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# A Systematic Review of Factors Influencing Audit Quality in Public Sector Organizations

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**Abstract**

This study investigates the determinants of public sector audit quality through a systematic literature review. It employs both descriptive and content analysis, utilizing a rigorous article selection process from leading journals based on predetermined keywords. The study addresses a significant gap in the literature, particularly concerning audit quality in public sector organizations, where research has been limited. Analyzing factors that influence audit quality in the public sector is crucial, given the differences between public and private sector audits. For example, public sector audits are mandatory and conducted solely by the Supreme Audit Institution (SAI), whereas private sector audits are contractual and involve competition. The findings indicate that competence, motivation, auditor type, and ethical decision-making significantly affect the quality of public sector internal audits. Meanwhile, external audit quality is influenced by factors such as auditor capability and professional development. These findings carry practical implications for enhancing public sector audit quality. For example, competition, auditor rotation policies, independence, and the legal framework are shown to substantially impact external audit quality within audit organizations. Based on these insights, SAI could improve auditor competence and motivation through continuous education and training. Additionally, the study emphasizes the importance of enhancing competition and rotation policies, staff involvement, leadership, independence, and the legal framework within SAI to strengthen audit quality. The study also highlights the need for further research to build on these findings and explore the complexities of public sector audit quality, offering opportunities for deeper investigation in this area.

**Keywords:** Audit quality, public sector, systematic review, SAI

## 1. INTRODUCTION

Auditing financial statements enhances the confidence of users who rely on the information, reducing the likelihood that the data is inaccurate or misleading (Arens et al., 2021). The level of user confidence in financial statements is determined by the quality of the financial statement audit performed (Albersmann & Quick, 2020; Christensen, 2016; Oladejo, 2020). High-quality audits significantly increase user confidence by ensuring that financial statements are accurate, reliable, and free from material misstatements. For instance, a high-quality audit can provide a clear view of a company's financial health, aiding investors in making well-informed decisions. This, in turn, improves decision-making processes, highlighting the vital role of auditors, researchers, and finance professionals (Akther & Xu, 2020; Barghathi et al., 2018; Taqi et al., 2021).

Similar to the private sector, audit quality in public sector organizations is equally important. Zeyn (2018) emphasized that high-quality internal audits in government are essential for enhancing financial accountability, making financial reports more reliable. These reliable reports serve as a foundation for stakeholders' decision-making, highlighting the practical implications of audit quality. Lustrilanang et al. (2023) also asserted that audit quality in public sector organizations is a key factor in determining financial resilience. As a result, the financial reports generated are more reliable and useful for stakeholder decision-making. Moreover, high-quality audits play a significant role in reducing corruption (DiPietro, 2011). Consequently, the study of audit quality and its influencing factors has drawn substantial interest from researchers.

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Research on audit quality has historically focused on private sector companies, examining various aspects and variables that may affect the audit process. For instance, (Alareeni, 2019) conducted a meta-analysis investigating the relationship between audit firm attributes (such as size, non-audit services, auditor industry specialization, and auditor-client tenure) and specific audit quality indicators. Similarly, Salehi et al. (2019) conducted a meta-analysis exploring the reasons behind inconsistencies in previous research findings regarding factors influencing audit quality. However, there is a notable gap in research concerning the factors that affect audit quality in the public sector. Addressing this gap could enhance our understanding of public sector audit quality, thereby improving auditing practices and governance in public sector organizations.

Research on audit quality in the public sector is gaining significance due to the unique characteristics of public-sector audits. Unlike private-sector audits, public audits are monopolized, with only the Internal Audit Unit (SAI) authorized to conduct government financial audits. This lack of competition among audit institutions presents challenges in applying factors like firm size or industry specialization (Clark et al., 2007). Previous studies on audit quality in public sector organizations have typically focused on testing one or two variables that influence audit quality (Basir et al., 2021; Dung, 2024; Mahdi et al., 2023). However, these studies have not comprehensively examined all potential factors. In contrast, this study seeks to address that gap by summarizing the factors influencing audit quality in public sector organizations based on prior empirical studies, providing a more holistic understanding of the topic. The primary objective is to explore the factors affecting public sector audit quality through a systematic literature review. Understanding these factors is crucial, as it forms the foundation for improving audit quality in the public sector, thereby enhancing financial accountability and transparency.

Our review follows a comprehensive analysis of the methods used by Schmidthuber et al. (2022). The research questions guiding this study are:
RQ1. What are the key determinants of audit quality specific to the public sector, and how do they differ from those in the private sector?
RQ2. How can the identified factors be leveraged to improve audit quality in public sector organizations, leading to greater financial accountability and transparency?

The findings of this study could significantly improve the effectiveness of public sector audits. This study makes a valuable contribution by addressing the gap in the literature on public sector audit quality. Whereas most previous studies have focused on the private sector, this research centers on the public sector, with its unique characteristics and challenges. Through a systematic literature review, this study identifies key factors that influence audit quality in public sector organizations and proposes steps to enhance financial accountability and transparency. The practical implications are substantial, offering guidance to policymakers and auditors in the public sector for developing more effective audit practices.

This article is structured into several main sections. The first section, the Introduction, provides background on the importance of audit quality in the public sector and outlines the objectives of this study. The second section, the Theoretical Framework, reviews key concepts related to public sector auditing and highlights its main differences from private sector auditing. The third section, Research Methodology, explains the data collection and analysis methods used in the study. The fourth section, Results and Discussion, presents the main findings and analyzes them in the context of existing literature. Finally, the article concludes with the Conclusion, summarizing the main findings, discussing their practical implications, and suggesting directions for future research.

## 2. THEORETICAL FRAMEWORK

The concept of public sector auditing is reviewed by Avci (2015). According to Avci (2015), public sector auditing is a systematic process of objectively collecting and evaluating evidence to determine the conformity of economic information with established criteria. Avci (2015) also distinguishes between audit and control, noting that an audit is a post-operation evaluation carried out by an independent party, while control is conducted during operations by individuals connected to the organization. Furthermore, Avci (2015) outlines key principles of public sector auditing, including professional competence, independence, objectivity, and auditor integrity.

Cordery and Hay, 2021) emphasize that public sector audits ensure governments are accountable for their actions and financial impacts, which is crucial for managing scarce public resources and ensuring their efficient use. Similarly, Johnsen (2019) highlights that public sector audits help hold governments and public organizations accountable for their resource use. Johnsen (2019) also points out that audit findings can influence public policy by offering recommendations for improvement and reform. Otalor and Eiya (2013) differentiate the roles of various types of public sector audits: Financial Audit ensures the accuracy and fairness of government organizations' accounting procedures and financial statements; Compliance Audit assesses whether funds are used for their intended purposes and comply with relevant laws and regulations; and Performance Audit examines the efficiency, effectiveness, and economy of government programs, aiming to detect potential corruption. Overall, public sector audits identify weaknesses in internal controls and provide recommendations for improving systems to prevent corruption.

According to Avci (2015), several key differences exist between public and private sector audits. First, the Legal Basis and Engagement: Public sector audits are legally mandated and have broad authority over the accounts, files, and personnel of public institutions. Their primary role is to ensure transparency and accountability. In contrast, private sector audits are contractual and aim to verify the accuracy of financial statements. Second, Audit Objectives: The primary purpose of public sector audits extends beyond transparency; it also aims to improve public administration and ensure effective resource use, reflecting the significant impact of these audits. Meanwhile, private sector audits focus on confirming that financial statements present an accurate reflection of reality. Third, Access to Information: Public sector audit results are generally accessible to the public, fostering transparency, while private sector audit results may be kept confidential to protect trade secrets, emphasizing privacy in business operations. Fourth, Performance Measurement: In the private sector, performance is measured by customer satisfaction and profitability, whereas in the public sector, it is gauged by efficiency, productivity, and compliance with budgetary laws.

Johnsen (2019) also notes significant differences between public and private sector audits in terms of auditor independence, influence, and impact. In the public sector, ensuring auditor independence from political and executive pressures is a central concern, while in the private sector, the focus is on maintaining independence from company management. The most notable difference, however, lies in the influence and impact of these audits. Public sector audits have a profound societal impact, with the potential to shape public policy and public perception, whereas private sector audits primarily influence business operations and investor decisions.

Clark (2007) highlights another distinction between public and private sector audits, particularly in the dynamic nature of the latter. Private sector audits are competitive, conducted by multiple large service providers, creating a dynamic and competitive environment. In contrast, public sector audits are monopolized by the highest audit institutions (SAI). Additionally, the private sector's use of factors such as audit firm size and industry specialization adds complexity to the field. Meanwhile, the public sector's focus on auditor accountability and independence offers a different perspective. Given these differences, the factors determining audit quality in the public and private sectors are likely to differ significantly.

## 3. METHODS

Article collection was conducted based on efficient material collection guidelines (Green, 2010) using initial and final inclusion steps outlined by Wibbeke and Lachmann (2020). The initial inclusion phase aimed to identify potentially relevant articles by reviewing titles, keywords, and abstracts (Booth et al., 2012). Five criteria were used to select relevant articles. First, the article must employ empirical research methods. Empirical research provides measurable and analyzable data, which is essential for producing valid, evidence-based findings. This ensures that the selected articles contribute to the research with factual data and verifiable results. Second, audit quality must be included in the title, abstract, or keywords. This criterion ensures a clear focus on the topic by avoiding studies that only mention audit quality incidentally. Third, the research setting must be in the public sector, ensuring consistency of context so that the study's findings are more applicable to public sector auditing. Fourth, audit quality must be the dependent variable. This ensures the research produces detailed conclusions regarding the factors influencing audit quality, rather than treating it as a secondary or minor variable.

The search followed the method used by Alareeni (2018), involving a search across numerous accounting, auditing, and finance journals indexed in Elsevier ScienceDirect, Emerald, EBSCO, JSTOR, Sage, Scopus, Springer, Taylor, and Wiley. These databases were chosen for their reputation, credibility, and comprehensive coverage of high-quality scientific articles. Their international indexing allows the research to access leading publications globally. By focusing on relevant journals, the literature search becomes more systematic and targeted, increasing the likelihood of finding high-quality studies on audit quality and its determinants. Additionally, many of these databases provide advanced search tools and filters, such as TITLE-ABS-KEY, which help refine search results to relevant studies. This ensures the literature review is conducted efficiently, effectively, and in a structured manner, selecting only high-quality research. Specific and targeted keywords such as TITLE-ABS-KEY ("factors affecting audit quality," "factors impairing audit quality," "variables affecting audit quality," "drivers of audit quality," and "determinants of audit quality") were used to ensure an efficient search process. This approach avoids irrelevant results and narrows the focus to studies directly related to the factors influencing audit quality. This methodology, as shown in Figure 1, enhances the transparency and replicability of the research process, thereby strengthening the validity of the findings.

The steps undertaken were as follows. The initial inclusion step involved screening the titles, keywords, and abstracts of all identified empirical research articles discussing factors affecting audit quality. This stage was designed to efficiently filter relevant articles by focusing on their titles, keywords, and abstracts, allowing irrelevant articles or those not directly addressing audit quality factors to be quickly eliminated. This approach saved time and resources while managing a large volume of articles, demonstrating its effectiveness. This step identified 443 potentially relevant articles for further examination. The next step was to screen for public sector settings by reviewing the abstracts of the articles. Since the research focuses on the public sector, this selection was necessary to exclude articles that did not fit this context. Screening by abstract ensured that only articles related to the public sector were included, aligning the research with its primary focus. This step identified 32 potentially relevant articles for further examination.

The subsequent step involved screening for research articles specifically focused on audit quality. This was essential to ensure that the articles directly addressed audit quality rather than general topics in auditing, maintaining the accuracy and relevance of the research. This step identified 31 potentially relevant articles for further review. The final inclusion step involved a full-text review of the 31 articles identified. This extended screening process provided a deeper evaluation of each article to confirm that its methods, results, and analysis met the research criteria. This step also ensured that audit quality was consistently used as the dependent variable, which is crucial for the study's validity and reliability. The researcher's expertise played a critical role in this meticulous verification process. As a result, 24 relevant articles were identified for analysis, enhancing the reliability and robustness of the research findings.

This study excluded non-English language articles. While excluding non-English articles may lead to an overrepresentation of perspectives from English-speaking countries—particularly those focused on practices and contexts in developed countries such as the United States, the United Kingdom, and Australia—this could reduce the generalizability of the results, especially in global or developing country contexts where audit practices may differ. However, English is widely regarded as the universal language of academic publication, and the majority of high-quality and highly cited research is published in English. By focusing on English-language articles, the study ensures access to research that is not only highly relevant but also credible, thus supporting the validity of the findings.

In this study, two types of analyses were conducted on all selected articles: descriptive analysis and content analysis. Descriptive analysis was used to examine the frequency of categories and identify patterns within the selected articles. Content analysis, a mixed-method approach, combined the assignment of analytical categories to key text segments with quantitative analysis of the frequency of those categories (Mayring, 2014). We qualitatively analyzed the selected papers to identify their research focus, design, and key findings, followed by a full-text analysis to identify factors influencing public sector audit quality.

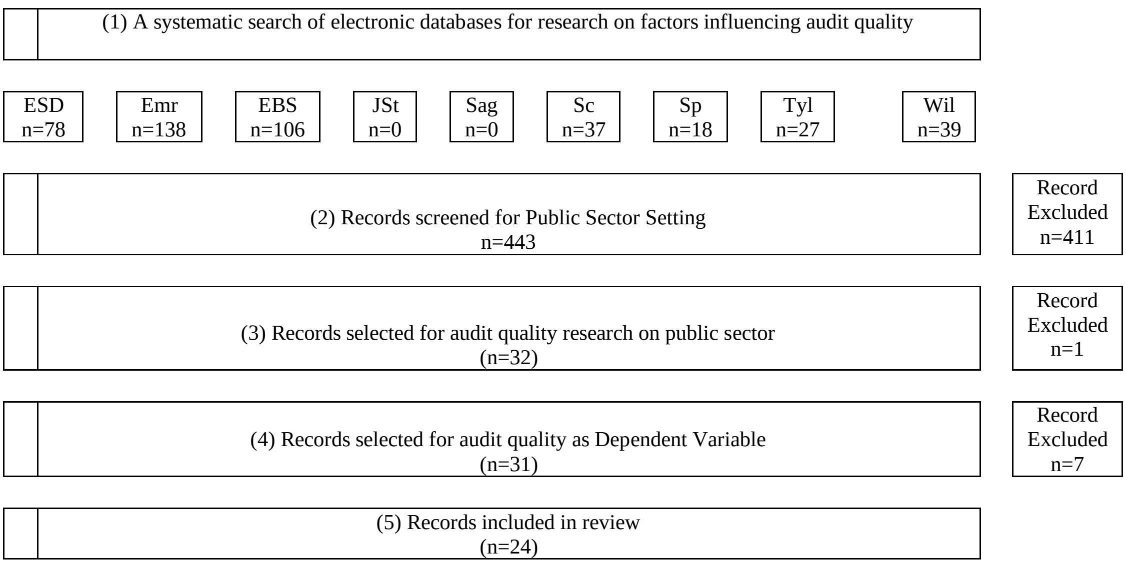


Figure 1: Flow-diagram search strategy

# 4. RESULT AND DISCUSSION

## 4.1. Result of Systematic Literature Review

### 4.1.1. Characteristics of sample articles

#### 4.1.1.1. The emergence of research on factors influencing public sector audit quality

Figure 2 illustrates the temporal development of research on factors affecting public sector audit quality, based on the number of publications per year. International articles on this topic have been published since 1992, with a steady growth pattern. Up until 2017, only one article per year was published. However, in 2018, research on public sector audit quality factors began to increase, peaking in 2022 with five articles published. From 1990 to 2015, the number of articles remained below one per year. However, starting around 2015, the number of publications increased significantly. Between 2020 and 2025, the number of articles dramatically surpassed five, indicating a significant surge in interest and productivity. Following this peak, the number of publications declined to about two. This trend illustrates a notable rise in productivity and interest in publishing research on factors affecting public sector audit quality over the examined period.

Furthermore, the breadth of the research is evident in the number of influential articles based on citations. The article by Deis and Giroux (1992) is particularly noteworthy, with 1,191 citations as of August 5, 2024, according to Google Scholar. This extensive citation count underscores the significance of their work. Several other frequently cited articles further highlight the depth and scope of research on this topic. Table 1 lists the most frequently cited articles, all of which have been cited over 100 times.

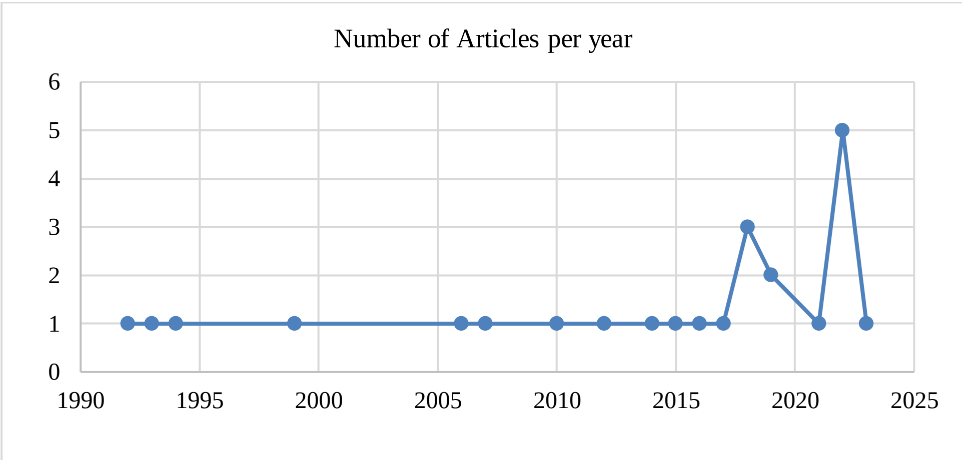


Figure 2. Number of Articles per year

Table 1 Most cited articles

| No | Article | Number of Citation |
|---|---|---|
| 1 | Deis, D. R., & Giroux, G. A. (1992). Determinants of Audit Quality in the Public Sector. *The Accounting Review* | 1191 |
| 2 | Lowensohn, S., Johnson, L. E., Elder, R. J., & Davies, S. P. (2007). Auditor specialization, perceived audit quality, and audit fees in the local government audit market. *Journal of Accounting and Public Policy* | 318 |
| 3 | Samelson, D., Lowensohn, S., & Johnson, L. E. (2006). The determinants of perceived audit quality and auditee satisfaction in local government. *Journal of Public Budgeting, Accounting & Financial Management* | 158 |
| 4 | Lee, S.-C., Su, J.-M., Tsai, S.-B., Lu, T.-L., & Dong, W. (2016). A comprehensive survey of government auditors' self-efficacy and professional development for improving audit quality. *SpringerPlus* | 128 |
| 5 | Copley, P. A., & Doucet, M. S. (1993). The Impact of Competition on the Quality of Governmental Audits. *Auditing: A Journal of Practice & Theory* | 117 |
| 6 | Elder, R., Lowensohn, S., & Reck, J. (2015). Audit Firm Rotation, Auditor Specialization, and Audit Quality in the Municipal Audit Context. *Journal of Governmental & Nonprofit Accounting* | 110 |

Note. Citations drawn from Google Scholar 05/08/2024

#### 4.1.1.2. Publication Outlets

This literature review, which focuses on peer-reviewed journal articles addressing factors influencing public sector audit quality, highlights the extensive research on this subject. Table 2 provides a list of the journals that have published the sample articles. A total of 18 different journals were identified. Notably, three journals published more than one article, indicating a concentration of research. The Journal of Governmental & Nonprofit Accounting led with 4 articles, followed by the Journal of Public Budgeting, Accounting & Financial Management with 3 articles, and the Journal of Accounting and Public Policy with 2 articles. The remaining 15 journals each contributed 1 article. These findings demonstrate the depth of research on factors affecting public sector audit quality.

Table 2. Journals publishing articles on factors influencing public sector audit quality

| No | Journal Name | Number of Articles | Journal Quality | |
|---|---|---|---|---|
| | | | Scopus Index | H-Index |
| 1 | Abacus | 1 | Q2 | 53 |
| 2 | Auditing: A Journal of Practice & Theory | 1 | Q1 | 98 |
| 3 | Australasian Accounting, Business and Finance Journal | 1 | Q3 | 21 |
| 4 | Contemporary Economics | 1 | Q2 | 22 |
| 5 | Economics Letters | 1 | Q2 | 125 |
| 6 | European Research on Management & Business Economics | 1 | Q1 | 36 |
| 7 | International Journal of Applied Economics, Finance and Accounting | 1 | Q1 | 23 |
| 8 | Journal of Accounting & Management | 1 | | |
| 9 | Journal of Accounting and Public Policy | 2 | Q1 | 90 |
| 10 | Journal of Economic Sciences: Theory & Practice | 1 | | |
| 11 | Journal of Governmental & Nonprofit Accounting | 4 | | |
| 12 | Journal of Public Budgeting, Accounting & Financial Management | 3 | Q1 | 23 |
| 13 | Management & Accounting Review | 1 | Q4 | 6 |
| 14 | Managerial Auditing Journal | 1 | Q2 | 71 |
| 15 | Problems and Perspectives in Management | 1 | Q3 | 30 |
| 16 | Public Administration Quarterly | 1 | Q3 | 5 |
| 17 | SpringerPlus | 1 | Q4 | 83 |
| 18 | The Accounting Review | 1 | Q1 | 192 |

### 4.1.2. Empirical research on factors influencing public sector audit quality

This section provides a detailed discussion of empirical studies examining factors influencing public sector audit quality. The findings are categorized by referencing two primary documents: the IAASB's Framework for Audit Quality (IAASB, 2014) and the SAI Performance Measurement Framework (SAI PMF) (INTOSAI, 2016). The following section critically evaluates these empirical studies, focusing on their research designs and findings.

#### 4.1.2.1. Methods used

All researchers studying factors influencing public sector audit quality utilized quantitative statistical analysis, including Structural Equation Modeling (SEM), Probit regression models, and Logistic regression models. In total, ten quantitative statistical models were employed across the studies.

#### 4.1.2.2. Data Collection

Based on the practical data sources used in the empirical sample articles, of the 24 articles, 10 utilized archival data, including audit reports, quality control reports, unaudited financial reports, and annual reports, as the basis for their empirical analysis. These readily available data sources provide a strong foundation for the research. Additionally, 8 articles used survey data, 4 articles employed both survey and archival data, 1 article used experimental data, and 1 article combined survey and interview data.

#### 4.1.2.3. Organizational Setting

All of the reviewed articles focus on the analysis of specific countries or organizations, reflecting the diversity of research settings. Of the 24 sample articles, 22 are based on government settings, either at the central or local level, providing a comprehensive view of public sector audits. The remaining 2 articles focus on non-governmental public organizations, offering a unique perspective. McGowan et al. (2018) examine whether institutional regulatory pressures enhance the audit quality of nonprofit hospitals in the United States, representing a significant study in this area. Similarly, Reheul et al. (2017) explore the relationship between individual auditor characteristics and audit opinions in Belgian non-profit organizations, further enriching the research.

#### 4.1.2.4. Theories

A variety of theories have been used to explain the factors influencing public sector audit quality, with some focusing on institutional factors and others on individual auditors. In terms of institutional factors, McGowan et al. (2018) apply Institutional Theory to explain how regulatory pressures affect the audit quality of nonprofit hospitals. Additionally, several authors, including Copley and Doucet, (1993), Gebreyesus (2022), Greenwood and Zhan (2019) use Agency theory to describe how public officials (agents) must be accountable to the government (principal) for resource use and the achievement of public goals. In this context, the auditor’s role as an independent third party is crucial in evaluating the performance of agents and ensuring they act in the principal's interests by conducting high-quality audits, thus playing a vital role in maintaining public sector audit quality.

Theories related to individual auditors in the sample articles include Attribution Theory and Self-Efficacy Theory. Aswar et al. (2021) use Attribution theory to explain how an internal auditor's competence can influence the quality of audit outcomes. Srimindarti et al., (2022) similarly apply this theory to explore how moral reasoning impacts auditors' actions in maintaining audit quality. Self-efficacy theory is used by Lee et al. (2016) to explain how self-efficacy influences individual actions, motivation, and persistence, which in turn affect auditor performance. The authors also investigate mediating factors such as effort, ability, and task difficulty, shedding light on the complexities involved in auditor performance.

Other researchers, such as Mersha et al. (2022), employ multiple theories to explain the factors determining tax audit quality. Agency Theory highlights the auditors' role in ensuring financial statements are free from material errors and in reducing information asymmetry between involved parties(Velte, 2023). Competent and independent auditors are crucial for improving audit quality. Contingency Theory is used to explain that there is no single best method for managing a particular situation. According to this theory, various contextual factors and interactions between auditors and stakeholders influence audit effectiveness (Fiedler, 1978). It also emphasizes the need to adapt the audit approach to specific conditions to achieve high quality, underscoring the importance of flexibility in the field.

Stakeholder Theory explains that the demand for audit services is directly driven by stakeholder participation in a company and third-party requirements for such services (Freeman & Velamuri, 2023). This theory stresses that auditors must meet public expectations by maintaining integrity and independence. Auditors are expected to evolve their practices to align with society's changing expectations and needs. Stakeholder Theory posits that entities engage with more than just their principals and agents; they interact with all parties who have a vested interest in their operations, such as the local community, creditors, bankers, and the government (Hill & Jones, 1992). As a result, there is a greater demand for accurate financial information, placing additional responsibility on auditors to ensure the reliability of financial statements.

It is also worth noting that several articles discuss the factors affecting public sector audit quality without explicitly referring to any particular theory.

### 4.1.3. Empirical Findings

This study categorizes factors influencing audit quality by referencing two primary documents: the IAASB's Framework for Audit Quality (IAASB, 2014) and the SAI Performance Measurement Framework (SAI PMF) (INTOSAI, 2016). The IAASB (2014) groups factors influencing audit quality into five primary elements: Input, Process, Output, Interaction in the Financial Reporting Chain, and Contextual Factors. These elements encompass critical areas such as auditor competence, professional ethics, quality control, and stakeholder interactions, all of which have various attributes. Meanwhile, the SAI PMF provides additional dimensions, focusing on governance, resource management, and support services, which are crucial for public sector audit quality. By combining these two frameworks, this study offers a comprehensive understanding of the factors influencing audit quality across different contexts, with practical implications for professionals.

1. Auditor's values, ethics, and attitudes

Auditors' values, ethics, and attitudes are vital components of audit quality that must be upheld to maintain public trust. These include integrity, objectivity, independence, and professional skepticism—key pillars of the profession. Integrity requires auditors to be honest and steadfast in adhering to professional standards, ensuring they are not swayed by pressure from clients or other parties. This includes honesty in reporting and disclosing audit findings (Hurtt, 2010). A failure to uphold integrity can result in a loss of public trust and damage to the auditor’s credibility.

Objectivity demands that auditors remain unbiased in their evaluation of financial statements. It is closely tied to independence, meaning auditors must maintain an appropriate distance from clients to avoid being influenced by overly close professional or personal relationships (DeAngelo, 1981). Independence is a cornerstone of audit quality, as independent auditors are more likely to provide honest opinions free from the influence of client management.

Professional Skepticism requires auditors to critically assess client information, seeking adequate and relevant evidence, questioning audit evidence, and not readily accepting client assumptions or explanations (Carpenter & Reimers, 2013). A failure to maintain professional skepticism can lead to critical oversights and potential audit failures. The studies that explore auditor values, ethics, and attitudes are briefly presented in Table 3. These studies are highly relevant as they discuss the determinants of public sector audit quality related to values, ethics, and attitudes. Three sample articles—Mahdi et al. (2023), Mersha et al. (2022), and Yuhertiana et al. (2019)—are highlighted in Table 3. Mahdi et al. (2023) focuses on the influence of auditor independence, integrity, and professionalism—factors related to values and attitudes—on public sector audit quality, specifically concerning external public sector auditors. Mersha et al. (2022) examines the determinants of tax audit quality, including values, ethics, and attitudes, using the audit process as a mediator in Ethiopia, with a focus on the Ministry of Revenue. Yuhertiana et al. (2019) explores the impact of ethical decision-making, an ethical factor, on public sector audit quality in the context of internal public sector auditors.

Table 3 Articles about Values, Ethics, and Attitudes

| **Author and Year** | **Title** | **Variables in Articles** | **Factors of IAASB (2014)** | **Institutional Setting** |
|---|---|---|---|---|
| Mahdi et al. (2023) | Moderation of Political Pressure on the Determinants of Audit Quality in the Public Sector: A Study of BPK Auditors for the Maluku and North Sulawesi Regions. | Auditor independence, integrity, and professionalism | Values and attitude | External Auditor |
| Mersha et al. (2022) | Determinants of Tax Audit Quality with Audit Process as the Mediator in Ethiopia: The Case of The Ministry of Revenues | Values, ethics, attitudes | Values and attitude | External Auditor |
| Yuhertiana et al. (2019) | The moderating effect of organizational changes on the influence of ethical decision making on public sector internal auditor performance | Ethical decision-making | Ethics | Internal Auditor |

Auditor values, ethics, and attitudes significantly affect audit quality in both the private and public sectors. According to Mahdi et al. (2023), auditor independence, integrity, and professionalism are key determinants of audit quality. Independence positively impacts audit quality because it enables auditors to act based on evidence without being influenced by political pressure or the audited party. Integrity reflects the auditor's honesty, reliability, and commitment to conducting audits according to high ethical standards. Auditors with high integrity are more likely to detect errors or fraud in financial statements, thereby improving audit quality. Professionalism, which encompasses the auditor's transparent and accountable approach to their tasks, also enhances audit quality. Professional auditors are better equipped to maintain skepticism and accurately complete audit tasks, increasing public confidence in audit results.

However, Mahdi et al.'s (2023) offers a general definition of the research variables without providing more specific limitations. For example, integrity is broadly defined as honesty and responsibility, but there is no detailed explanation of how these elements are applied in the context of public sector audits. A more nuanced definition would help clarify how these variables interact with audit quality. In addition, the measurement of variables is based solely on perception. Relying on respondents' perceptions of independence, integrity, professionalism, and audit quality may reduce the objectivity of the research findings.

However, the potential for more objective measurements, such as using actual audit data or independent evaluations, is significant and could enhance the reliability of the research. This study also does not include control variables that may influence audit quality, such as time pressure, audit team experience, or the level of supervision. Without considering these variables, it is difficult to determine the extent to which the primary variables measured (independence, integrity, competence, and professionalism) affect audit quality without being influenced by other factors.

Mersha et al. (2022) found that values, ethics, and attitudes are critical determinants of public sector audit quality. They concluded that professional ethics, integrity, commitment to rules, and independence play a key role in improving audit quality. The study highlights the importance of auditors maintaining integrity and neutrality throughout the audit process to reduce conflicts of interest and enhance transparency in audit reporting (Mersha et al., 2022). In this context, values, ethics, and attitudes are defined as the professional standards and ethical principles auditors uphold in their duties.

One criticism of this variable is the challenge of objectively measuring ethical aspects and attitudes, as subjective perceptions and the auditor's social environment can influence their judgments. Moreover, different auditors may interpret ethical standards differently, potentially leading to inconsistencies in applying this variable. Future research could explore how auditor ethical values are applied in various cultural and regulatory contexts. Additionally, studies could focus on the impact of ethics training for auditors and its potential to improve audit quality by reducing ethical breaches and enhancing the consistency of audit practices, making these aspects more measurable and objective.

Yuhertiana et al. (2019) emphasize the transformative power of ethical decision-making in auditing. Their research demonstrates that ethical decision-making not only enhances auditor performance but also has the potential to elevate audit quality, offering an optimistic outlook for the field. Ethical decision-making is a powerful tool that can significantly improve audit quality, as auditors who make ethical decisions tend to produce higher-quality audits. For instance, auditors with an ethical orientation of relativism, which prioritizes personal values and cultural norms, may have a different decision-making process than those who follow idealism, which emphasizes universal ethical principles. In the public sector, auditors applying performance audit tools in varied ways make efficiency auditable. The potential of ethical decision-making to enhance audit quality serves as a beacon of hope for the future of auditing, inspiring auditors to continue adhering to ethical practices.

Yuhertiana et al. (2019) use variables such as religious values and religious rules to assess ethical decision-making in auditing. While this approach can provide valuable insights, it also carries the risk of subjectivity and bias, particularly given the diverse cultural and religious backgrounds of individual auditors. It is important to be mindful of this potential bias when considering the role of religious values in audit decision-making. Additionally, not all auditors may prioritize religious values in their professional ethics, which could limit the generalizability of this measure to a broader context.

Moreover, the study focuses on internal public sector auditors, meaning the findings may not be applicable to external public sector auditors, who face different pressures and ethical challenges. Internal auditors in the public sector often contend with ethical dilemmas stemming from their relationships within the organization, particularly in navigating interactions with management and the political environment. These relationships may create conflicts, as their audit reports could influence performance assessments of management or other departments. In contrast, external public sector auditors, who operate outside the audited organization, are more focused on maintaining independence from the auditee and ensuring objectivity in reporting to the public. This focus on the objectivity of external auditors helps reinforce the integrity of their work.

2. Knowledge, Skills, Experience, and Time

According to the IAASB (2014), knowledge, skills, experience, and time are key input factors that influence audit quality. These elements have a significant impact on the effectiveness of audits. Knowledge includes understanding accounting principles, auditing standards, and the specific industry or business being audited. Sufficient knowledge enables auditors to better comprehend the complexities of financial statements and apply appropriate audit procedures in line with established standards. It also allows auditors to identify relevant risks and address potential issues that may arise during the audit process (IAASB, 2014; Suyono, 2012). Skills encompass technical audit skills, communication abilities, risk analysis capabilities, and the application of professional skepticism. Auditors with strong technical skills can conduct audits more efficiently and effectively, utilizing the right tools and making accurate assessments (IAASB, 2014; Suyono, 2012).

Furthermore, experience includes handling complex audits, working with similar clients, and assessing risk and making decisions in uncertain situations. Experienced auditors are generally better equipped to manage complex situations and understand the implications of unusual business transactions. Experience also enables auditors to make more informed decisions based on well-considered judgments (IAASB, 2014). Francis (2011) emphasizes that auditor experience significantly influences audit quality, as more experienced auditors tend to have a deeper understanding of audit risk and are able to provide more critical evaluations of financial statements. Another key factor is time: sufficient time must be allocated to plan, conduct, and review audit work. Adequate time allocation is critical for addressing all aspects of the audit with care. A lack of time can result in rushed audits, where auditors may not have enough time to conduct thorough risk assessments or examine audit evidence comprehensively (IAASB, 2014).

According to Knechel et al. (2015), the amount of time allocated to an audit is closely linked to audit quality, as time constraints often prevent auditors from thoroughly examining audit evidence. DeFond and Zhang (2014) further note that a combination of knowledge, skills, experience, and sufficient time are key determinants of audit quality. Auditors who lack these four elements are more likely to produce lower-quality audits. Table 4 presents studies that discuss the determinants of public sector audit quality related to knowledge, skills, experience, and time. The studies by Aswar et al. (2021), Le et al. (2022), Mahdi et al. (2023), Mersha et al. (2022), Samelson et al. (2006), Srimindarti et al. (2022), Schelker, (2012), and Waymire et al. (2018) provide essential insights into the factors influencing audit quality.

Aswar et al. (2021) conducted a comprehensive study on government internal auditors at the Main Inspectorate of the Supreme Audit Agency, rigorously examining the relationship between competence and audit quality. Le et al. (2022) explored factors influencing audit performance using a risk-based approach (RBA) and independent audit quality in Vietnam, surveying 355 professional auditors. One of the key factors studied was auditor capacity, which is closely related to skills and knowledge. Mahdi et al. (2023) examined audit quality in the public sector, with a specific focus on testing the effect of competence on audit quality. The study was conducted among government external auditors, specifically BPK auditors in Indonesia's Maluku and North Sulawesi regions, involving 123 BPK auditors from the specified area. Mersha et al. (2022) conducted a survey and interviews with tax auditors from the Ethiopian Federal Ministry of Revenues to analyze the determinants of tax audit quality, with the audit process serving as a mediator, focusing on the Ministry of Revenues.

Srimindarti et al. (2022) analyzed whether moral reasoning moderates the determinants of audit quality and tested the effect of competence and time budget pressure on audit quality by surveying 97 auditors from the Supreme Audit Agency in Central Java. Samelson et al. (2006) surveyed 302 local government finance directors to investigate the determinants of audit quality, including auditor skills and auditee satisfaction in local government audits. Schelker (2012) examined the relationship between public auditor expertise and fiscal performance. Waymire et al. (2018) explored differences in single audit findings between state/local governments and nonprofit organizations, as well as variations in audit outcomes across different levels of auditor expertise.

Empirical results from the sample articles indicate that knowledge, skills, experience, and time significantly affect audit quality in the public sector. Aswar et al. (2021), Le et al. (2022), Mahdi et al. (2023), Srimindarti et al. (2022) emphasize that auditor competence or capacity—comprising knowledge, skills, and work experience—has a profound impact on audit quality in the public sector. Auditors with high competence have a deeper understanding of government financial management processes and responsibilities, allowing them to conduct audits more effectively. Their ability to detect errors or fraud and to adhere to auditing standards significantly enhances audit quality (Aswar et al., 2021; Srimindarti et al., 2022). The higher the competence, the more efficiently audit tasks are completed, leading to improved overall audit quality (Mahdi et al., 2023). Auditors with high capacity are also more effective in conducting audit procedures and making risk-related decisions, thereby improving audit quality (Le et al., 2022).

Competence is a crucial element in enhancing audit quality, as it enables auditors to conduct precise and professional audits, ensuring they meet standards and, importantly, allowing them to detect errors more accurately. Aswar et al. (2021), Le et al. (2022), Mahdi et al. (2023), and Srimindarti et al. (2022) define competence or capacity in auditing as the essential abilities and characteristics that auditors must possess to carry out their duties effectively. They measure auditor competence based on personal qualities, general knowledge, and specialized skills, further emphasizing that competence is reflected in the auditor's knowledge, skills, and attitudes in performing audit tasks. This focus on competence as a means of meeting standards reassure the audience about the reliability of public sector audits.

Table 4 Articles about Knowledge, Skills, Experience, and Time

| Author and Year | Title | Variables in Articles | Factors of IAASB (2014) | Institutional Setting |
|---|---|---|---|---|
| Aswar et al. (2021) | Determinants of audit quality: Role of time budget pressure | Auditor competence | Knowledge, skills, and experience | External Auditor |
| Le et al. (2022). | Risk-based approach and quality of independent audit using structure equation modeling - Evidence from Vietnam | Auditor capacity | Knowledge, skills, and experience | External Auditor |
| Mahdi et al. (2023) | Moderation of Political Pressure on the Determinants of Audit Quality in the Public Sector: A Study of BPK Auditors for the Maluku and North Sulawesi Regions. | Auditor competence | Knowledge, skills, and experience | External Auditor |

| Author and Year | Title | Variables in Articles | Factors of IAASB (2014) | Institutional Setting |
|---|---|---|---|---|
| Mersha et al. (2022) | Determinants of Tax Audit Quality with Audit Process as the Mediator in Ethiopia: The Case of The Ministry of Revenues | Knowledge, experience, education, and training | Knowledge, skills, and experience | External Auditor |
| Srimindarti et al. (2022). | Does Moral Reasoning Moderate Audit Quality Determinants? | Auditor competence Time budget pressure | Knowledge, skills, experience, and time | External Auditor |
| Samelson et al. (2006) | The determinants of perceived audit quality and auditee satisfaction in local government | Auditor skills | Skills | External Auditor |
| Schelker (2012) | Auditor expertise: Evidence from the public sector | Auditor Expertise | Skills | External Auditor |
| Waymire et al. (2018). | A Comprehensive Analysis of Findings from Single Audits: The Implications of Auditee Type and Auditor Expertise. | Auditor Expertise | Skills | External Auditor |

Mersha et al. (2022) found that knowledge, experience, education, and training are are key determinants of audit quality improvement in the public sector. Their study, conducted in the context of the Ethiopian Ministry of Revenue, revealed that public sector audit quality is significantly influenced by auditors' technical competence, which includes knowledge of taxation, accounting, and audit standards. Mersha et al. (2022) emphasize that auditors with higher levels of education, extensive work experience, and appropriate training are better equipped to detect and report material errors in financial statements, ultimately enhancing audit quality. In Mersha et al.'s (2022) study, knowledge, experience, education, and training refer to an auditor's expertise in the auditing field and the professional training they have received. Knowledge is measured by the auditor's understanding of audit rules and procedures; experience is assessed based on the length of time the auditor has worked in the field; and education and training are evaluated through the auditor's qualifications and the amount of training they have completed (Mersha et al., 2022).

Criticism of these variables includes the challenge of objectively measuring experience and training. Extensive experience does not always correlate directly with improved audit quality, and formal education may not necessarily reflect technical expertise in specific audit situations. Additionally, not all training programs are of high quality or relevant to the challenges auditors face in the field. Future research could explore the development of more effective and context-specific training that addresses the unique issues in public sector audits. Further research could also investigate the role of modern technology and information systems in auditor training. The integration of modern technology can significantly enhance auditors' competency in detecting errors and fraud, providing real-time data analysis and improving the speed and accuracy of audits.

Meanwhile, Samelson et al. (2006) explicitly examine the effect of auditor skills on audit quality in the local government context. These skills, operationalized as auditor expertise in government accounting and auditing, are measured by the financial director's perception of the auditor's ability to understand the government accounting system and conduct a thorough evaluation of internal control. Proxies used to measure these skills, such as industry experience and the auditor's responsiveness to client scheduling needs, further highlight their importance. The study's findings indicate that auditor skills significantly influence perceived audit quality, with auditors possessing specialized expertise in government accounting and auditing consistently delivering higher-quality audits. This underscores the potential for positive change in the local government context, as skilled auditors are more effective at identifying and addressing the specific challenges faced by government entities, thereby improving the quality of audits performed.

Furthermore, the ongoing debate regarding whether the competence indicator fully captures all aspects contributing to an auditor's performance calls for further exploration. As Mahdi et al. (2023) suggest, competency assessment often emphasize the technical dimension, overlooking non-technical aspects such as communication skills and professional judgment, which can also impact audit quality. This debate highlights the need for future research to examine the effects of different types of specialized training or professional accreditation on audit quality, offering a more comprehensive understanding of auditor competence. By focusing on non-technical factors such as interpersonal skills and the ability to manage work pressure, future research could lead to substantial improvements in audit quality.

Research on the influence of competence on public sector audit quality is relevant for both internal and external auditors, with findings applicable across various contexts. Aswar (2021) conducted research on internal government auditors and found that competence—encompassing knowledge, expertise, and experience—significantly impacted audit quality. This aligns with the findings of Le et al., 2022, Mahdi (2023), and Srimindarti (2022), which, although focused on external auditors, also demonstrated that auditor competence plays a critical role in determining the quality of audits. Both internal and external auditors require technical knowledge, a thorough understanding of regulations, and the skills to accurately assess information. Thus, the conclusions regarding the importance of competence for audit quality apply broadly to both types of auditors, even though their work contexts differ in terms of scope and independence.

Another internal factor proven to significantly affect the quality of public sector audits, as demonstrated by the sample articles, is time budget pressure. This pressure arises when auditors are required to complete an audit within a predetermined time frame (Srimindarti et al., 2022). Srimindarti et al. (2022) found that stringent time pressure can cause auditors to rush through audit procedures or compromise their skepticism in gathering audit evidence. Drawing on attribution theory, Srimindarti et al. (2022) explained that time budget pressure can disrupt the auditor's work program, resulting in a significant operational impact and ultimately affecting the quality of the audit. Auditors' commitment to meeting deadlines can lead to procedural breaches and a decline in audit quality, which may have serious consequences for the public sector.

However, the study's operational definition and measurement of the time budget pressure variable may not fully capture the various dimensions of time pressure experienced by auditors, potentially oversimplifying the actual conditions faced during the audit process. Future research could benefit from using more comprehensive operational definitions and variable measurements, along with diverse methods such as direct observation and time log analysis, to enhance the validity and reliability of time budget pressure assessments.

The findings from Schelker (2012) and Waymire et al. (2018) are particularly important, revealing that auditor expertise is a key determinant of public sector audit quality. For example, Waymire et al. (2018) highlight the role of highly experienced auditors, particularly those specializing in single audits, in uncovering more findings related to large programs. This not only improves accountability but also enhances the quality of audits in public and nonprofit entities (Waymire et al., 2018). Similarly, Schelker (2012) emphasizes the value of professional certifications, such as Certified Public Accountants (CPA), in enabling public sector auditors to detect financial reporting errors with greater accuracy. The result? US states with such auditors tend to enjoy better credit ratings and reduced debt and spending per capita (Schelker, 2012).

Waymire et al. (2018) define auditor expertise as the number of single audits conducted in a year, categorizing auditors with more than 50 audits as "specialists" and those with fewer than 10 audits as having low expertise. In contrast, Schelker (2012) measures auditor expertise based on whether public auditors hold professional certifications such as CPA. Both measures are more quantitative (number of audits or certifications), which may not always reflect the technical quality and ability of auditors in complex audit situations. This opens up intriguing opportunities for further research to explore the role of modern audit technology in enhancing auditor expertise and to investigate how auditor training and education can be more deeply measured in the context of public sector audit quality.

3. Audit Process and Quality Control Procedures

According to IAASB (2014), audit processes and quality control procedures are a series of steps and protocols that auditors and audit institutions must follow to ensure audits are conducted in compliance with applicable professional standards, laws, and regulations. These procedures, which are systematic and standardized, include audit methodology, internal quality control, documentation requirements, and audit quality monitoring and review processes. This structured and consistent approach is essential for ensuring that auditors follow a uniform process, thereby improving audit quality. Strict quality control procedures promote the application of professional skepticism and sound judgment, allowing auditors to more effectively detect and report material errors or irregularities in financial statements. This view aligns with Arens et al. (2021), who argue that audit quality is significantly influenced by the effectiveness of quality control measures, including client selection, audit team rotation, ongoing training, and engagement quality reviews. When these controls are properly implemented, the risk of audit failure is reduced, and the credibility and public trust in audit results are strengthened. Studies discussing the audit process and quality control procedures are briefly presented in Table 5.

Based on Table 5, eleven studies explore the determinants of public sector audit quality related to audit processes and quality control procedures: Copley and Doucet (1993), Elder et al. (2015), Greenwood and Zhan (2019), Raman and Wallace (1994), Lee et al. (2016), Lowensohn et al. (2007), Modlin and Stewart (2014), Motubatse et al. (2018), Samelson et al. (2006), Yuhertiana et al. (2019), and Mersha et al. (2022). Copley and Doucet (1993) examined the impact of competition on public sector audit quality in the context of external government auditors, while Yuhertiana et al. (2019) analyzed this effect in the context of internal government auditors. Elder et al. (2015) and Lowensohn et al. (2007) investigated how audit firm rotation policies affect public sector audit quality in the context of external government auditors.

Greenwood and Zhan (2019) explored the influence of industry specialization, client size, and financial health on public sector audit quality among external government auditors. Raman and Wallace (1994) examined the relationship between state audit budgets and specialized audit inputs, considering factors such as size, complexity, financial risk, and political risk. Modlin and Stewart (2014) and Samelson et al. (2006) analyzed the impact of staff and managerial involvement on audit quality in the context of external government auditors. Motubatse et al. (2018) studied the relationship between leadership, financial management, risk management, and clean audits among external government auditors. Lastly, Lee et al. (2016) examined how self-efficacy, professional development, organizational culture, learning motivation, and training opportunities affect public sector audit quality among external government auditors.

The empirical results of the sample articles highlight the importance of understanding how various attributes of the audit process and quality control procedures significantly impact public sector audit quality. Attributes such as competition, rotation policy, industry specialization, client size and financial wealth, staff or manager involvement, responsiveness, leadership, financial management, risk management, self-efficacy, professional development, organizational culture, motivation to learn, and training opportunities all play crucial roles in determining audit quality. These factors influence audit quality through various mechanisms, such as increasing auditor industry knowledge, fostering accountability and objectivity through rotation policies, and enhancing audit capabilities through professional development and ongoing training.

Table 5 Articles about Audit Process and Quality Control Procedures

| **Author and Year** | **Title** | **Variables in Articles** | **Factors of IAASB (2014)** | **Institutional Setting** |
|---|---|---|---|---|
| Copley & Doucet (1993) | The Impact of Competition on the Quality of Governmental Audits | Competition | Audit Process and Quality Control Procedures | External Auditor |
| Yuhertiana et al. (2019) | The moderating effect of organizational changes on the influence of ethical decision making on public sector internal auditor performance | Competition | Audit Process and Quality Control Procedures | Internal Auditor |
| Elder et al. (2015) | Audit Firm Rotation, Auditor Specialization, and Audit Quality in the Municipal Audit Context. | Audit firm rotation policy | Audit Process and Quality Control Procedures | External Auditor |
| Lowensohn et al. (2007) | Auditor specialization, perceived audit quality, and audit fees in the local government audit market. | Audit firm rotation policy | Audit Process and Quality Control Procedures | External Auditor |
| Greenwood & Zhan (2019) | Audit Adjustments and Public Sector Audit Quality | Industry specialization, size, and financial wealth of clients | Audit Process and Quality Control Procedures | External Auditor |
| Raman & Wallace (1994) | The association between state audit budgets and specialized audit inputs | Size, complexity, financial risk, and political risk | Audit Process and Quality Control Procedures | External Auditor |
| Modlin & Stewart (2014) | Local Government Staff Involvement in The External Audit Process: Reassessing Independent Auditee Satisfaction Levels Among Professionally Administered County Governments | Staff and manager involvement | Audit Process and Quality Control Procedures | External Auditor |
| Samelson et al. (2006) | The determinants of perceived audit quality and auditee satisfaction in local government | Staff and manager involvement Responsiveness | Audit Process and Quality Control Procedures | External Auditor |
| Motubatse et al. (2018) | Drivers of Audit Quality in South African Public Sector | Leadership, financial management, and risk management | Audit Process and Quality Control Procedures | External Auditor |

| Author and Year | Title | Variables in Articles | Factors of IAASB (2014) | Institutional Setting |
|---|---|---|---|---|
| Lee et al. (2016) | A comprehensive survey of government auditors' self-efficacy and professional development for improving audit quality | Self-efficacy, professional development, organizational culture, motivation to learn, and training opportunities | Audit Process and Quality Control Procedures | External Auditor |
| Mersha et al. (2022) | Determinants of Tax Audit Quality with Audit Process as the Mediator in Ethiopia: The Case of The Ministry of Revenues | Audit Process Effectiveness | Audit Process and Quality Control Procedures | External Auditor |

In the SAI PMF (INTOSAI, 2016), financial management and risk management are key dimensions that significantly affect the quality of public sector audits. This dimension emphasizes that SAIs must manage their operations efficiently, economically, and in compliance with applicable laws and regulations. It involves the proper management of financial resources and internal control systems to prevent resource misuse, loss, or mismanagement (INTOSAI, 2016). SAIs must have strong structures and procedures to ensure sound financial management, which includes appropriate budgeting, expenditure control, and accurate record-keeping. Additionally, SAIs should implement effective risk management systems to identify and mitigate potential risks that could affect their performance. By maintaining robust financial controls and risk management, SAIs can minimize operational risks and improve the efficiency and quality of their audits (INTOSAI, 2016). Effective financial management ensures resources are used efficiently, while risk management helps address potential issues that could compromise audit quality. Audits supported by strong risk and financial management are more objective, accurate, and reliable, ultimately enhancing public confidence in the audit results produced by SAIs (INTOSAI, 2016).

Another critical aspect of the SAI PMF is professional development and training. This dimension includes a continuous plan for training and professional development, ensuring that auditors are consistently equipped with the skills needed to perform audits in accordance with international standards and applicable laws (INTOSAI, 2016). According to INTOSAI, SAIs must have a structured training mechanism to enhance auditors' technical skills and personal competencies. This includes internal training on audit standards, direct supervision, membership in professional organizations, and continuous professional development (INTOSAI, 2016). This dimension significantly impacts audit quality, as well-trained auditors are able to conduct more accurate and effective audits in compliance with standards. Ongoing training ensures that auditors remain up to date with the latest audit methods and financial regulations, ultimately increasing the credibility of audit results and public confidence (INTOSAI, 2016).

Copley and Doucet (1993) and Yebba (2022) found that competition enhances audit quality. Copley and Doucet (1993) argue that more audit bids improve quality, as auditors compete not only on price but also on the quality of their audit results. This competition motivates auditors to provide superior service, reduce procedural violations, and increase adherence to professional standards. Yebba (2022) adds that competition incentivizes auditors to improve their services to secure future government audit contracts. Auditors in a competitive market are more likely to maintain their reputation by ensuring reliable and standardized audit results, thereby increasing their credibility with regulators and the public. This competitive pressure encourages auditors to be more thorough, comply with professional standards, enhance internal controls, and maintain audit quality.

Copley and Doucet (1993) define competition as the number of bids received for an audit assignment, with more bids indicating higher competition. They found that a greater number of bids correlates with improved audit quality, highlighting the significant impact of competition on audit outcomes. Yebba (2022) expands on this by measuring competition based on the number of auditors or their specialization in government auditing, noting that competition creates incentives for improving audit quality. However, Copley and Doucet argue that measuring competition solely by the number of bids is insufficient. They emphasize the need to consider factors such as bid quality, auditor reputation, and client relationships to develop a more comprehensive measure of competition. Yebba (2022) also acknowledges that auditor specialization may have a more significant impact on audit quality than the number of bids, reinforcing the need for a broader perspective.

Future research could incorporate data on prior audit quality, auditor reputation, and industry experience to better measure competition. Additionally, research could explore the long-term effects of competition on audit quality, including whether auditors maintain high standards after winning an assignment. This could involve studying auditors' performance over multiple assignments and investigating whether increased competition leads to a "race to the bottom" in audit quality or fosters a culture of continuous improvement.

The next factor is audit firm rotation. According to Elder et al. (2015), audit firm rotation, whether mandatory or optional, is a policy that can significantly enhance audit quality in the public sector. As Elder et al. (2015) and Lowensohn et al. (2007) discovered, rotation can improve audit quality by reducing the risk of long-term relationships that may compromise auditor independence. This helps ensure that auditors maintain objectivity and are not unduly influenced by clients, thereby improving the quality of audits. Additionally, rotation encourages clients to select audit firms specializing in government audits, which have been shown to produce higher-quality results. Rotation also ensures that audit teams are better trained and experienced in handling government entities. Lowensohn et al., (2007) further noted that audit firm rotation serves as a mechanism for the periodic evaluation of auditor performance. This continuous evaluation ensures that government entities choose auditors with superior technical skills and specific experience in government audits, contributing to ongoing improvements in audit quality. In Elder et al.'s (2015) study, audit firm rotation includes formal policies based on laws, regulations, or commission decisions that require periodic rotation or technical evaluation of accounting firms, with a defined period for rotation or evaluation. Audit firm replacement or retention is based on the evaluation of the technical quality of the audits performed (Elder et al., 2015). The use of rotation as a measure of audit quality also considers other variables, such as accounting firm specialization, which can indirectly affect audit outcomes. However, some criticisms suggest that audit firm rotation does not always guarantee better quality, as new audit firms may initially lack an in-depth understanding of the audited entity during the early years of the relationship (Elder et al., 2015). Further research could investigate the long-term impact of audit rotation on audit quality, particularly in the public sector. Studies could explore how audit rotation affects auditor independence and whether audit firm specialization mediates improvements in audit quality (Elder et al., 2015).

Greenwood and Zhan (2019) found that industry specialization, client size, and financial wealth also affect audit quality. Audit quality increases when auditors have industry specialization, as auditors with in-depth knowledge of a particular industry tend to deliver higher-quality audits. However, audit quality tends to decline with larger and wealthier clients, as these clients may have more resources to influence auditors. Agency theory helps explain this relationship, suggesting that auditors act to reduce agency costs and mitigate the risk of self-serving reporting by management. are better equipped to identify and correct management bias.

Greenwood and Zhan (2019) define industry specialization based on an audit firm's involvement in specific sectors. However, this definition overlooks qualitative aspects, such as an in-depth understanding of the industry, rather than simply focusing on quantitative involvement. This limitation may reduce the accuracy of measuring industry specialization. Additionally, Greenwood and Zhan (2019) use total assets or revenue to represent client size. While this is a common measure, it does not always reflect operational complexity or the level of risk involved, as business complexity is often disproportionate to asset or revenue size. The financial wealth of a client, measured by liquidity or assets, does not account for hidden credit or debts risks that may not be apparent from reporting assets alone.

Future research could focus on measuring industry specialization by considering an auditor's in-depth knowledge of specific industry characteristics, such as by evaluating the auditor's participation in industry-specific training or related certifications. For instance, audit firms could track the number of hours auditors spend on industry-specific training or the number of industry-related certifications they hold. Further research could also refine the measurement of "size" by incorporating factors such as operational complexity, management structure, or unique industry risks, rather than relying solely on asset or revenue size. Audit firms could develop a comprehensive scoring system that considers these factors to assess a client's size and complexity more accurately. Additionally, rather than measuring financial wealth solely through assets and liquidity, future research could explore financial health by considering debt risk, leverage, or the liquidity of the client's market. Audit firms could use financial ratios and market data to calculate these measures, providing a more accurate representation of a client's financial condition (Greenwood & Zhan, 2019).

Raman and Wallace (1994) state that size, complexity, financial risk, and political risk are related to audit quality in the public sector. The following explains the relationship between these factors. The term "audit entity" refers to any organization or department undergoing an audit. The size of such an entity is linked to the amounts of resources it manages, which impacts operational complexity. Larger entities tend to have higher audit budgets to maintain audit quality, as managing substantial resources requires more detailed and careful audits (Raman & Wallace, 1994). Entities with complex operations, such as local governments or performance audits, often require more extensive audit procedures. This increases the demand for audit quality, as greater operational complexity necessitates more thorough evaluation (Raman & Wallace, 1994). Financial risk, indicated by a high ratio of expenditure to income or short-term debt to income, encourages heightened government supervision through audits, directly improving audit quality (Raman & Wallace, 1994). Additionally, high political competition within a state is associated with a greater demand for stricter oversight. Governments facing higher political competition are more likely to enhance audit quality to safeguard their reputation and increase transparency (Raman & Wallace, 1994). Thus, all four factors—

size, complexity, financial risk, and political risk—are correlated with improved public sector audit quality, as each demands greater oversight and higher-quality audit services.

Modlin and Stewart (2014) and Samelson et al. (2006) found that staff and manager involvement significantly influences public sector audit quality. Modlin and Stewart (2014) noted that staff involvement, particularly in local government audits, plays a crucial role. They found that having more staff with an accounting background improves the quality of financial reporting and audits, ultimately enhancing auditor satisfaction. Similarly, Samelson et al. (2006) observed that manager involvement in audit planning and implementation also contributes to higher audit quality and satisfaction in the local government sector. Staff and manager involvement is essential for ensuring accountability and professionalism throughout the audit process. With their expertise and experience, staff and managers are vital in identifying and addressing financial issues, thereby increasing the credibility of audit results. Accountability theory underscores that such deep involvement helps maintain transparency and trust in public financial management (Modlin & Stewart, 2014; Samelson et al., 2006).

Modlin and Stewart (2014) define staff involvement in the public audit process using the number of accounting staff (ACCTSTAFF) involved. This is operationalized by counting the number of accounting staff participating in the audit process. On the other hand, Samelson et al. (2006) defines manager involvement (MGRTIME) as the involvement of managers in planning and conducting the audit. They found that manager involvement positively contributes to the perceived quality of audits by the auditee, highlighting the importance of executive involvement in public sector audits (Samelson et al., 2006). However, Modlin and Stewart’s (2014) quantitative measure of staff involvement may not fully capture the quality of that involvement. This implies that increasing the number of staff, without regard to their expertise or quality, may not necessarily lead to improved audit results.

In contrast, Samelson et al.’s (2006) definition of manager involvement, while effective in measuring its impact on audit quality, focuses primarily on planning involvement without directly assessing the quality or specific impact of managerial decisions during the audit. Some researchers, such as Behn et al. (1997), have adopted a more comprehensive approach to measuring staff engagement, combining metrics for staff professional qualifications, training, and experience in public auditing. This broader approach is crucial for more meaningful measurement of staff involvement. It also underscores the need for future research to expand the measurement of manager involvement by evaluating the impact of specific managerial decisions on audit quality or by incorporating independent internal oversight or reviews conducted by managers during the audit.

Additionally, responsiveness is another factor influencing the quality of public sector audits. According to Samelson et al. (2006), responsiveness, or the auditor's ability to flexibly accommodate client scheduling needs, has a significant impact on public sector audit quality. Responsiveness is measured by the SCHED variable, which refers to the extent to which the auditor can adjust the audit schedule to meet the requirements of government clients (Samelson et al., 2006). They found that an auditor's ability to respond to client scheduling requests positively correlates with auditee satisfaction, which indirectly enhances the perception of audit quality. The auditor's responsiveness improves communication and collaboration with the client, leading to a smoother audit process. This aligns with audit behavior theory, which posits that positive interactions between auditors and clients can foster trust and accountability in financial reporting (Samelson et al., 2006).

However, the operational definition and measurement of responsiveness used by Samelson et al. (2006) is limited to scheduling, overlooking other important aspects such as the auditor’s speed in addressing technical issues or responding to audit findings (Samelson et al., 2006). Other researchers, such as Behn et al. (1997), have taken a broader approach by measuring responsiveness to include the auditor's response to client feedback during and after the audit process. This broader approach allows for a more comprehensive assessment of how responsiveness affects audit quality. There is an urgent need for future research in this area to explore a more inclusive definition of responsiveness by incorporating various aspects of auditor-client interactions, such as response time to technical issues and communication quality during the audit (Samelson et al., 2006).

Key factors influencing audit quality in the public sector include leadership, financial management, and risk management. According to Motubatse et al. (2018), these three factors significantly impact public sector audit quality, and when combined, they have a strong relationship in achieving clean audit outcomes. Effective leadership, characterized by strong managerial and ethical skills, is not just important but essential for maintaining the integrity of the audit process. It forms the backbone of an audit conducted in accordance with established standards, reducing the risk of errors in financial reporting and reassuring stakeholders (Motubatse et al., 2018). Financial management, a critical element in enhancing audit quality, ensures accurate financial reporting and effective internal controls. Sound financial management practices lead to precise financial reports, which lay the groundwork for quality audits and boost confidence in the accuracy of financial data (Motubatse et al., 2018). Risk management, with its focus on identifying and mitigating risks, plays a crucial role in ensuring audit quality. By minimizing the likelihood of errors or fraud in financial reporting, it ensures reliable and accurate audit outcomes, providing security and trust to stakeholders (Motubatse et al., 2018).

However, Motubatse et al.'s (2018) study has limitations in the definition and measurement of leadership, financial management, and risk management variables. For example, the measurement of leadership is limited to qualitative assessments, which may not fully capture its impact on the audit process in quantitative terms. Other researchers, such as Jelic (2012), have used more specific metrics for ethical skills and managerial competencies. Future research could focus on developing more comprehensive measurements by considering the quantitative influence of each variable on public sector audit quality.

Furthermore, Lee et al. (2016) highlight the positive effects of self-efficacy, professional development, organizational culture, motivation to learn, and training opportunities on audit quality. Auditor self-efficacy, which includes self-confidence and professional experience, is a key driver of audit quality. Auditors with high self-efficacy are more motivated and better equipped to overcome challenges, thereby enhancing audit quality. Professional development through training and skill enhancement plays a crucial role in improving audit quality, as the knowledge and skills gained enable auditors to make better professional decisions. An organizational culture that fosters learning and knowledge sharing also positively impacts audit quality. Organizations that encourage innovation and collaboration help auditors perform more effectively. High motivation to learn, coupled with sufficient training opportunities, allows auditors to continue developing their skills and improving the quality of their work, shaping the future of auditing in a positive direction.

Several other researchers use different measures for the variables discussed by Lee et al. (2016). A notable example is the General Self-Efficacy Scale developed by Schwarzer (2012). This scale emphasizes an individual's ability to manage complex situations and challenges, making a significant contribution to understanding self-efficacy. Additionally, Eraut (2004) underscores the importance of informal learning and direct work experience as key indicators of professional development, not just formal training. This measurement includes everyday learning through workplace interactions and problem-solving.

For organizational culture, Cameron and Quinn (2006) use the Organizational Culture Assessment Instrument (OCAI), a comprehensive tool that measures organizational culture across four quadrants: clan, adhocracy, market, and hierarchy. This instrument is more comprehensive as it accounts for cultural differences within organizations, rather than just formal networks. For learning motivation, Deci and Ryan (1985) developed the Self-Determination Theory (SDT), which distinguishes between intrinsic and extrinsic motivation. This theory measures motivation based on internal drives (intrinsic motivation) and external influences such as rewards or social pressures (extrinsic motivation), providing a deeper understanding of individual learning motivation.

As for training opportunities, Noe (2010) uses a competency-based approach, where training is measured based on its relevance and applicability to improving workplace performance. This practical method emphasizes how training can be directly applied to daily tasks to enhance employee competency. Future research could explore dynamic models of self-efficacy, the role of informal learning and mentoring, the impact of organizational subcultures on innovation, and a deeper investigation into motivational factors in learning.

Mersha et al. (2022) found that the effectiveness of the audit process is one of the key determinants of audit quality in the public sector. The effectiveness of the audit process encompasses the stages of preparation, implementation, and reporting, all of which must be carried out systematically and efficiently. An effective audit process allows auditors to identify material errors and fraud more accurately, thereby enhancing the accuracy and credibility of the audit results. This credibility is essential as it fosters trust among stakeholders and decision-makers who rely on these results for financial and operational decisions (Mersha et al., 2022). Mersha et al. (2022) measure audit process effectiveness based on auditors' perceptions of how well their audit process is conducted, including thorough preparation, systematic audit methods, and the timely delivery of audit results.

## 4. Key Interactions within the Financial Reporting Supply Chain

Key interactions within the financial reporting supply chain refer to the relationships and communications among the various parties involved in the financial reporting process (IAASB, 2014). These parties include a company's management, board of directors, audit committee, external auditors, regulators, and users of financial statements such as investors and analysts. Critical attributes of these interactions are transparency, effective communication, trust, and accountability. Transparency and effective communication help auditors obtain accurate and complete information, which is essential for conducting a high-quality audit. Trust between auditors and the audited entity enhances public confidence in the financial statements produced. Clear accountability, a fundamental pillar ensuring that all parties adhere to applicable standards and regulations, is instrumental in improving audit quality (IAASB, 2014).

Studies discussing key interactions within the financial reporting supply chain are briefly presented in Table 6. Based on the articles analyzed, three studies specifically focus on one of the main interactions in the financial reporting supply chain: the interaction between auditors and authorities. These studies were conducted by Mahdi et al. (2023), McGowan et al. (2018), and Mersha et al. (2022). Mahdi et al. (2023) explored the factors influencing audit quality and found that external pressures, particularly political pressure, can significantly affect audit quality. They discovered that political pressure can undermine auditor integrity, leading to deviations from proper audit standards and principles. This interference compromises the independence and objectivity of auditors, thereby diminishing the quality of the resulting audit. When audits are not objective and independent, they fail to reflect actual conditions, thus eroding public trust in the audit results and in state financial management.

Table 6 Articles on Key Interactions within the Financial Reporting Supply Chain

| **Author and Year** | **Title** | **Variables in Articles** | **Factors of IAASB (2014)** | **Institutional Setting** |
|---|---|---|---|---|
| Mahdi et al. (2023) | Moderation of Political Pressure on the Determinants of Audit Quality in the Public Sector: A Study of BPK Auditors for the Maluku and North Sulawesi Regions. | Political pressure | Interactions between Auditor and Authority | External Auditor |
| McGowan et al. (2018). | The Influence of Institutional Regulatory Pressure on Nonprofit Hospital Audit Quality | Institutional Regulatory Pressure | Interactions between Auditor and Authority | External Auditor |
| Mersha et al. (2022) | Determinants of Tax Audit Quality with Audit Process as the Mediator in Ethiopia: The Case of The Ministry of Revenues | Interactions between tax auditors and stakeholders | Interactions between Auditor and Authority | External Auditor |

McGowan et al. (2018) investigate whether institutional regulatory pressures improve nonprofit hospital audit quality, focusing on the influence of the Sarbanes-Oxley Act and subsequent nonprofit legislation on audit practices. They found that institutional regulatory pressure significantly impacts public sector audit quality. Regulatory pressure stemming from the enactment of the Sarbanes-Oxley Act (SOX) and other nonprofit regulations enhances the audit quality of nonprofit hospitals. This improvement is evident in the reduction of discretionary accruals, which are non-cash adjustments made to financial statements by management, and in the increased reporting of internal control deficiencies (McGowan et al., 2018). Regulatory pressure prompts audit firms to reassess previously accepted audit procedures, with reputation becoming an important incentive for improving audit quality. Coercive pressure, in the form of government regulation, forces organizations to comply with socially accepted norms and practices to secure resources and avoid sanctions (McGowan et al., 2018).

Meanwhile, Mersha et al. (2022) explore whether interactions between tax auditors and stakeholders are a critical determinant of tax audit quality. They found that such interactions are indeed one of the key determinants of audit quality in the public sector. Mersha et al. (2022) emphasize that effective communication and collaboration between auditors and stakeholders strengthen audit accuracy and help auditors identify potential risks that might otherwise be overlooked. In their research, Mersha et al. (2022) measured the interaction between tax auditors and stakeholders based on the frequency and quality of communication and collaboration. However, this measurement could introduce bias, as auditors might assess the relationship with stakeholders subjectively, influenced by personal experiences. Additionally, external factors such as political or economic conditions may affect the quality of interaction, yet these factors are not always captured in this variable. Future research could explore how digital interaction and new communication technologies might improve auditor-stakeholder interactions. Additionally, studies could examine how different stakeholders influence these interactions and their impact on audit outcomes.

5. Contextual Factor

According to AASB (2014), contextual factors are environmental elements that influence financial reporting and audit quality. These factors, which vary between countries, include business practices, commercial law, and laws and regulations related to financial reporting (IAASB, 2014). Contextual factors also encompass financial reporting frameworks, information systems, corporate governance, broader cultural factors, attitudes toward authority, audit regulation, the litigation environment, talent acquisition, and the financial reporting timetable. These elements shape how auditors perform their duties, ultimately affecting audit quality. For example, in environments with robust commercial law, auditors can more easily obtain relevant audit evidence due to the formal documentation of transactions. Similarly, strict regulations on financial reporting enhance the integrity of management reporting, thereby strengthening audit quality (IAASB, 2014). Conversely, in environments with weak information systems or low transparency cultures, auditors may struggle to obtain accurate and complete data, which can negatively impact audit quality. Therefore, auditors must adapt their approach to these environmental factors to maintain high-quality audits (IAASB, 2014).

Empirical results from sample articles demonstrate that contextual factors significantly affect public sector audit quality. Audit information technology is identified as a crucial factor; the use of advanced information technology in the audit process improves the accuracy and efficiency of auditing public financial statements (Le et al., 2022). However, strong governance stands out as playing a pivotal role in ensuring transparency and accountability (Motubatse et al., 2018). These factors are not only important but are the backbone of achieving better audit outcomes (Motubatse et al., 2018). Additionally, the type of auditor has a significant impact on audit quality. Independent and qualified auditors are more likely to produce high-quality audits compared to those with less independence (López & Peters, 2010). This highlights the importance of auditor independence and qualifications.

Audit independence and the legal framework are essential for limiting potential conflicts of interest and ensuring that audits are conducted objectively and in compliance with legal standards (Gebreyesus, 2022). Country regulations also influence audit quality, with stringent regulations increasing the trustworthiness and quality of audited financial statements (Yebba, 2022). In the SAI PMF Framework (INTOSAI, 2016), the independence of the SAI and the legal framework are crucial dimensions that determine audit quality. This dimension underscores the paramount importance of SAI independence, which is regulated by the relevant country's legal framework.

Independence means that the SAI must be free from external influences, including those from the executive and legislative branches, with its role and authority clearly defined in the constitution or law. This independence is not just a requirement but a cornerstone of the audit process (INTOSAI, 2016). It encompasses the SAI's ability to perform its duties without threats or interference from other audited entities. Independence includes financial autonomy, organizational freedom, and the ability of the SAI's head to carry out their duties without obstruction. Therefore, an effective legal framework must ensure that the SAI can function independently, with robust protections against political or administrative interference. Such protection is essential to instill confidence in the audit process (INTOSAI, 2016).

This independence has a profound impact on audit quality. It empowers public auditors to perform their duties objectively, free from pressure. This strong independence allows the SAI to produce credible and accurate audits, reinforcing accountability and transparency in public financial management. The SAI plays a pivotal role in ensuring the integrity of financial processes and fostering public trust. Additionally, an auditor's sector expertise and gender have been shown to significantly influence their approach to performing their duties. Auditors with specific expertise, along with the unique perspectives contributed by gender diversity, can improve audit quality (IAASB, 2014). This highlights the importance of diverse perspectives in enhancing audit outcomes.

Table 7. Articles on Contextual Factors

| **Author and Year** | **Title** | **Variables in Articles** | **Factors of IAASB (2014)** | **Institutional Setting** |
|---|---|---|---|---|
| Le et al. (2022). | Risk-based approach and quality of independent audit using structure equation modeling - Evidence from Vietnam | Information Technology | Information system | External Auditor |
| Motubatse et al. (2018) | Drivers of Audit Quality in South African Public Sector | Governance | Corporate Governance | External Auditor |
| López & Peters (2010) | Internal control reporting differences among public and governmental auditors: The case of city and county Circular A-133 audits. | Auditor Type | Broader cultural factors | External Auditor |
| Waymire et al. (2018). | A Comprehensive Analysis of Findings from Single Audits: The Implications of Auditee Type and Auditor Expertise. | Auditor Type | Broader cultural factors | External Auditor |
| Gebreyesus (2022) | Determinants of Public Sector Audit Quality: The Case of The Office of The Federal Auditor General, Ethiopia (OFAG) | Organization's independence and the audit's legal framework | Attitudes to authority | External Auditor |
| Yebba (2022) | Measuring Municipal Audit Quality: Focus, Findings, Avenues | State regulations | Audit regulation | External Auditor |
| Reheul et al. (2017) | Auditor gender, experience and reporting in nonprofit organizations | Sector expertise and auditor gender | Attracting talent | External Auditor |

Table 7 showcases the significance of contextual factors in shaping the quality of public sector audits, as discussed in seven articles, including those by Le et al. (2022), Motubatse et al. (2018), López and Peters (2010), Gebreyesus

(2022), Yebba (2022), and Reheul et al. (2017b). These factors, such as information technology, governance, auditor type, organizational independence, the audit's legal framework, state regulations, sector expertise, and auditor gender, play critical roles in the audit process.

Le et al. (2022) highlight that the use of information technology (IT) in auditing enhances both audit efficiency and effectiveness, thereby improving audit quality. In this case, IT is identified as one of the key factors supporting the implementation of Risk-Based Auditing (RBA) and enhancing audit quality. IT enables auditors to conduct audits more efficiently, utilizing software to collect and analyze audit data more quickly and accurately (Le et al., 2022). The operational definition of the IT variable in this study refers to the use of IT infrastructure, such as audit software, electronic data processing, and computer-based audit tools that support auditors in the decision-making process. This variable is measured by the auditor's ability to use audit software, manage risk control, and apply IT capabilities to support sample selection and analytical procedures during audits (Le et al., 2022). However, this definition places less emphasis on the training and competence aspects of auditors in effectively using IT. While software and digital tools are essential, the potential for auditors to enhance their skills in utilizing technology optimally is especially promising, particularly in developing countries like Vietnam. Future research could expand the operational definition by considering the auditor's skills and knowledge in utilizing technology more comprehensively and its impact on improving audit quality (Le et al., 2022).

Governance is critical in ensuring that public organizations have an effective and transparent management structure, which is crucial for the audit process. Motubatse et al. (2018) demonstrate that governance significantly influences the achievement of clean and high-quality audits. According to Motubatse et al. (2018), governance is a key independent variable that greatly impacts clean audit outcomes. Governance plays a direct role in ensuring the sound management of public entities, which in turn directly affects audit quality. Effective governance establishes a robust internal control framework and enhances accountability, leading to improved audit quality and more accurate financial statements (Motubatse et al., 2018). Motubatse et al. (2018) define governance as a set of practices that include the oversight and management of public resources, transparent policy implementation, and the application of internal control mechanisms. Governance is typically assessed through the Auditor General of South Africa (AGSA) report on clean audit outcomes. This score reflects the extent to which governance contributes to clean audit results in government entities (Motubatse et al., 2018).

However, there are criticisms regarding the operational definition and measurement of governance. The use of the AGSA score may be too simplistic and may not account for variations in governance implementation across different public entities. Moreover, the measures used do not always capture the complexity and specific challenges faced by various entities. This highlights the potential for future research to develop more comprehensive and detailed measures, such as evaluating specific internal control mechanisms and audit committee independence.

Lopez and Peters (2010) found that public accounting (CPA) firms are more likely to issue audit reports that identify internal control problems, such as financial mismanagement or fraud, compared to government auditors, especially in larger CPA firms. This highlights the significant impact of the type of auditor on audit quality. CPA firms are more likely to detect internal control problems than government auditors, particularly following the implementation of the Sarbanes-Oxley Act (SOX). The size of the CPA firm influences audit quality, with larger firms more likely to report internal control issues than smaller firms or government auditors.

Gebreyesus (2022) emphasizes the crucial role of an organization's independence and the audit's legal framework in ensuring audit quality. Organizational independence ensures that auditors can perform their duties without pressure or influence from external parties, thereby making the audit results more objective and reliable. A strong legal framework provides clear guidance and standards for auditors, ensuring that audits are conducted according to applicable laws and regulations.

Gebreyesus (2022) defines organizational independence as the ability of an audit organization to operate without interference from outside parties, including the government. This is measured through a questionnaire that assesses auditors' perceptions of their organization's level of independence. Meanwhile, the legal framework is defined as the set of rules and regulations that govern public sector audits. This variable is also measured through a questionnaire assessing auditors' perceptions of the clarity and comprehensiveness of the existing legal framework. However, measuring organizational independence solely based on auditors' perceptions may not fully reflect actual independence, as external factors like political or economic pressures might not be detected.

Additionally, perception-based measurements of the legal framework may not fully capture its effectiveness in practice. However, there is potential for future research to improve these measurements. By utilizing direct observation methods or conducting in-depth interviews, a more accurate and comprehensive understanding of organizational independence could be obtained. Similarly, future research could explore the legal framework through legal document analysis and case studies, providing a more objective assessment of its effectiveness.

Yebba (2022) found that state regulations significantly affect audit quality. State regulations can influence both the demand for and quality of audits. For example, some states have GAAP disclosure mandates that affect the structure and quality of the audit market. Research shows that stricter regulations can increase both the demand for audits and their quality. According to Yebba (2022), state regulation refers to rules imposed by states that affect financial reporting and audit demand. Examples of measures used include GAAP disclosure mandates, auditor selection documentation, and the option to work with either a government or independent auditor.

The results of this study are difficult to generalize due to regulatory differences across states. Some states enforce strict regulations, while others are more lax, leading to varied impacts on audit quality. Additionally, the lack of publicly available data on government audit fees limits research in this area, making it challenging to measure the precise impact of regulations on audit quality. Future research could compare the effects of regulation across different states to gain deeper insights into how regulations influence audit quality. Collecting more comprehensive data on audit fees and quality across states could help address current data limitations and provide a clearer understanding of the regulatory impact.

Reheul et al. (2017) found that sector expertise and auditor gender play a significant role in audit quality. Their study shows that auditors with sector-specific experience and expertise tend to perform better in audit tasks. Auditors with sector expertise are more likely to identify and report errors and uncertainties in their audit reports, thus providing a higher level of assurance regarding the quality of financial statements. Meanwhile, the Selectivity Hypothesis explains that women tend to process information more comprehensively, considering risks and ethics in their decision-making. As a result, female auditors are often more conservative, independent, and more likely to detect and report material errors or uncertainties in financial statements.

## 4.2. Discussion and Future Research

### 4.2.1. Key Insights

This study employs a systematic literature review to identify the factors that shape audit quality in the public sector. Audit quality refers to the degree to which an audit fulfills its objectives and provides reliable information. The primary objective is to distinguish the differences in factors influencing audit quality in the public and private sectors and suggest how these factors can be leveraged to enhance audit quality in public sector organizations. The method employed in this study involves a rigorous and comprehensive selection process, gathering relevant articles from a wide range of reputable journals indexed in databases such as Elsevier ScienceDirect, Emerald, EBSCO, JStore, Sage, Scopus, Springer, Taylor, and Wiley. The selected articles must use empirical research methods, have audit quality as a central theme in the title, abstract, or keywords, and focus on the public sector.

The empirical findings of this study underscore the importance of several key factors that influence public sector audit quality. These factors are highly relevant to public auditors, policymakers, and other stakeholders. Based on the mapping of factors in the IAASB (IAASB, 2014) and SAI PMF (INTOSAI, 2016) frameworks, factors such as auditor values, ethics, attitudes, competence, financial risk management, auditor rotation, and resource management have a significant impact on audit quality in the public sector. Integrity, objectivity, and professional skepticism are essential elements of audit quality. Integrity ensures that auditors remain honest and firm in upholding professional standards without succumbing to external pressures. An independent attitude helps auditors maintain objectivity and impartiality (Mahdi et al., 2023). A strong professional stance fosters public trust and enhances the credibility of auditors (Mersha et al., 2022). However, it is professional skepticism that keeps auditors cautious and vigilant, making it a critical element for maintaining audit quality (Mahdi et al., 2023).

DeAngelo (1981) emphasized the importance of auditor independence in preserving objectivity during financial statement evaluations. His work, alongside Hurtt's (2010) development of a scale to measure professional skepticism, has significantly advanced our understanding of skepticism's role in uncovering potential errors or fraud in financial statements. These scholars' contributions have been invaluable in advancing the field. While integrity, objectivity, and professional skepticism are widely acknowledged as crucial components of audit quality, it is important to recognize potential drawbacks. Nelson (2009) noted that excessive skepticism could prolong the audit process and result in an overly cautious approach, potentially reducing audit efficiency. Similarly, Rennie et al. (2010) pointed out that while independence is critical, over-reliance on it may create a communication barrier, hindering effective understanding of the client's operations.

In addition, the research of Peecher et al. (2013) challenges the notion that professional skepticism remains consistent across experience levels. Less experienced auditors tend to exhibit lower levels of skepticism, while more experienced auditors may display excessive skepticism, potentially disrupting the working relationship between the auditor and the client. Auditor competency encompasses knowledge of accounting principles, auditing standards, and an understanding of the industry and business being audited. Competent auditors can apply audit procedures effectively, identify risks, and address issues that arise during the audit process (Aswar et al., 2021). Research shows that auditors with high competency are better equipped to detect errors or fraud in financial statements, ultimately enhancing audit quality (Aswar et al., 2021). Auditor competency is a critical factor, as it directly affects the auditor's ability to detect material errors and ensure that the audit is conducted according to standards. This study reaffirms the findings of previous research by Francis (2011) and DeFond and Zhang (2014), which highlight the crucial role of auditor competence in determining audit quality.

Time pressure can significantly impact audit quality. Auditors working under tight time constraints often rush the audit process, leading to audit procedures not being performed as thoroughly as they should be (Srimindarti et al., 2022). While it is essential for auditors to work efficiently, effective time management is equally important to maintain audit quality (Srimindarti et al., 2022). Therefore, proper time management is not merely a suggestion but a responsibility that auditors must take on to ensure quality audit results. Knechel et al. (2013) found that auditors working under time pressure tend to conduct audits quickly, which can reduce the depth and thoroughness of the audit procedures performed. Similarly, Sundgren and Svanström (2014) emphasized that when auditors face tight deadlines, the risk of errors or delays in collecting audit evidence increases, particularly in complex audits that require more in-depth risk assessment and extensive testing.

While DeZoort and Lord (1997) argue that time pressure does not always negatively affect audit quality, they acknowledge that effective time management is critical. They found that auditors under reasonable time pressure can become more focused and productive in some situations. This finding, along with Ghani et al. (2022), who demonstrated that time pressure can enhance auditor performance when sufficient resources and experience are available, underscores the importance of managing time effectively while maintaining responsibility and accountability. A systematic audit process and internal quality control are essential for maintaining audit standards (IAASB, 2014). These procedures include audit methodology, internal controls, and audit quality monitoring (IAASB, 2014). For example, audit firm rotation audit firm rotation helps maintain auditor independence, increasing the objectivity of audit results (Elder et al., 2015). A well-organized process minimizes the risk of errors or violations in the audit, thereby enhancing the reliability of the results (Lowensohn et al., 2007).

For public auditors, these findings emphasize the critical role of public trust in the quality of public sector audits. Strengthening ethics and independence—by promoting strong ethical values and maintaining auditor independence—is a key step in this direction. This is not only about improving audit quality but also about bolstering public trust. Additionally, enhancing technical competence through continuous education and training is vital for ensuring higher audit quality. Well-trained and experienced auditors are more effective at detecting risks and providing accurate evaluations of financial statements. These findings provide important guidance for policymakers, empowering them to develop policies that foster healthy competition among auditors through auditor rotation and encourage the development of specialized expertise in the public sector. Policies that support auditor independence are particularly valuable, as they help maintain objectivity and increase public trust in audit results.

Additionally, the findings underscore the potential for substantial improvement in financial risk management and internal governance. Audit institutions and other stakeholders can leverage these results to promote more effective and efficient supervision. By adopting best practices in risk and financial management, audit institutions can strengthen the integrity and quality of their audit outcomes, ultimately enhancing public accountability. Our literature review revealed several unexpected trends, one of which is the impact of audit firm rotation. Contrary to initial expectations, research in the public sector shows that audit firm rotation—often seen as a means to enhance auditor independence and objectivity—does not always lead to immediate improvements in audit quality. New auditors typically require time to familiarize themselves with the business or organization under audit. Lowensohn et al. (2007) found that new auditors, particularly in the local government setting, tend to produce lower-quality audits during the early years of rotation compared to more experienced auditors who have longer-term relationships with the same client. This trend is also evident in the private sector, where audit firm rotation can result in a temporary decline in quality as new auditors adjust to their clients' unique processes and risks (Elder et al., 2015).

These findings suggest that while rotation is essential for maintaining independence, the short-term effects of auditor adaptation on audit effectiveness should not be overlooked. However, the potential for improvement is significant. To address this issue, we propose implementing intensive training and effective knowledge transfer between outgoing and incoming auditors. A more systematic onboarding process could expedite the adaptation of new auditors, providing a promising solution for improving audit quality in the short term.

Moreover, several studies indicate that factors previously thought to primarily influence the private sector, such as industry experience and auditor specialization, also significantly impact public sector audits. Greenwood and Zhan (2019) demonstrate that auditors with specific industry expertise tend to deliver higher-quality audits in both the public and private sectors. This is attributed to their deeper understanding of the risks and complexities inherent in the audited industry, which improves their ability to detect errors or irregularities in financial statements.

#### 4.2.2. Implications for scholars and researchers

Understanding the unique dynamics between public and private sector audits is crucial for improving audit quality. This study examines the factors influencing audit quality in the public sector, offering valuable insights for academics and researchers. The research methods employed, such as quantitative statistical analysis and systematic literature reviews, ensure the validity and reliability of the results.

Further research is urgently needed to explore factors that have not been widely investigated or to deepen the analysis of existing studies. This research is critical, as it can provide important insights into how political pressure affects auditor independence in the public sector. Such research is essential to understanding the mechanisms that protect auditor independence in politically sensitive environments. Future studies could also focus on comparing audit quality between the public and private sectors, given that different contextual factors influence each. This comparison will help identify significant differences that affect public sector transparency and accountability.

The auditor monopoly in the public sector has yet to be extensively studied. Research in this area could examine how the lack of competition affects audit quality and whether opening the market to more auditors could improve both quality and public trust. As technology continues to evolve, research opportunities related to the role of artificial intelligence (AI) and big data analytics in enhancing the efficiency and accuracy of public sector audits are highly relevant. This research could offer new insights into the use of technology to produce more accurate and reliable audits.

Previous studies have predominantly used qualitative measurements for variables such as auditor competence, leadership, and risk management. Further research could develop more comprehensive quantitative methodologies to measure the direct effects of these variables on audit quality. By exploring the research opportunities mentioned above, scholars are expected to contribute significantly to a deeper understanding of the factors influencing public sector audit quality, providing practical insights for policymakers and stakeholders to improve public financial transparency and accountability.

This study contributes to the existing literature by integrating Agency Theory and Contingency Theory to provide a more nuanced understanding of the factors influencing audit quality. The resultant theoretical framework offers a robust foundation for future research, enabling the development of more comprehensive models for examining public sector audits.

#### 4.2.3. Research Agenda

Based on recent considerations and the findings from a systematic review of the current body of knowledge on factors influencing public sector audit quality, we propose an agenda for future research. Below, we outline five research gaps that should guide future investigations to enhance our understanding of public sector audit quality.

Research Gap 1: Political Influence on Audit Quality in the Public Sector
The impact of political and executive pressure on audit independence and audit quality in the public sector is a critical area that demands immediate attention. Understanding how political intervention can compromise audit objectivity and effectiveness is of paramount importance. Future research should focus on identifying mechanisms that protect auditor independence in politically sensitive environments and explore the impact of political pressure on audit quality and public accountability.

Research Gap 2: Comparison of Audit Quality between the Public and Private Sectors
Most previous research has predominantly concentrated on the private sector, thereby creating a significant knowledge gap in understanding the determinants of audit quality in the public sector. Future research should investigate the disparities in audit quality between the public and private sectors, with a particular focus on how these differences impact governance and accountability within the public sector.

Research Gap 3: Monopolistic Practices in Public Sector Audits
Monopolistic practices in public sector audits, which can potentially reduce audit quality due to a lack of competition, have not been studied in depth. Analyzing the impact of monopolistic practices on audit quality in the public sector is essential for improving quality and accountability. In addition, reforms that introduce more competition in public sector audits should be considered to provide more auditor choices and foster improvements in audit practices, thereby contributing to transparency and public trust.

Research Gap 4: Audit Firm Characteristics and Audit Quality in the Public Sector
The impact of audit firm characteristics, such as size, specialization, and auditor tenure, on audit quality in the public sector is a promising area of investigation. Research should investigate how these characteristics affect audit quality and credibility in the public sector, with a particular emphasis on the potential of firm specialization to augment audit effectiveness.

Research Gap 5: Methodological Approaches and Cross-Country Studies
Methodological approaches in public sector audit quality research have traditionally relied on quantitative analysis, while qualitative or mixed-methods approaches still need to be explored. Additionally, most studies focus on single-country or regional contexts. Future research should incorporate a broader range of methodologies, including case studies, longitudinal analyses, and cross-country studies, to understand better how contextual variations affect public sector audit quality across different countries.

## 5. CONCLUSION

This collaborative study makes a significant contribution to understanding the factors influencing audit quality in the public sector through a systematic literature review. While previous research has predominantly focused on the private sector, this study addresses the gap in the public sector by identifying and grouping key factors that impact audit quality. In addition to identifying these factors, the article proposes a future research agenda aimed at improving the effectiveness of public sector audits, as well as financial accountability and transparency. The findings provide valuable insights for both researchers and practitioners, encouraging collective efforts to strengthen financial governance in the public sector.

This study enriches the field by deepening the understanding of public sector audit quality, an area that has been underexplored in comparison to the private sector. By conducting a systematic literature review, we have identified key factors such as auditor competence, independence, audit firm rotation, and time pressure, offering new insights into how these factors interact in the unique environment of public sector audits. The study also extends Agency Theory and Contingency Theory by demonstrating how the complexity of the public sector—characterized by political pressure and heightened expectations of accountability—requires adjustments in the application of practical audit standards. The findings reinforce existing literature on the importance of professional skepticism in maintaining audit quality, while also highlighting the detrimental effects of excessive time pressure on audit procedures, as evidenced by Srimindarti et al. (2022).

Governments and public institutions should ensure that auditors are provided with adequate time to conduct thorough audits, particularly in highly complex environments. mitigate the risk of rushed audit procedures. Moreover, continuous training and competency enhancement should be prioritized to address challenges such as low auditor experience during rotation, and to strengthen auditors' ability to handle the complexities of public sector audits. In implementing auditor rotation to enhance independence, public sector institutions must develop effective knowledge transfer mechanisms between outgoing and incoming auditors to minimize the negative impact on audit quality during the transition. Policies should also focus on protecting auditors from political pressure, as independence is a crucial element in maintaining audit quality. This study provides clear guidance for policymakers and practitioners to improve audit quality in the public sector, emphasizing practical policies that support auditor integrity, independence, and competence.

However, this study has several limitations that must be acknowledged. One limitation is the limited geographic focus on a few countries or regions, which may restrict the generalizability of the findings to a global context. Additionally, the article relies primarily on quantitative research, potentially underrepresenting qualitative perspectives on factors affecting public sector audit quality.

For future research, a broader study involving more developing countries is recommended, given that the context of public sector auditing can vary significantly across countries. Moreover, in-depth qualitative research approaches, such as interviews or case studies, could provide additional insights into the specific challenges faced by public sector auditors in different regions. Further research could also explore the impact of new technologies, such as data analytics, in improving audit quality in the public sector audit process. Addressing these limitations would make future research more comprehensive and enhance its contribution to improving audit quality in the public sector.

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