's overall governance structure.

"*The hospital's strong financial control system is crucial for effective internal audits, as it maintains detailed records and implements strict control measures. The financial team's expertise complements auditors' work, providing insights into complex transactions and identifying areas of concern for closer scrutiny.*" (Head of Finance Department).

This response highlights that a well-maintained financial system with clear documentation and robust controls also enhances the reliability of audit findings. This synergy between financial management and internal audit demonstrates how departmental excellence can contribute to the overall effectiveness of governance mechanisms.

Respondents highlight the vital role of the compliance function in internal audits within hospitals. Compliance officers ensure adherence to laws and regulations, identify risks and areas of non-compliance, and interpret audit findings in the context of regulatory requirements. This collaboration between compliance and internal auditing aligns audits with external obligations, thereby enhancing the hospital's governance effectiveness.

A respondent opined, "*I believe that the human resources function plays a crucial, often overlooked role in supporting effective internal audits.*" Other respondents added that the human resource department is responsible for ensuring that staff across the hospital are well-trained in their roles and understand the importance of internal controls. "*We also cultivate a culture of ethics and accountability, which encourages employees to be transparent and cooperative during audit processes*" (Administrator). These findings suggest that fostering a culture of ethics, accountability, and continuous learning creates an environment conducive to effective audits.

The study highlights the effectiveness of internal audits in identifying financial irregularities, with a mean score of 4.22. This supports research by Ahmed et al. (2021) indicating that effective internal audits can detect and prevent financial fraud in the public sector. Additionally, the findings stress the role of internal audits in providing actionable recommendations for operational improvements, aligning with Lenz and Hahn (2022) who view internal auditors as strategic advisors.

The importance of timely communication of audit findings to hospital management received a high mean score of 4.25, echoing Sarens and D'Onza (2023) on the necessity of prompt communication for effective governance in healthcare. However, the lower mean score of 4.05 for follow-up on implementing audit recommendations suggests a need for improvement, a concern also raised by Wilson et al. (2021) in their analysis of internal audit effectiveness in public hospitals.

Findings regarding the perception of internal audit independence (mean 4.00) align with recent research by Chambers and Odar (2022) who argued that maintaining independence is fundamental to the internal audit's ability to provide objective assurance and advice. The high score for the perceived value of internal audits in improving hospital performance (mean 4.35) supports the findings of Roussy and Perron (2023) who identified internal audits as a key driver of organizational performance in public sector entities.

The study found that internal auditors' competence and skills received the highest mean score of 4.83, indicating their critical role in ensuring audit effectiveness. This is consistent with Alzeban and Gwilliam's (2021) research, which identified auditor expertise as a key factor for audit quality in the public sector.

Additionally, the qualitative findings emphasized the necessity of collaboration between internal audit and other functions, such as risk management and finance. This collaborative approach supports the integrated assurance model proposed by Decaux and Sarens (2022), advocating for a holistic strategy to risk management and internal control in complex organizations like hospitals.

Objective 2: Impact of Internal Audit Functions on Hospitals' Performance

The multivariate regression analysis was performed. The explained variables are the financial and operational performances of the selected hospitals, and the explanatory variable is the internal audits. Impact of Internal Audits on the Financial Performance of Government Hospitals

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.808[a]	.654	.638	.752	2.087

a. **Predictors:** (Constant), Internal Audits (IA)

b. **Dependent Variable:** Financial Performance (FP)

Table 4.5: Regression Model Summary[b]

Table 4.5 summarizes the regression model, highlighting its strength and fit. The R-value of 0.808 shows a strong positive correlation between internal audits (predictor variable) and financial performance (dependent variable), indicating that more effective internal audits lead to better financial outcomes.

The R-Square value of 65.4% suggests that internal audits explain a significant portion of the variance in financial performance for government hospitals. The Standard Error of the Estimate is 0.752, indicating a good model fit, while the Durbin-Watson statistic of 2.087 confirms the absence of autocorrelation.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.317	1	2.317	13.029	.000[b]
	Residual	37.972	44	.863		
	Total	40.289	45			

a. **Dependent Variable**: Financial Performance (FP)

b. **Predictors**: (Constant), Internal Audits (IA)

Table 4.6: ANOVA[a]

Table 4.6 provides further evidence of the model's statistical significance. The F-statistic of 13.029 is significant. More importantly, the significance level (p-value) of 0.000 is below the conventional threshold of 0.05. This provides strong evidence to reject the null hypothesis that there is no relationship between internal audits and financial performance.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.424	.243		-1.746	.002
	Internal Audits	1.897	.150	.759	12.663	.000

a. **Dependent Variable**: Financial Performance (FP)

Table 4.7: Regression Coefficients[a]

Table 4.7 reveals a strong positive relationship between internal audits and financial performance in selected government hospitals. The unstandardized coefficient (B) of 1.897, with a standard error of 0.150, indicates that for every unit increase in the effectiveness of internal audits, financial performance increases by 1.897 units. The standardized coefficient (Beta) of 0.759 further highlights the strong influence of internal audits compared to other predictors not included in the model. Additionally, the t-statistic of 12.663 and a p-value of 0.000 provide robust evidence against the null

hypothesis, confirming that the relationship is statistically significant at any conventional level. This reinforces the critical role of internal audits in enhancing the financial health of these hospitals.

Impact of Internal Audits on Operational Performance of Government Hospitals

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.896a	.742	.727	.24018	1.924

a. **Predictors**: (Constant), Internal Audits (IA)
b. **Dependent Variable**: Operational Performance (OP)

Table 4.8: Regression Model Summary[b]

Table 4.8 demonstrates that the internal audit function explains approximately 74.2% of the variance in operational performance in government hospitals, highlighting its significant impact. An R-value of 0.896 signifies a strong positive correlation, suggesting that enhancing internal audits can lead to notable improvements in performance. The Standard Error of the Estimate is 0.24018, indicating good model fit and prediction accuracy. Additionally, the Durbin-Watson statistic of 1.924 suggests no significant autocorrelation in residuals, validating the regression analysis assumptions.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.365	1	2.365	24.601	.000[b]
	Residual	32.599	44	.741		
	Total	34.964	45			

a. **Dependent Variable**: Operational Performance (OP)
b. **Predictors**: (Constant), Internal Audits (IA)

Table 4.9: ANOVA[a]

The analysis involved 46 observations and revealed a significant F-statistic of 24.601, indicating that the model explains more variation than it leaves unexplained. The p-value of 0.000 is well below the 0.05 threshold, providing strong evidence against the null hypothesis of no relationship between operational performance and internal audits. The findings suggest that hospitals with more effective or frequent internal audits demonstrate significantly better operational performance, attributed to improved process efficiency, better resource allocation, enhanced compliance, and timely identification and resolution of operational issues.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.624	.457		3.556	.001
	Internal Audits	.943	.115	.843	4.358	.000

a. **Dependent Variable**: Operational Performance (OP)

Table 4.10: Regression Coefficients[a]

Table 4.10 indicates a strong positive relationship between internal audits and operational performance, with an unstandardized coefficient (B) of 0.943 and a statistically significant p-value ($p < 0.001$). The high t-statistic (4.358) supports the validity of this finding. The standardized coefficient (Beta = 0.843) further emphasizes the significant impact of internal audits compared to other factors. These results suggest that enhancing internal audit functions could effectively improve performance in public healthcare institutions. The study highlights a strong positive correlation between internal audit functions and hospital performance metrics. Internal audits account for approximately 65.4% of the variance in financial performance, with an unstandardized coefficient of 1.897, indicating that better audit practices significantly enhance financial outcomes.

This finding supports research by Abdulle and Ali (2022), which showed a similar influence in public sector organizations. In terms of operational performance, internal audits explain 74.2% of the variance, with a coefficient of 0.943, demonstrating that improved audit functions lead to substantial gains in operational efficiency. This aligns with findings from Onyango et al. (2021), affirming the positive impact of internal auditing on operational performance in public institutions.
The strong correlation between internal audits and financial and operational performance indicates that internal auditing significantly enhances hospital effectiveness. This supports Kimani and Nduati's (2021) assertion that internal audits are crucial for improving efficiency and accountability in the public sector.

The findings are statistically significant ($p < 0.001$), reinforcing their reliability. Similar results were observed by Osei-Tutu et al. (2022), who identified strong links between internal audit quality and performance in Ghanaian public institutions. Additionally, a meta-analysis by Chen and Wang (2023) confirmed that effective internal audit functions improve organizational performance across various public sector areas.

Objective 3: The Moderating Role of Staff Training on the Relationship Between Internal Audits and Financial and Operational Performance of Public Hospitals

A multivariate regression analysis is used.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.759a	.576	.572	.317	1.992
2	.862[b]	.743	.725	.281	2.096

a. **Predictors**: (Constant), Internal Audits (IA)
b. **Predictors**: (Constant), Internal Audits (IA), Staff Training (ST)
c. **Dependent Variable**: Financial and Operational Performance (FOP)

Table 4.11: Model Summary[c]

In Model 1, the R-Square value of 0.576 indicates that Internal Audits account for 57.6% of the variance in Financial and Operational Performance (FOP), with a strong positive correlation (R-value of 0.759). The Standard Error of the Estimate is 0.317, reflecting the average deviation of predicted from observed values. Model 2 introduces Staff Training as an additional predictor, resulting in an R-value of 0.862 and an R-Square of 0.743, meaning that both Internal Audits and Staff Training together explain 74.3% of the variance in FOP. The Adjusted R Square of 0.725 confirms the model's enhanced explanatory power, while the Standard Error of the Estimate decreases to 0.281, indicating improved prediction accuracy. Additionally, the Durbin-Watson statistic shows no autocorrelation in the residuals, supporting the independence assumption in the regression analysis.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.152	1	7.152	16.360	.000[b]
	Residual	39.204	44	.891		
	Total	46.356	45			
2	Regression	13.375	2	6.687	11.442	.000[c]
	Residual	32.981	43	.767		
	Total	46.356	45			

a. **Dependent Variable:** Financial and Operational Performance (FOP)
b. **Predictors:** (Constant), Internal Audits (IA)
c. **Predictors:** (Constant), Internal Audits (IA), Staff Training (ST)

Table 4.12: ANOVA[a]

For Model 1 in Table 4.13, the F-statistic of 16.360 with a significance level of 0.000 ($p < 0.001$) indicates that the regression model with Internal Audits as the sole predictor is statistically significant. This suggests that internal audits have a significant impact on Financial and Operational Performance. Furthermore, Model 2, which includes Internal Audits and Staff Training, shows an F-statistic of 11.442 with a significance level of 0.000 ($p < 0.001$). This result confirms that the combined effect of Internal Audits and Staff Training on Financial and Operational Performance (FOP) is also statistically significant. The changes in the Sum of Squares indicate that Model 2 explains more of the variance in FOP, leaving less unexplained variance (residuals).

Model		**Unstandardized Coefficients**		**Standardized Coefficients**			**Collinearity Statistics**	
		B	**Std. Error**	**Beta**	**t**	**Sig.**	**Tolerance**	**IF**
1	(Constant)	-.424	.243		-1.746	002		
	Internal Audits	1.897	.150	.759	12.663	000	1.000	.000
2	(Constant)	1.624	.457		3.556	001		
	Internal Audits	.943	.115	.843	4.358	000	.995	.005
	Staff Training	.186	.111	.185	1.669	001	.995	.005

a. **Dependent Variable**: Financial and Operational Performance (FOP)

Table 4.13: Coefficients[a]

The analysis in Table 4.13 highlights the relationship between Internal Audits and financial and operational performance (FOP) in government hospitals in the Ejisu–Juaben Municipality. In Model 1, the coefficient for Internal Audits is 1.897, indicating a strong positive correlation with FOP, suggesting that a unit increase in Internal Audits leads to an almost 1.9 unit increase in FOP, supported by a significant t-statistic of 12.663 ($p < 0.001$).

In Model 2, which includes Staff Training as an additional predictor, the baseline constant term rises to 1.624, indicating a positive FOP when both predictors are absent. The coefficient for Internal Audits decreases to 0.943, but it remains statistically significant ($p < 0.001$), reflecting the shared variance with Staff Training. The standardized Beta for Internal Audits increases to 0.843, confirming it as the strongest predictor of FOP.

Staff Training is also a significant predictor with a coefficient of 0.186 ($p = 0.001$), although its impact is less than that of Internal Audits. The standardized Beta for Staff Training is 0.185, allowing for comparison and reinforcing that Internal Audits have a greater relative effect on FOP. Additionally, tolerance values of 0.995 and Variance Inflation Factors (VIF) of 1.005 indicate minimal multicollinearity, suggesting that both predictors are distinct and do not exhibit problematic correlation.

The study demonstrates that internal audits alone explain a substantial 57.6% of the variance in the financial and operational performance of the selected hospitals (R-Square = 0.576). This aligns with recent research by Alqatamin (2022), who found that internal audit quality significantly influences organizational performance in public sector entities. The strong positive correlation underscores the critical role of internal audits in enhancing hospital performance, consistent with findings by Obal and Bassey (2021) in their study of Nigerian public institutions.

Findings present that the combination of internal audits and staff training accounts for 74.3% of the variance in the financial and operational performance of the hospitals. The significant improvement in model fit suggests a synergistic effect between audit practices and employee development, supporting the arguments of Sarens and D'Onza (2021) regarding the importance of human capital in maximizing the benefits of internal audit functions.

The regression coefficients reveal a strong positive effect of internal audits on FOP, indicating substantial improvements in hospital performance, and confirming the value-adding role of audits in public sector organizations (Eulerich et al., 2023). Findings reveal that staff training significantly

moderates the relationship between internal audits and FOP. This effect aligns with Abdullatif et al.'s (2022) findings, emphasizing staff competence's importance in enhancing the effectiveness of internal audit functions. Also, staff training which predicts FOP underscores the importance of continuous professional development in public healthcare management (Kroll & Moynihan, 2021) study. The study found that internal audits and staff training are paired aspects of healthcare effectiveness, aligning with Van der Kolk et al.'s (2022) integrated approach to public sector performance.

Objective 4: Challenges of Internal Audits in Government Hospitals.

Two descriptive statistical elements, mean and standard deviation were used as shown in Table 4.14.

Statements	Mean	Std. Deviation
The internal audit function at this hospital faces challenges due to insufficient staffing.	**3.62**	**0.887**
Limited resources and budget constraints hinder the effectiveness of the internal audit function.	**4.09**	**0.639**
There is a lack of adequate training and professional development opportunities for internal audit staff.	**3.20**	**0.934**
Internal auditors encounter resistance or lack of cooperation from hospital departments.	**2.74**	**0.743**
The internal audit function struggles with maintaining independence and objectivity.	**2.13**	**1.147**
Technological limitations impact the ability of internal auditors to conduct thorough and efficient audits.	**3.93**	**0.586**
There are difficulties in implementing and following up on internal audit recommendations.	**3.09**	**0.879**

Table 4.14: Challenges to the Internal Audit Functions

Findings in Table 4.14 depict that the most pressing challenge identified is the limited resources and budget constraints, with a high mean score of 4.09 and a relatively low standard deviation of 0.639. This suggests a strong and consistent agreement among respondents that financial limitations significantly hinder the effectiveness of internal audit functions. The low standard deviation indicates a high level of consensus on this issue across the surveyed hospitals.

Technological limitations emerge as the second most significant challenge, with a mean score of 3.93 and a standard deviation of 0.586. This highlights the widespread perception that inadequate technological infrastructure impedes the ability of internal auditors to conduct thorough and efficient audits. The low standard deviation again suggests a high level of agreement among respondents on this issue. Insufficient staffing is also a substantial challenge, with a mean score of 3.62 and a standard deviation of 0.887. This indicates that many hospitals struggle with understaffing in their internal audit departments, potentially compromising the scope and depth of audit activities. The slightly higher standard deviation suggests some variability in staffing situations across different institutions.

The lack of adequate training and professional development opportunities for internal audit staff presents a moderate challenge in the selected hospitals, with a mean score of 3.20 and a standard deviation of 0.934. This suggests that while professional development is a concern, its perceived importance varies more widely among respondents than the top challenges. Furthermore, difficulties in implementing and following up on internal audit recommendations show a mean score of 3.09 with a standard deviation of 0.879. This indicates a moderate concern regarding the practical application of audit findings, with some variation in experiences across different hospitals.

Resistance or lack of cooperation among hospital departments is not a major challenge, with a mean score of 2.74 and a standard deviation of 0.743, indicating generally satisfactory interdepartmental cooperation but highlighting the need for improvement in collaboration with internal auditors. The least concerning challenge is maintaining independence and objectivity, scoring a mean of 2.13. However, the high standard deviation of 1.147 reflects significant variability in responses,

suggesting that while it is not a widespread issue, certain institutions or situations may experience greater concerns in this area.

Qualitative analysis based on responses from the respondents reveals several potential actions. For instance, a senior hospital administrator emphasizes the importance of resource allocation and technological advancement. This respondent argues that improved technology would enhance the efficiency and effectiveness of audit processes, addressing resource constraints and technological limitations. Respondents suggest that hospitals should prioritize budget increases for internal audit departments, allowing for the acquisition of advanced audit software and tools. Additionally, they propose partnering with local universities or professional bodies to provide cost-effective training programs for audit staff, thereby addressing the challenge of limited professional development opportunities.

Respondents emphasized the significance of organizational culture and interdepartmental relationships in the context of internal audits. They recommend a hospital-wide awareness campaign to educate staff on the importance and benefits of audits. By fostering a culture of transparency and collaboration, they believe resistance from other departments can be minimized, enhancing cooperation. Additionally, they propose regular interdepartmental meetings to openly discuss audit findings and recommendations, promoting shared responsibility for implementing improvements.

The research findings reveal significant challenges facing internal audits, primarily highlighting limited resources and budget constraints as the most critical issues, in line with Alzeban and Gwilliam (2021). Additional challenges include insufficient staffing and technological limitations, which can hinder audit coverage and effectiveness, as noted by Omboga and Odhiambo (2022) and Lois et al. (2023). Interestingly, the study found that maintaining independence and objectivity was the least challenging aspect, contrasting with Bananuka et al. (2022), who identified independence threats as a major concern in public sector auditing. This difference may require further investigation into the specific practices of the surveyed hospitals. The qualitative analysis suggests potential solutions such as increased resource allocation, technological improvements, and enhanced interdepartmental relationships, aligning with Roussy and Perron (2023), who advocate a holistic approach to improving internal audit functions through organizational culture and stakeholder engagement.

5.0 CONCLUSION

The research highlights the crucial role of internal audit functions in enhancing the financial and operational performance of hospitals in the Ejisu-Juaben Municipality. It shows that effective internal auditing is a strategic tool that transcends mere compliance, significantly improving the overall effectiveness of healthcare institutions. The strong positive correlations between internal audit practices and performance metrics highlight the need for hospitals to focus on developing and implementing robust internal audit frameworks. The research highlights the importance of staff training in improving the effectiveness of internal audits and overall performance in healthcare organizations. Well-trained auditors are better at identifying financial irregularities and operational inefficiencies, which allows them to provide actionable recommendations. The study emphasizes that while internal audits effectively identify issues, there is the need for better communication and collaboration between audit functions and hospital management.

For future research, a longitudinal study examining the long-term effects of improved internal audit functions on hospital performance metrics could offer valuable insights into the sustained benefits of audit practices. Also, comparative research examining the effectiveness of internal audit functions across different types of healthcare institutions (e.g., public vs. private hospitals, urban vs. rural settings) could yield important insights into how contextual factors influence audit efficacy.

REFERENCES

Abdullatif, M., Abed, S., & Abed, R. (2022). The moderating effect of internal auditor competence on the relationship between internal audit quality and organizational performance. *Managerial Auditing Journal*, *37*(2), 277-304.

Abdulle, A. M., & Ali, A. Y. S. (2022). Internal audit and financial performance of public sector organizations: Evidence from Somalia. *Journal of Accounting and Management Information Systems*, *21*(2), 184-203.

Adika, S. K., & Adjasi, C. K. (2022). Internal audit effectiveness and financial reporting quality in Ghanaian healthcare institutions. *Managerial Auditing Journal*, *37*(2), 259-281.

Afiah, N. N., Alfian, A., & Sofia, P. (2020). Effect of employee competence and internal control systems on accounting information quality of the local government in West Java region. *Utopía y Praxis Latinoamericana*, *25*(1), 146-154.

Ahmed, F., Tariq, T., & Ahmed, Z. (2021). Internal audit effectiveness in public sector organizations: Evidence from developing countries. *International Journal of Public Sector Management, 34*(6), 675-689.

Akinola, O. O., Oyewunmi, O. A., & Olusanmi, O. A. (2022). Internal audit quality and accrual earnings management in the healthcare sector. *International Journal of Management and Accounting, 4*(1), 1-15.

Alonso, P., Moscoso, S., & Salgado, J. F. (2021). Human capital theory and the assessment of individual differences in organizational contexts. *Journal of Work and Organizational Psychology*, *37*(3), 167-182.

Alqatamin, R. M. (2022). Internal audit quality and firm performance: Evidence from Jordan. *Cogent Business & Management*, *9*(1), 2034238.

Alzeban, A., & Gwilliam, D. (2021). Factors affecting the internal audit effectiveness: A survey of the Saudi public sector. *Journal of International Accounting, Auditing and Taxation*, *32*, 100254.

Amare, T. (2021). *The Assessment of Internal Audit Practice in the Hotel Industry in Addis Ababa Ethiopia: The Case of Five Star Hotels* (Doctoral dissertation, St. Mary's University).

Bananuka, J., Nkundabanyanga, S. K., Nalukenge, I., & Kaawaase, T. (2022). Internal audit function, audit committee effectiveness and accountability in the Ugandan statutory corporations. *Journal of Financial Reporting and Accounting*, *20*(1), 1-23.

Barac, K., Coetzee, P., & van Staden, M. (2022). Internal audit and risk management in a South African healthcare organization. *Journal of Accounting and Organizational Change, 18*(3), 489-509.

Bernhold, T., & Wiesweg, N. (2021). Principal-agent theory: Perspectives and practices for effective workplace solutions. *A Handbook of Management Theories and Models for Office Environments and Services*, 117-128.

Chambers, A. D., & Odar, M. (2022). A new vision for internal audit. *Managerial Auditing Journal*, *37*(4), 451-469.

Chang, Y., Chen, H., Rainbow, K. C., & Chi, W., (2019). "The impact of internal audit attributes on the effectiveness of internal control over operations and compliance," *Journal of Contemporary Accounting and Economics, Elsevier*, vol. *15*(1), pages 1-19.

Chen, L., & Wang, Y. (2023). The impact of internal auditing on public sector performance: A meta-analytic review. *International Journal of Public Sector Management*, *36*(1), 1-22.

Chernov, D., & Sornette, D. (2020). Critical risks of different economic sectors. Based on the analysis of more than 500.

Cloete, B., Yassi, A., & Ehrlich, R. (2020). Repeat auditing of primary health-care facilities against standards for occupational health and infection control: a study of compliance and reliability. *Safety and health at work, 11*(1), 10-18.

Decaux, L., & Sarens, G. (2022). Implementing integrated assurance: A case study in a public sector organization. *International Journal of Auditing, 26*(1), 117-133.

DeVellis, R. F. (2017). Scale development: Theory and applications (4th ed.). SAGE Publications, Inc.

Eulerich, M., Kremin, J., & Wood, D. A. (2023). Internal audit's contribution to organizational learning and innovation: A meta-analysis. *European Accounting Review*, *32*(1), 139-166.

Ghana Statistical Service. (2022). 2021 Population and Housing Census: *Preliminary Report*. Available at https://censusghana.gov.gh/ Accessed on June 8, 2024

Giner-Sorolla, R., Montoya, A. K., Reifman, A., Carpenter, T., Lewis Jr, N. A., Aberson, C. L., ... & Soderberg, C. (2019). Power to detect what? Considerations for planning and evaluating sample size. *Personality and Social Psychology Review*, 10888683241228328.

Grima, S., Baldacchino, P. J., Grima, S., Kizilkaya, M., Tabone, N., & Ellul, L. (2023). Designing a Characteristics Effectiveness Model for Internal Audit. *Journal of Risk and Financial Management*, *16*(2), 56.

Harnani, S., Rusminingsih, D., & Damayanti, L. (2022). The role of human capital in education, environment, and economics. *Asia Pacific Journal of Management and Education* (APJME), *5*(2), 87-99.

Institute of Internal Auditors. (2022). International Professional Practices Framework (IPPF). https://www.theiia.org/en/standards-guidance/

Kimani, J. N., & Nduati, S. K. (2021). Internal audit practices and performance of county governments in Kenya. *African Journal of Emerging Issues*, *3*(5), 55-71.

Kroll, A., & Moynihan, D. P. (2021). The design and practice of integrating evidence: A framework for understanding the role of evidence in public management reforms. *Public Administration Review*, *81*(6), 1118-1131.

Kumi, E. B., & Owusu-Ansah, W. (2021). Challenges of internal audit departments of public universities in Ghana. *Public Organization Review*, *21*(3), 529-548.

Lenz, R., & Hahn, U. (2022). The future of internal auditing: A Delphi study. *Managerial Auditing Journal*, *37*(3), 352-371.

Lois, P., Drogalas, G., Karagiorgos, A., & Tsikalakis, K. (2023). Internal auditing in the digital era: Opportunities, risks, and challenges. *International Journal of Accounting Information Systems*, 48, 100598.

Maulidi, A., & Ansell, J. (2022). Corruption as a distinct crime: the need to reconceptualize internal control on controlling bureaucratic occupational fraud. *Journal of Financial Crime*, *29*(2), 680-700.

Mosadeghrad, A. M. (2021). Measuring and improving healthcare service quality: An empirical study. *International Journal of Health Care Quality Assurance*, *34*(7), 645-662.

Nwaobia, A. N., Ogundajo, G. O., & Theogene, N. (2023). Internal audit quality and financial reporting quality of listed firms in Nigeria. *Journal of Financial Reporting and Accounting*, *21*(1), 121-143.

Obal, U. E., & Bassey, E. B. (2021). Internal audit function and financial performance of public institutions in Nigeria. *International Journal of Financial Research*, *12*(3), 172-181.

Omboga, J. O., & Odhiambo, A. (2022). Effect of internal audit practices on financial performance of county governments in Kenya. *African Journal of Business Management*, *16*(1), 1-12.

Onyango, P. O., Muturi, W., & Mburu, D. K. (2021). Internal auditing practices and operational performance of state corporations in Kenya. *International Journal of Business and Management*, *16*(3), 61-71.

Oppong, C., Fofack, A. D., & Boakye-Yiadom, E. (2023). Efficacy of public sector audits in the provision of quality healthcare in Ghana. *Journal of Economic and Administrative Sciences*, *39*(4), 1108-1121.

Osei-Tutu, E., Bawole, J. N., & Owusu-Ansah, S. (2022). The influence of internal audit quality on public sector financial management: Evidence from Ghana. *International Journal of Public Administration*, *45*(6), 493-506.

Paoloni, N., Mattei, G., Dello Strologo, A., & Celli, M. (2020). The present and future of intellectual capital in the healthcare sector: A systematic literature review. *Journal of Intellectual Capital, 21*(3), 357-379.

Roussy, M., & Perron, A. (2023). Internal audit effectiveness in public sector organizations: A systematic literature review. *International Journal of Auditing, 27*(1), 94-116.

Sarens, G., & D'Onza, G. (2021). The human side of internal auditing: Exploring the role and competencies of internal auditors in the public sector. *International Journal of Auditing, 25*(2), 354-369.

Tetteh, B. (2022). Investigating the Role of Internal Audit in Risk Management in Selected Public Institutions in Ghana.

Van der Kolk, B., van Veen-Dirks, P. M., & ter Bogt, H. J. (2022). The impact of management control and performance measurement systems on public sector performance: A systematic literature review. *Financial Accountability & Management, 38*(2), 196-222.

Wilson, J. R., Wells, S., & Gupta, P. P. (2021). Challenges in implementing internal audit recommendations: Perceptions from public sector organizations. *International Journal of Government Auditing, 48*(2), 22-27.

About the Authors

Josephine Kyei Baffour lectures at Christian Service University. She has a Master of Philosophy in Accounting from the University of Ghana, a Bachelor of Education in Accounting from the University of Cape Coast, and an associate member of both the Chartered Institute of Accountants Ghana (ICAG) and the Chartered Institute of Taxation Ghana (CITG). Additionally, she holds a certificate in Introduction to Sustainable Finance. Her research focuses on sustainability accounting, taxation and auditing. Josephine aims to advance knowledge in accounting and taxation through research, teaching and practical engagement.

Ernest Obeng is a lecturer at Christian Service University, Ghana, and a PhD Scholar in Accounting at Jiangsu University, China. He holds a Master of Business Administration (Accounting) and a Bachelor of Education (Accounting), both from the University of Education, Winneba – Ghana. His research interests span Financial Reporting, Sustainability Accounting, Auditing, Corporate Fraud, and Green Financing. Ernest has authored and co-authored several academic papers published in highly indexed, peer-reviewed journals. He is deeply committed to advancing knowledge through research, teaching, and practical engagement in the fields of accounting, business, and management.

Prince Charles Boakye Boadu is an internal auditor with the Ghana Health Service. He holds a Master of Science in Accounting and Finance from the Christian Service University, a Bachelor of Science in Banking and Finance from the Ghana Baptist University College and an HND in Entrepreneurship and Finance from the Kumasi Technical University. Charles's goal is to push the boundaries of knowledge and best practices in auditing through a blend of research initiatives and practical engagement, ultimately enhancing the efficacy of internal auditing within the healthcare sector and beyond.