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The Influence of Work Experience and Audit Expertise on Audit Quality in the Public Sector: The Moderating Effect of Professional Qualification

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Abstract:

Purpose: This study analyses the degree to which audit experience and expertise affect audit quality through the moderating effect of Professional Qualification.

Design/Methodology/Approach: The study used a survey research design from a sample of about 400 audit staff of the Ghana Audit Service.

A conceptual framework was developed by adopting the framework for Audit Quality (2014) instituted by the International Auditing and Assurance Board (IAASB) and tested using PLS-SEM method of analysis.

Findings: The study found that in the Public Sector, both audit expertise and experience influence audit quality.

Furthermore, it was also established that professional qualification did not moderate the relationships between work experience, audit expertise and audit quality.

Professional qualification in audit quality was also found to be significant in the study.

Implications/Research Limitation: The results of the study extend and add to the growing empirical research studies on audit expertise, work experience, and audit quality, as well as in the area of public sector auditing. However, the study was limited to only public sector auditors working with Ghana's Supreme Audit Institution (SAI), the Audit Service.

Practical Implication: The study results have the prospect of encouraging top management to intensify the need to consciously institute and implement strategies that incorporate people with the requisite audit expertise and experience into the public sector to maximise and enhance audit quality.

Originality/Value: This study is the first from a public sector perspective that directly examines how audit quality is influenced by audit expertise and experience and how professional qualification moderates this effect.

Nonetheless, this research is distinct from other empirical studies on the basis of the method used and the context of the study.

Keywords: Public sector, experience and expertise, professional qualification, audit quality, PLS-SEM method

1. Introduction

Auditors play a key watchdog role in protecting the public purse and ensuring that public resources are adequately managed and accounted for, especially in the public sector.

Auditors are generally expected to meet specific requirements and qualifications to acquire the needed expertise in the auditing practice. Audit expertise is achieved by a mix of exams, training, education, and professional experience with consistent enhancement of one's knowledge and skills in undertaking audit assignments while maintaining professional standards and principles.

Audit expertise may influence the incentives of public decision-makers to misstate financial records due to electoral pressure or career concerns. The ability of auditors with relevant expertise to detect errors in financial reports and economic data makes it more likely that this valuable information will improve and assist key stakeholders, such as the general public, investors, etc., to make informed electoral and investment decisions.

Audit experience, on the other hand, is one of the key elements that influence audit quality. Experience is generally acquired through a number of years practising as an auditor and the number of diverse and complex audit assignments carried out by the auditor.

In the auditing profession, one of the critical professional qualifications of auditors includes Certified Public Accountants (CPAs), Certified Internal Auditors (CIAs), or other relevant certifications. This study examines whether these

professional qualifications moderate the relationships between work experience, audit expertise and audit quality from the public sector perspective.

2. Empirical Literature Review and Hypothesis Development

2.1. Audit Expertise and Audit Quality

According to auditing literature, auditor expertise is one of the main elements influencing audit quality. Schelker (2012) examined how auditor expertise and economic performance were related and found that state auditors with the required professional qualifications had good credit ratings with less debts and costs. It also found a positive correlation between credit ratings and the least required professional education and an adverse relationship with public costs and expenses. Therefore, auditors who possess the necessary competence improve the accuracy of financial reporting.

Haislip et al. (2016) explored the relationship between auditor IT expertise and internal controls. This particular study sought to focus on establishing whether auditor switching and audit reports highlighting IT weakness were positively related. They also examined the prospective benefits associated with internal controls by substituting auditors with better expertise in environments that are IT-based. They claimed that audit firms with high IT expertise improved IT-based internal controls for their clients.

They found that clients who were able to change their former auditors to auditors with high IT expertise had a greater chance of rectifying material weakness after a year of reporting. Additionally, they found that audit IT expertise was adversely related to both non-IT and IT material weaknesses and hence further recommended that the internal control systems of clients should be enhanced or improved through the expertise of IT auditors.

According to Ettredge et al. (2011), audit-related expertise indicates improved financial systems resulting in audit quality.

Reichelt and Wang (2010) emphasised the relevance of auditing expertise by indicating that both technical competence and technical information, when managed well, can effectively and efficiently increase the probability of detecting errors of misstatement in financial reporting by auditors.

This study adds to the growing auditor expertise literature that analyses expertise as one of the key factors that enhance audit quality, especially in the public sector. This paper will add to the accounting and auditing literature by examining the extent to which auditors with distinct capabilities and knowledge (i.e. expertise) influence audit quality from the Ghanaian public sector perspective. Specifically, the first hypothesis for the study is as follows:

- H₁: Audit expertise significantly influences audit quality in the Public Sector.
- H₂: Professional Qualification significantly moderates the impact of audit expertise on audit quality.

2.2. Audit Work Experience and Audit Quality

Prior empirical studies conducted on audit experience were undertaken either through experimental designs or case studies to ascertain the influence of audit experience on auditors' findings. Huang et al. (2021) undertook a study in Taiwan and found co-working experience to be significantly related to audit quality when the backgrounds of key audit partners are identified.

Calocha and Hewiyanti (2020) conducted a study in Indonesia to examine how the experience of auditors influenced audit quality and found that audit experience significantly influences audit quality.

Nation et al. (2019) explored the elements that impacted audit reports related to compliance audits by assessing how these elements contribute to the level of experience of each audit manager. Further, they investigated how issues such as significant audit observations, non-critical outcomes and complete audit findings are affected by the auditor's experience. The study revealed that the previous experience of an auditor and the significant audit findings or observations are positively related.

Cahan and Sun (2015) studied how audit fees and audit quality were affected by the auditor's experience in China using archival data. The study focused on the audit partner's general experience using Chinese exclusive data by considering the auditor's number of years spent in an audit engagement.

They found that experienced auditors are able to restrain the management of clients' earnings more than inexperienced auditors by lowering absolute discretionary accruals. This, in effect, indicates that clients will pay a premium for high-quality audits performed by more experienced lead auditors, suggesting that the relationship between aggregate audit experience and audit fees is significant.

Libby and Frederick (1990) examined the association between audit experience and data regarding the frequency of financial report misstatements. They found that for experienced auditors, their observations regarding the basis of financial statement error are more precise than for auditors with less experience.

A study by Davis (1996) studied whether the approach adopted by auditors in the selection of important data in enhancing their judgment in controlling and assessing risk is influenced by the experience of the auditor. He found that experienced auditors working with a non-Big 6 accounting firm paid more attention to selecting relevant information than senior auditors. In summary, these previous empirical experimental studies offer valuable views regarding the impact of experience in peculiar situations.

This study focuses on the effect of auditor experience on audit quality from a public sector perspective using data from auditors of Ghana's state auditor, the Ghana Audit Service. Thus, this study seeks to determine whether audit quality is influenced by the auditor's experience, especially in the public sector, using PLS-SEM technique. This work will contribute to the literature by adding to empirical research on audit experience, which has previously produced varied outcomes.

From the above background, this study seeks to test the following hypotheses;

- Hypothesis 3 (H3): *Audit work experience significantly affects Audit Quality.*
- Hypothesis 4 (H4): *Professional Qualification significantly moderates the influence of work experience on audit quality in the public sector.*

2.3. Professional Qualification and Audit Quality

To the best of the author's knowledge, no empirical studies have sought to specifically investigate the impact of professional qualification on audit quality. However, a study conducted in Taiwan by Chen et al. (2020) sought to examine the extent to which professional training and educational qualifications affected audit organisations' operational performance. They established that advanced educational qualifications and professional training significantly contribute to an audit firm's performance. They also found that qualifications associated with academic or education and operational performance were moderated by professional training.

In the Ghanaian Public sector, about 17.5% of the state Auditor's staff (i.e. Ghana Audit Service) have various professional accountancy-related certifications from Institutions such as the Institute of Chartered Accountants, Ghana (ICA), Association of Certified Chartered Accountants (ACCA), Chartered Institute of Management Accountants (CIMA) and other relevant certifications.

This study seeks to establish whether these professional qualifications moderate and influence the relationships between expertise, experience, and audit quality, especially from the public sector perspective. This study, therefore, seeks to test and hypothesise the following;

- Hypothesis 5 (H5): *Professional Qualification significantly contributes to audit quality in the public sector.*

3. Data and Methodology

3.1. Research Design

The study employed a survey research design with a quantitative approach to assess how audit expertise and work experience impact audit quality in the Ghanaian Public Sector. This research design provides trends, attitudes, or opinions of a population through quantitative or numeric descriptions by generalising the sample data collected to the population using structured interviews or questionnaires (Fowler, 2008).

3.2. Sample and Sampling Technique

The sample size included a population of about 2,000 staff with Ghana's Audit Service. A sample of about 400 public sector auditors in Ghana Audit's Service were surveyed to collect the data used for validating and investigating the input factors (i.e., audit expertise and work experience) that influence audit quality. However, 370 respondents out of the total 400 respondents sampled for the study appropriately filled and completed the questionnaires, representing about a 92.5% response rate.

Both stratified and simple random sampling techniques were employed in this study, and a survey questionnaire was employed in the data collection via email and WhatsApp platforms.

3.3. Data Collection and Analysis Method

Data were gathered using structured questionnaires to the target respondents through the use of both emails and WhatsApp platforms. A survey questionnaire was administered to collect data on public sector auditors' perspectives on the elements contributing to audit quality.

A five-point Likert scale was used in measuring the constructs, anchored by 1: strongly disagree; 2: Disagree; 3: Neutral; 4: Agree and 5: strongly agree.

In evaluating the correlation between observed and latent variables, the PLS-SEM was employed by using a reflective measurement framework through the application of Smart PLS 4.0.

An analysis technique such as PLS-SEM helps detect and construct predictive models, especially in establishing causal relationships between latent variables as against linear relationships, which is appropriate in exploratory studies (Pavlou & Fygenon, 2006; Melchor & Julián, 2008).

The Constructs assessed to determine its effects on Audit quality were the audit expertise and work experience. The constructs used in this study were based on the IAASB's Framework for Audit Quality (2014). Audit quality, which is the dependent variable (measured by three items), is evaluated by the input factors or elements, which are second-order constructs comprising Audit expertise (measured by four items) and work experience (measured by two items) as the Independent variables.

The inverse square root method proposed by Kock and Hadaya (2018) indicates the minimum sample size for this study should ideally be 150; however, to achieve more accurate statistical prediction, a sample size of 400 was employed.

With the application of PLS-SEM, it can be used in identifying whether there is a statistical linear relationship among research variables causally than linearly since it is appropriately used in the development of theoretical frameworks. Furthermore, Henseler and Chin (2010) indicate that in establishing the path coefficients and significance levels, sampling is repeated 5000 times through the application of the PLS algorithm and bootstrapping.

Variables	Operational Definition	Source
Audit Quality	<ul style="list-style-type: none"> There is a generally high level of Transparency and Accountability in the financial reporting of public sector Organisations. There is an enhanced degree of confidence of prospective users (including the general public) in our audit reports. Audit Service and its auditors are Independent in carrying out their work to ensure the accountability of government and public sector entities. 	(IAASB, 2014)
Audit Expertise	<ul style="list-style-type: none"> The professional qualification of staff helps improve audit quality. The level of industry-specific knowledge and understanding of the public sector environment by auditors enhances audit quality. The training and ongoing education programs provided to auditors are more likely to produce high-quality audits. The relevant educational background of an auditor provides the foundational knowledge needed for auditing and helps achieve audit quality. 	(IAASB, 2014)
Work Experience	<ul style="list-style-type: none"> The number of years working as a state auditor influences the quality of audit work performed. The number of complex and diverse audit assignments carried out as an auditor enhances audit quality. 	(IAASB, 2014)

Table 1: Details of Questionnaire and References

4. Data Analysis and Results

4.1. Analysis of Background Variables

About 400 staff employed in Ghana's Supreme Audit Institution (SAI), the Audit Service, were sampled for the study, consisting of 135 females and 235 males. The sample, in terms of department size, comprised 100 staff (27 percent) with Educational Institutions & District Assemblies Audit Department (EIDA), 60 staff (16 percent) with Commercial Audit Department (CAD), 90 staff (24 percent) with Central Government Audit Department (CGAD); 45 staff (12 percent) with Performance and Special Audit Department (PSAD); 25 staff (7 percent) with Human Resource, Finance and Administration Department (HR, F& A) and 50 staff (14 percent) with the office of the Auditor General (AG) which includes units such as Internal Audit, Legal, Public Affairs, Parliamentary and Quality Assurance and Monitoring and Evaluation who are undertaking audit engagements across all areas in the public sector. The sample data's frequency distribution is indicated in table 2.

Variables	Background Variables	No. of Staff	Percentage
	Gender		
	Male	235	64%
	Female	135	36%
	Department		
	Educational Inst. & District Assemblies Audit Dept. (EIDA)	100	27%
	Commercial Audit Department (CAD)	60	16%
	Central Government Audit Department (CGAD)	90	24%
	Performance and Special Audit Department (PSAD)	45	12%
	Human Resources, Finance and Admin. Dept. (HR, F& A)	25	7%
	Auditor General's (AG) office	50	14%
	Professional Qualification		
	Yes	170	46%
	No	200	54%

Table 2: Details of Questionnaire and References

4.2. Reliability and Validity Test

The assessment of the regularity of the instrument scale denotes reliability and is evaluated using reliability related to specific items and internal consistency (Hair et al., 1998). Factor loading tests the reliability of the individual

scale items, while both composite reliability (CR) and Cronbach's alpha determine the internal consistency of the latent variables with an ideal value greater than 0.7.

The accuracy of the measurement instrument signifies validity and evaluates indicators such as convergent and discriminant validity. In the determination of the correlation between items with the same element or factor, convergent validity is used. It is also used to identify the average variance extraction (AVE), which ideally should be more than 0.5 (Bagozzi & Yi, 1988). On the other hand, discriminant validity is used to assess the correlation between items with diverse factors, which is tested by applying the AVE's square root value. Thus, according to Fornell and Larcker (1981), discriminant validity is established when the diagonal AVE's square root value exceeds the coefficient value of the correlation relating to the horizontal or vertical column.

The items' factor loadings exceed 0.7, which indicates the ideal standard, as shown in table 3 of this study. Furthermore, all the dimensions' Cronbach alpha and composite reliability values also exceed 0.7, signifying good reliability and internal consistency. An acceptable convergent validity is indicated by each dimension's AVE exceeding 0.5, as shown in table 3. According to Henseler et al. (2015), an acceptable discriminant validity can also be identified using Heterotrait-Monotrait analysis, as shown in table 5, with all the values less than 0.9.

4.3. The Effects of Audit Expertise and Work Experience on Audit Quality and the Moderating Role of Professional Qualification in Moderating These Relationships

The results indicated that Professional Qualification did not influence the relationships between audit expertise and work experience on Audit Quality. Thus, professional qualification did not moderate the impact of audit expertise and work experience on audit quality. The moderating effect of professional qualification on the dimensions, audit expertise, work experience and audit quality is shown in table 6.

Constructs	Variable Items	Factor Loading	Cronbach's α	CR	AVE
Audit Quality					
	AQ1	0.653	0.705	0.752	0.682
	AQ2	0.809			
	AQ3	0.897			
Audit Expertise					
	AE1	0.853	0.843	0.858	0.628
	AE2	0.746			
	AE3	0.897			
	AE4	0.799			
Work Experience					
	WE1	0.880	0.721	0.721	0.782
	WE2	0.888			

Table 3: Estimation of the Measurement Model

Elements	AVE	AE	AQ	Prof. Qualification	WE
AE	0.628	0.826			
AQ	0.682	0.746	0.793		
Professional Qualification		0.245	0.076	1.000	
Work Experience	0.782	0.664	0.671	0.107	0.884

Table 4: Discriminant Validity Test (Fornell-Larcker)

Elements	AE	AQ	Prof. Qualification	WE	Professional Qualification x WE	Professional Qualification x AE
AE						
AQ	0.829					
Professional Qualification	0.269	0.213				
WE	0.846	0.801	0.125			
Professional Qualification x WE	0.399	0.425	0.087	0.671		
Professional Qualification x AE	0.649	0.476	0.197	0.431	0.627	

Table 5: Heterotrait-Monotrait Ratio of Correlations

Dimensions	Mean	Standard Deviation	T-Value	P-Values
AE→AQ	0.602	0.046	13.138	0.000*
Professional Qualification→AQ	-0.187	0.066	2.820	0.005*
WE→AQ	0.280	0.052	5.406	0.000*
Professional Qualification x WE→AQ	0.066	0.087	0.765	0.444
Professional Qualification x AE→AQ	-0.095	0.074	1.292	0.196

Table 6: Summary Table Highlighting Professional Qualification's Moderating Role on the Relationships between Audit Expertise, Work Experience and Audit Quality
*P-Value Is Significant When $P < 0.05$

4.4. Structural Equation Modelling Analysis

The issue of collinearity should be removed when applying the structural equation modelling technique. A Variance Inflation Factor (VIF) greater than 5 may indicate issues associated with collinearity among the constructs (Hair et al., 2011). The results of the data indicating VIF values less than 5 (i.e. between 1.000 and 2.797) imply there are no problems with collinearity among the constructs used in the study. In PLS-SEM, one of the indicators mostly used to assess the overall suitability of the model is SRMR. SRMR values should range between 0 and 1, with SRMR results indicating 0.095. Overall, the model employed in this research, as presented in table 7, is rationally suitable.

Construct Correlation	VIF	Model Fit
AE1	2.061	
AE2	1.805	SRMR=0.095
AE3	2.797	
AE4	2.073	
AQ1	1.424	
AQ2	1.459	
AQ3	1.946	
Professional Qualification	1.000	
WE1	1.465	
WE2	1.465	
Professional Qualification x WE	1.000	
Professional Qualification x AE	1.000	

Table 7: Collinearity Analysis and Model Fit

The path analysis and R^2 explain and analyse the verification of the model with the T-value being used in assessing the validity of the hypothesis. A t-value > 1.96 indicates that the p-value is significant at 0.05 (indicated by *).

As presented in table 8, it can be observed in this study that hypotheses H1, H2 and H3 are confirmed signifying that they are significant at a level where 0.05 exceeds the p-value.

Path Analysis	Path Coefficient	T-Value	P-Value	Hypothesis
AE→AQ	0.602	13.138	0.000*	H1 valid
Prof. Qualification→AQ	-0.187	2.820	0.005*	H2 valid
WE→AQ	0.280	5.406	0.000*	H3 valid
Prof. Qualification x WE→AQ	0.066	0.765	0.444	H4 Not valid
Prof. Qualification x AE→AQ	-0.095	1.292	0.196	H5 Not valid

Table 8: Path Analysis Verification
*P-Value Is Significant When $P < 0.05$

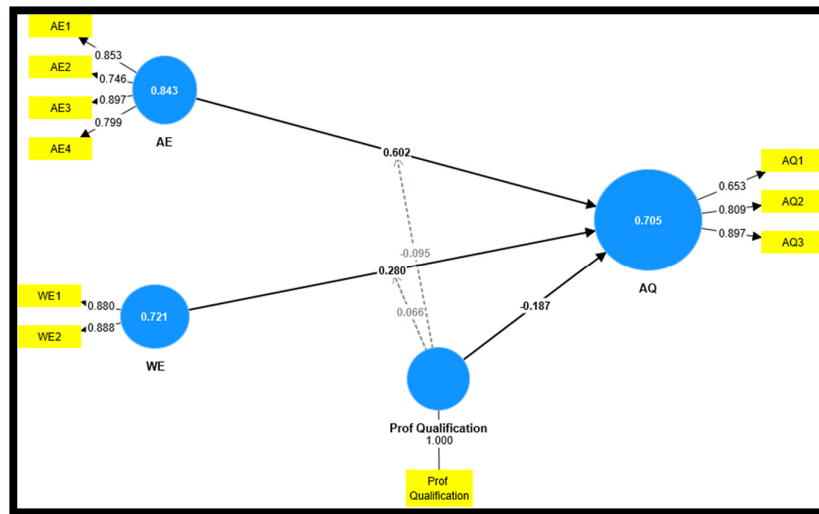


Figure 1: Pictorial Presentation of PLS-SEM Path Analysis Model

The ability of the model to be explained can be estimated using R^2 and should lie between 0 and 1. The explanatory power of the model is dependent on its value, and therefore, an R^2 value of 0.62 implies a moderate explanatory ability. A model with an R^2 of 0.70 indicates a high explanatory ability.

Table 9 displays that about 62.2% of the model has the ability to explain the relationship between audit expertise, work experience and audit quality. Thus, the study’s model highly describes the latent variables and has a moderately greater amount of explanatory ability.

Path Analysis	R^2	R^2 Adjusted	f^2
AE→AQ	0.622	0.617	0.322
WE→AQ			0.075
Prof. Qualification→AQ			0.021

Table 9: The Values of R^2 and f^2

In estimating the endogenous variables by the impact of exogenous variables, the effect size (f^2) is used. An effect size of $0.02 < f^2 \leq 0.15$; $0.15 < f^2 \leq 0.35$ and $f^2 > 0.35$ implies a small effect, medium effect and large effect, respectively. Table 9 displays the effect size (f^2) of AE to AQ to be 0.322, implying a medium-impact explanatory power. The effect size (f^2) of WE to AQ is 0.075, and Prof. Qualification* AQ is 0.021, both indicating a small-impact explanatory power.

Except for the fact that the explanatory results of work experience on audit quality and the professional qualification on audit quality both show a small-effect explanatory capability, the influence of audit expertise on audit quality indicates a medium-effect explanatory ability. Thus, the net effect of the exogenous variable explaining the endogenous variable is relatively medium.

5. Results and Discussion

This research sought to explore the impact of audit expertise and work experience on audit quality with the moderating effect of professional qualification using PLS-SEM model.

Thus, the conceptual framework developed for this research studied how audit quality is influenced by audit expertise and work experience. Additionally, we evaluated how professional qualification also impacted audit quality and how it moderates the effects of audit expertise and work experience on audit quality, especially from the public sector perspective. Key findings from this study are discussed in detail below.

Primarily, the study found that audit expertise significantly impacts audit quality (H1), similar to previous research works such as Schelker (2012) and Gunn & Michas (2018). Therefore, this supports the assertion that the auditors with requisite expertise who are engaged in audit engagements or assignments are critical in achieving audit quality. Thus, the consistent enhancement of one’s knowledge and skills in undertaking audit assignments with professional standards and principles is critical in maximising audit quality, especially in promoting accountability and transparency in the use of public resources.

For instance, in the public sector, directors are responsible for ensuring that audit engagement teams jointly have the suitable skill set and competencies to obtain adequate audit evidence before issuing audit opinions in the form of management letters.

Secondly, this study revealed that auditor experience also influences audit quality (H2). This result is similar to previous empirical research works of Huang et al. (2021), Calocha and Hewiyanti (2020) and Nation et al. (2019). We, therefore, accept H2 since the significance level of 0.05 exceeds the P-value (i.e. $P \leq 0.05$). Thus, experienced auditors are more likely to exhibit consistency in assessing and reducing audit risk, gathering sufficient and appropriate audit evidence,

selecting relevant information and making appropriate professional judgements, which could positively affect audit quality, especially in the public sector.

Auditors with less experience cannot evaluate and minimise audit risk on a consistent basis and collect suitable audit evidence to make an informed professional judgement, which could result in the auditor forming an inappropriate audit opinion, which, in essence, will negatively influence the efficiency and quality of the audit performed.

Additionally, the research also found that professional qualification significantly and negatively contributes to audit quality in the public sector. This outcome differs from the study of Chen et al. (2020), which rather found academic qualification to positively contribute to audit firm performance and, to a large extent, audit quality. Thus, in the auditing profession, having gone through the rigorous process of writing the requisite professional examinations and qualifying as a certified public accountant or auditor negatively affects the critical role of auditors in ensuring that audit quality is achieved efficiently.

Lastly, the study also found that there was no moderating effect of professional qualifications on the effect of audit expertise and work experience on audit quality. However, no prior studies have specifically been found investigating the moderating effect of professional qualifications on the influence of audit expertise and experience on audit quality.

However, the probability of professional qualification to positively contribute to audit quality on a consistent and long-term basis can be maximised through continuous professional development and training of auditors, especially in the public sector.

6. Conclusion

The ability of auditors to play their key watchdog role in protecting the public purse and ensuring that public resources are adequately managed and accounted for, especially in the public sector, depends on their expertise, experience and the requisite professional qualification. These elements are, therefore, vital for maximising audit quality.

This research paper investigated how audit expertise and work experience influenced audit quality from the Ghanaian Public Sector perspective. The research found a positive significant influence of audit expertise and experience (which are input factors) contributing to audit quality. We also established that professional qualifications negatively influenced audit quality in the Ghanaian public sector.

Additionally, the study revealed that professional qualifications do not moderate the relationship between audit expertise, audit experience and audit quality.

Collectively, our analysis suggests that while input factors such as audit expertise and experience play a significant role in enhancing audit quality in the Ghanaian public sector, the professional qualification of an auditor, on the other hand, also negatively affects audit quality.

However, it was also established that the relationship between audit expertise, experience and audit quality is not moderated by professional qualification.

Our study extends the literature that examines how audit expertise and experience affect audit quality and how professional qualifications impact and moderate audit quality, especially from the public sector context. Our conclusions have some implications for improving public sector audit efficiency in Ghana and suggest that Supreme Audit Institutions (SAIs) such as Ghana's Audit Service should pay attention to the recruitment of staff with requisite expertise and experience in the public sector in order to maximise audit quality in their work. It also encourages public sector auditors to work towards acquiring the necessary expertise and experience needed to achieve audit quality and ensure the accountability of public resources. Thus, high-quality audits will help promote the development of the economy by ensuring accountability of public resources by providing assurance that staff employed in the public sector possess an appropriate level of expertise and experience.

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