

When Good Governance Matters: Digital Auditing and Public Sector Audit Quality

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DOI: <https://doi.org/10.33005/jasf.v9i1.738>

Article Info

Editor: Dr. Lai Thi Thu Thuy

Received: 28 April 2026

Revised: 20 June 2026

Accepted: 27 June 2026

Citation APA 7th

Supriyono, E., Sawani, Y., Mardjono, E. S., Zai, S. N. P., & Mahardia, V. P. (2026). When Good Governance Matters: Digital Auditing and Public Sector Audit Quality. *JASF: Journal of Accounting and Strategic Finance*, Vol. 8(1), pp. 114-142.

ABSTRACT

Purpose: This study aims to examine the effects of Computer-Assisted Audit Techniques (CAATs), remote auditing, and professional scepticism on the quality of public sector audits, and to analyse the role of good governance moderation in these relationships. This study is important because digital-based public sector audits require governance support to enable technology and auditor judgment to improve public accountability.

Method: This study uses a quantitative approach with auditors of the Supreme Audit Agency (BPK) in Central Java as respondents. The Sample used was 134 respondents. Data were obtained by distributing questionnaires. Data were collected through surveys and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4.0.

Findings: The results indicate that remote auditing has a positive effect on the quality of public sector audits. In contrast, CAATs and professional scepticism had no direct effect. However, good governance has been shown to moderate the influence of CAATs, remote auditing, and professional scepticism on audit Quality. These findings suggest that audit technology and auditors' critical attitude do not work automatically but require strong governance support.

Implications: The results of this study affirm the importance of strengthening digital audit governance, data Quality, Information System Integration, digital Evidence security, auditor independence, and follow-up of audit results. BPK needs to build a digital audit ecosystem that is not only focused on technology adoption but also on strengthening accountability and internal controls.

Novelty/Value: This study demonstrates that good governance is a key condition for the effectiveness of audit technology and for professional scepticism in improving the quality of public sector audits.

Keywords: CAATs, remote auditing, professional scepticism, good governance, audit quality, public sector audit.



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INTRODUCTION

The quality of public sector audits plays an important role in strengthening transparency, accountability, and public trust in the management of state finances. From the perspective of Agency Theory, public sector auditing serves as an accountability mechanism that reduces information asymmetry between government institutions as managers of public resources and citizens as principals (Jensen & Meckling, 1976). With this role, auditing can strengthen accountability in public financial management (Sawaya et al., 2026). Quality audits are not only determined by the auditor's competence, but also by audit institutions' ability to use technology, maintain independence, and operate within an effective governance system. Within the public sector, auditors use audit results to assess compliance, the effectiveness of budget management, and potential irregularities in the use of public resources (Johnsen, 2019). Conceptually, audit quality is the auditors' ability to identify and report misrepresentations, irregularities, or control weaknesses objectively and independently (DeAngelo, 1981; Dragomir & Dumitru, 2023).

The development of digital technology has driven major changes in auditing practices. Computer-Assisted Audit Techniques (CAATs) and remote auditing are important tools that can improve audit efficiency, accuracy, scope, and auditors' ability to analyze large-scale data (Omari et al., 2025; E. G. Siew et al., 2020). CAATs enable auditors to perform transaction testing more systematically, while remote auditing supports inspection without physical location constraints. In the public sector, these two technologies can help auditors detect risks, strengthen audit evidence, and improve the quality of decision-making. However, the benefits of audit technology will not be optimal without regulatory support, human resource readiness, digital infrastructure, and governance that are adaptive to technological change (Jannah & Nirwana, 2025).

Although there are many advantages, the adoption of audit technology in several countries still faces significant challenges. Due to high costs, complex software, and difficulty integrating with existing systems, auditors in Saudi Arabia have not been able to implement CAATs effectively (Alhebri, 2025). Many Jordanian auditors continue to resist new auditing technologies (Omari et al., 2025). On the other hand, the main problems in Indonesia are weak regulation, low digital literacy, and limited infrastructure and institutional capacity (Alsarayrah & Ali, 2025; Jayanti et al., 2025). Evidence from several developing countries shows that audit technology adoption depends not only on technical readiness but also on organizational capacity, policy support, and governance.

Audit quality cases in Indonesia demonstrate the importance of strengthening audit technology and governance. The 4G BTS case indicates that an unqualified audit opinion does not always eliminate the risk of irregularities when internal control assessment and data analysis are not conducted thoroughly. This case highlights the need for technology-based audits to improve accuracy, expand audit coverage, and identify potential manipulation that may be difficult to detect through conventional procedures (The Jakarta Post, 2024). Similar conditions were also observed in the Ministry of Agriculture, which showed weaknesses in financial reporting and supervision. This confirms that public sector auditing requires a data-driven approach, strong governance, and an effective internal control system to support audit quality (Alqudah et al., 2023; Dragomir & Dumitru, 2023).

In explaining the adoption of audit technology, this study uses the Technology, Organization, and Environment (TOE) framework. The TOE framework explains audit technology adoption through the alignment of technological readiness, organizational capacity, and environmental support (Tornatzky & Fleischer, 1990). In this study, CAATs and remote auditing represent the technological context because they support audit procedures, data analysis, evidence collection, and audit efficiency. The organizational context includes digital infrastructure, institutional readiness, management support, and auditor competence (Ceki & Moloi, 2025; Drazin, 1991). Thus, TOE is relevant to public sector auditing because the effective use of CAATs and remote auditing depends on technological readiness, organizational capacity, and a supportive governance environment (Al-Araj, 2025; Alsarayrah & Ali, 2025; Bin-Nashwan et al., 2025).

Beyond audit technology adoption, professional skepticism is also important in improving audit quality in technology-enabled public sector auditing. Professional skepticism reflects the auditor's

critical attitude in assessing evidence, testing information, and questioning the fairness of data obtained during the audit process (Anand et al., 2024; Rahim et al., 2023; Kartika & Pramuka, 2019)). In the use of CAATs and remote auditing, auditors cannot rely solely on digital systems. Auditors still need to assess data validity, understand the risks of manipulation, and exercise professional judgment in forming audit conclusions. Therefore, professional skepticism may improve audit quality by encouraging auditors to evaluate digital evidence carefully, objectively, and in an evidence-based manner. However, research on how professional skepticism contributes to audit quality in technology-enabled public sector auditing remains limited, especially in developing countries (N. Ahmed & Senan, 2024; Omari et al., 2025).

Good governance plays an important role in determining the extent to which audit technology and professional skepticism improve audit quality. Audit technologies can improve transparency, efficiency, and accuracy, but their impact on audit quality depends largely on the governance systems that regulate and support their use (Chouaibi & Fadhli, 2026; Dragomir & Dumitru, 2023). In a strong governance environment, data traceability, audit transparency, and evidence reliability are more likely to translate into higher audit quality. Good governance strengthens regulations, clarifies institutional responsibilities, improves internal control quality, and ensures that audit results are used to improve public financial management (Jannah & Nirwana, 2025; Adeniyi & Aderobaki, (2023); Sujanto et al., 2021). Thus, good governance can serve as a moderating condition that strengthens the effects of CAATs, remote auditing, and professional skepticism on public sector audit quality. This moderating role is consistent with Contingency Theory, which argues that the effectiveness of organizational practices depends on contextual conditions (Otenyo, 2022; Shonhadji & Maulidi, 2020). In this study, good governance represents the institutional condition that can strengthen or weaken the effects of CAATs, remote auditing, and professional skepticism on public sector audit quality.

The preceding discussion reveals several research gaps that require further empirical examination. First, most research on CAATs and remote auditing continues to focus on technical aspects and the private sector, while studies on public-sector audits in developing countries remain limited (Alhebri, 2025; Omari et al., 2025). Second, previous studies have not fully integrated professional skepticism as a factor that improves audit quality in technology-enabled public sector auditing (Omari et al., 2025; Senan, 2024). Third, limited empirical evidence examines how good governance moderates the effects of CAATs, remote auditing, and professional skepticism on public sector audit quality. In fact, in the public sector, the effectiveness of audit technology and auditor judgment is strongly influenced by regulations, institutional structures, internal controls, and commitment to public accountability (Alsarayrah & Ali, 2025; Kartikasary et al., 2021; Meiryani et al., 2022; Saleh et al., 2026; Sujanto et al., 2021; Wassie, 2024).

The urgency of this study arises from the fact that the use of audit technology does not automatically improve audit quality. The effectiveness of Public Sector Auditing depends on Good Governance. Good governance is required to respond to various cases of fraud, data manipulation, internal control weaknesses, and irregularities in the management of public finances (Alhebri, 2025; Meiryani et al., 2021). Without good governance, audit technology risks producing less reliable evidence, creating opportunities for manipulation, and causing fraud-detection failures (Senan, 2024; Al Omari et al., 2025). Therefore, good governance is placed as a moderating variable as it can strengthen or weaken the influence of CAATs, remote audits, and professional skepticism towards the quality of public sector audits (Alhebri, 2025; Aslan, 2021; Kartikasary et al., 2021; Puthukulam et al., 2021). This research offers a theoretical contribution by integrating Agency Theory, the TOE framework, Contingency Theory, professional skepticism, and good governance into a single conceptual model of public sector audit quality. Empirically, this study expands evidence on how audit technology and professional skepticism improve audit quality under different governance conditions in the public sector of a developing country, particularly Indonesia. In practical terms, the results of this study can help public audit institutions, particularly BPK, strengthen technology adoption, improve auditors' digital competence, and build governance conditions that support public sector audit quality.

This study focuses on public sector auditing in Central Java, Indonesia, with BPK auditors as the research subjects. The scope of the study is limited to CAATs, remote auditing, professional skepticism, good governance, and public sector audit quality. This study does not examine all forms of digital audit technology, but focuses on CAATs and remote auditing as technologies relevant to public sector audit processes. This study addresses whether CAATs, remote auditing, and professional skepticism improve public sector audit quality and whether good governance strengthens these

relationships. The remainder of this article presents the literature review and hypothesis development, research methods, results and discussion, and conclusion.

LITERATURE REVIEW

Agency Theory

Agency Theory describes the relationship between principals and agents in the management of resources (Jensen & Meckling, 1976). In the public sector, citizens act as principals, while government institutions act as agents that manage public finances and public resources. This relationship may create information asymmetry because government institutions have broader access to financial information, policy implementation, and budget execution than citizens (Grossi et al., 2023; Samagaio & Felício, 2022). Therefore, public sector auditing is needed as an independent oversight mechanism to reduce information gaps and strengthen accountability in public financial management (Alhebri, 2025; Jensen & Meckling, 1976; Sawaya et al., 2026; Sujanto et al., 2021).

In this study, Agency Theory is used as the grand theory because audit quality serves as an important instrument for ensuring that public resources are managed transparently, in compliance with regulations, and responsibly (Dekeyser et al., 2024; Fang et al., 2025; Grohnert et al., 2025; Leixnering et al., 2025). Quality audits help auditors assess compliance, budget management effectiveness, and potential irregularities in the use of public resources (Alhebri, 2025; Jensen & Meckling, 1976; Sujanto et al., 2021). Conceptually, audit quality reflects auditors' ability to detect and report misstatements, irregularities, or control weaknesses objectively and independently (DeAngelo, 1981; Dragomir & Dumitru, 2023; Puthukulam et al., 2021). On this basis, Agency Theory supports this study by explaining why audit quality is essential for public sector accountability. In contrast, audit technology adoption, professional scepticism, and good governance are positioned as mechanisms that strengthen the accountability function of public sector auditing (Bin-Nashwan et al., 2025; Sawaya et al., 2026).

Audit Quality

Audit quality is the auditor's ability to conduct an objective, independent, and reliable examination to detect and report misstatements, irregularities, or control weaknesses (Rafiuddin et al., 2024). DeAngelo (1981), emphasised that audit quality is related to two main aspects, namely the auditors' ability to identify problems in the examined reports and their courage to report the findings independently. Within the public sector, audit quality is becoming increasingly important, as audit results can be used to assess compliance, budget effectiveness, and potential irregularities in the use of public resources (Johnsen, 2019).

The quality of public sector audits is concerned not only with the accuracy of audit procedures but also with the contribution of audits to transparency, accountability, and public trust (Abu Huson et al., 2024; Juneja et al., 2025). A quality Audit helps ensure that the country's financial management complies with the rules and can be accounted for. Therefore, audit quality reflects the extent to which auditors produce findings that are relevant, evidence-based, and useful for improving public financial governance (Dragomir & Dumitru, 2023; Farida & Sugesti, 2023)).

In this study, audit quality is treated as a dependent variable because it is the result to be explained by the adoption of audit technology, professional scepticism, and good governance. Audit quality measures the success of the public sector audit process in producing an objective, credible, and beneficial examination that strengthens public accountability (Soedarsono et al., 2019). Thus, audit quality is the main measure for assessing the contribution of CAATs, remote auditing, professional scepticism, and good governance to improving the effectiveness of public sector audits.

Technology, Organization, and Environment (TOE) Framework

The TOE Framework explains technology adoption in organizations as occurring within three main contexts: technology, organization, and environment (Tornatzky & Fleischer, 1990). In this study, TOE

is used to explain the adoption of audit technology in the public sector, especially CAATs and remote auditing. The context of technology relates to the benefits, appropriateness, and capabilities of technology in supporting audit procedures, data analysis, evidence collection, broadening the scope of examination, and audit efficiency. Research by (Siew et al., 2020) showed that technological, organizational, and environmental factors influence the adoption of CAATs on audit practice.

The organizational context includes institutional readiness, digital infrastructure, management support, organizational culture, and auditor competence in using audit technology. Auditor technology competence and organizational readiness are important factors in the adoption of audit technology (Wassie & Peter, 2024). In contrast, organizational culture can strengthen the successful use of CAATs in internal audit units (Amadu et al., 2025). In addition, (Liu & Huang, 2025) emphasize that technological capacity at the leadership level can influence the audit process and results. Thus, TOE is relevant to this study because it explains that the successful adoption of CAATs and remote auditing is not determined solely by technology, but also by organizational readiness and external environmental support.

Recent studies confirm that the adoption of auditing technologies within the TOE framework is influenced by infrastructure readiness, auditor digital competence, management support, organizational culture, and external environmental pressures (Al-Hajaya et al., 2025; Ismail et al., 2024; Seshadrinathan & Chandra, 2025; Tetteh et al., 2026). The utilization of AI, remote auditing, blockchain, and CAATs also requires alignment between technological capabilities, organizational readiness, governance, data security, system compatibility, and institutional support to improve audit quality effectively (Al-Araj, 2025; Alsarayrah & Ali, 2025; Ceki & Moloi, 2025; Huang et al., 2024; Rikhardsson et al., 2022; Seethamraju & Hecimovic, 2023; Torroba et al., 2025; Yang et al., 2024; Zygioulis, 2014).

Professional Auditor Scepticism

Professional scepticism is the critical attitude of auditors in assessing evidence, testing the reliability of information, and questioning the fairness of data during the audit process (Hurt, 2010; Nelson, 2009). In technology-based auditing, this attitude is important because the auditor must still assess the validity of the data, the risk of manipulation, and the adequacy of the evidence generated through CAATs and remote auditing (Anand et al., 2024; Rahim et al., 2023). Auditors with strong professional scepticism tend to rely not only on system results but also to evaluate processes, data sources, and the consistency of audit evidence. This attitude helps auditors use audit technology more carefully, objectively, and evidence-based (Argento et al., 2025; Deligiannis et al., 2026; Trudelle, 2024). In this study, professional scepticism is identified as a driver of the adoption of more effective auditing technologies, particularly in public-sector audits in developing countries (Omari et al., 2025; Rahim et al., 2023).

Good Governance

Contingency Theory explains that the effectiveness of organizational practices depends on contextual conditions, including governance structures, regulatory systems, and institutional capacity (Otenyo, 2022; Shonhadji & Maulidi, 2020). Good governance is derived from Contingency Theory because it represents a contextual condition that determines whether audit technology and professional skepticism can effectively improve public sector audit quality (Otley, 1980). Good governance emphasises transparency, accountability, regulatory compliance, clear assignment of responsibility, internal controls, and performance orientation in the public sector. Good governance supports accountability systems through performance measurement, program evaluation, risk management, and improvement of public services (Rana, 2018). It is increasingly important in the digital age as technology expands access to information and public oversight (Setyarto & Judijanto, 2025).

Good governance is defined as an institutional condition that ensures the use of audit technology based on the principles of transparency, accountability, regulatory compliance, effective internal control and risk management, clarity of responsibility, auditor independence, and digital data integrity and security. These conditions ensure that CAATs and remote audits are used in a consistent, secure, and accountable manner, resulting in reliable audit evidence and supporting effective public sector oversight (S. K. Ahmed, 2024; Magnusson et al., 2025; Nadirsyah et al., 2024; Purnamasari et al., 2024; Yamen & Can, 2023). Thus, good governance is an institutional condition that determines the

strong or weak influence of audit technology and professional skepticism on the quality of public sector audits.

In public sector audits, good governance ensures the audit process runs according to the rules, audit results are used responsibly, and audit recommendations support the improvement of public financial management. Governance also strengthens the quality of financial reporting, accountability, regulation, internal control, and audit effectiveness (Jannah & Nirwana, 2025; Sujanto et al., 2021; Vokshi & Xhemajli, 2022). In this study, good governance acts as a moderation variable because the influence of CAATs, remote auditing, and professional scepticism on audit quality can be stronger when governance supports regulatory clarity, data access, institutional accountability, audit independence, and follow-up on audit results (Chouaibi & Fadhli, 2026; Dragomir & Dumitru, 2023).

Hypothesis Development

Agency Theory holds that public sector audits help reduce information asymmetry and strengthen accountability between government institutions and society (Jensen & Meckling, 1976). In this context, audit quality is important because auditors must produce reliable findings regarding compliance, budget effectiveness, and potential irregularities in the management of public resources (Johnsen, 2019; DeAngelo, 1981). The TOE Framework supports the role of CAATs because the adoption of audit technology depends on technological readiness, organizational capacity, and environmental support (Tornatzky & Fleischer, 1990). CAATs helps auditors systematically test transactions, analyze large-scale data, strengthen evidence collection, and expand audit coverage (Siew et al., 2020; Omari et al., 2025). In the public sector audit conducted by the BPK in Central Java, CAATs can improve audit quality by enabling auditors to examine government financial data more accurately, efficiently, and evidence-based.

However, CAATs do not necessarily improve audit quality automatically, as their effectiveness depends on data quality, system integration, auditors' digital competence, management support, and organizational readiness (Ahmed & Senan, 2024; Al-Araj, 2025; Amadu et al., 2025; Meiryani et al., 2022). The findings of previous studies have also not been consistent: some show an increase in the efficiency, accuracy, and scope of audits, while other studies confirm that these benefits are only achieved when technology is integrated with the audit process and supported by adequate institutional conditions (Abu Huson et al., 2024; Jayanti et al., 2025; Tetteh et al., 2026; Wassie, 2024). In the context of BPK, the representative of Central Java province, CAATs is expected to improve audit quality through more extensive transaction testing, faster anomaly detection, and strengthening evidence traceability. This mechanism integrates Agency Theory and the TOE framework: CAATs reduce information asymmetry, but their effectiveness remains contingent on technological and organizational readiness (Bin-Nashwan et al., 2025; Ceki & Moloi, 2025). Technically, this hypothesis is important to test because the ability of CAATs to improve audit quality depends on the extent to which the system is actually able to expand the scope of testing, accurately detect anomalies, and generate verifiable digital evidence

H₁: CAATs positively affects the quality of public sector audits.

From the perspective of the TOE Framework, remote auditing is a technological context whose effectiveness depends on technological readiness, organisational capacity, and the audit's environmental support (Tornatzky & Fleischer, 1990). Audit technology can improve efficiency, expand the scope of examination, and flexibly strengthen access to and evaluation of audit evidence (Omari et al., 2025; Siew et al., 2020). However, these benefits still require digital infrastructure, auditor technological competence, and organisational readiness to ensure the audit process remains reliable and accountable (Alsarayrah & Ali, 2025; Wassie & Peter, 2024).

In public sector auditing, remote auditing is relevant because government entities are spread over different regions, have large volumes of documents, and require efficient examination without compromising the quality of evidence. In BPK audits in Central Java, remote auditing can help maintain audit timeliness, speed up document confirmation, expand data access, and support evidence-based audits. A digital audit approach can strengthen audit effectiveness when auditors maintain data validity,

the reliability of evidence, and the quality of audit procedures (Aslan, 2021; Puthukulam et al., 2021b). In addition, public sector audits require a data-driven approach, robust internal controls, and an audit system that supports the quality of audit results (Alqudah et al., 2023; Dragomir & Dumitru, 2023). Thus, remote auditing is expected to improve the quality of public sector audits by enhancing efficiency, audit scope, timeliness, and the reliability of evidence.

Although remote auditing offers efficiency and flexibility, previous studies have shown that its effect on audit Quality has not always been uniform. The benefits can be weakened when auditors face limited data access, low technological readiness, information security risks, difficulty verifying evidence virtually, and lack of competence in using digital audit systems (Alma'aitah et al., 2024; Al-Hajaya et al., 2025; Ismail et al., 2024). In contrast, remote auditing can improve audit quality when supported by reliable infrastructure, clear digital verification procedures, and auditors' ability to maintain the validity and traceability of evidence (Al Shbail et al., 2025; Guo et al., 2025; Shen et al., 2026). In the context of BPK representatives in Central Java Province, the mechanism is important because audits are conducted across scattered entities and documents, so the speed of access must still be balanced against the reliability of the evidence. Technically, this hypothesis needs to be tested to ascertain whether remote auditing is really capable of speeding up checks, expanding evidence access, and maintaining verification validity without degrading auditor rigor.

H₂: Remote auditing positively affects the quality of public sector audits.

Professional scepticism reflects auditors' critical attitude toward assessing evidence, testing the reliability of information, and questioning the fairness of audit data (Hurt, 2010; Nelson, 2009). From the perspective of Agency Theory, this attitude is important because auditors play a role in reducing information asymmetry and strengthening public accountability through objective and independent examination (Jensen & Meckling, 1976). Audit quality also depends on the auditor's ability to produce findings that are relevant, evidence-based, and beneficial to improving public financial governance (DeAngelo, 1981; Dragomir & Dumitru, 2023; Soedarsono et al., 2019).

In technology-based audits, auditors still need to assess the validity of data, the risk of manipulation, the adequacy of evidence, and the consistency of information generated through CAATs and remote auditing (Anand et al., 2024; Rahim et al., 2023). In the BPK examination of local government entities in Central Java, professional scepticism is important because auditors face the risk of budget abuse, internal control weaknesses, and variations in data quality between entities. Previous studies have shown that professional scepticism in public-sector technology-based audits remains under-researched, especially in developing countries (N. Ahmed & Senan, 2024; Omari et al., 2025; Senan, 2024). Thus, professional scepticism is expected to improve audit quality through objectivity, rigour, reliability of evidence, and quality of auditor judgment.

However, professional skepticism does not necessarily improve audit quality directly, as its effectiveness depends on access to reliable evidence, auditor independence, audit timing, organizational support, and the auditor's ability to assess risk in a digital environment. Previous research has shown that auditors' critical attitude can strengthen fraud detection and the quality of audit considerations. Still, its influence can be weakened when auditors rely too heavily on system outputs, face data limitations, or work in environments that are less supportive of independent judgment (Samagaio & Felício, 2022; Rahim et al., 2023; Anand et al., 2024; Grohnert et al., 2025). In the context of BPK representatives in Central Java province, professional skepticism is expected to improve audit quality by retesting information, assessing the consistency of evidence, identifying indications of manipulation, and strengthening the objectivity of audit conclusions. This mechanism clarifies Agency Theory by showing that auditors reduce information asymmetry not only by acquiring evidence but also by critically and independently assessing the credibility of that evidence (Jensen & Meckling, 1976; DeAngelo, 1981; Hurt, 2010). Technically, this hypothesis is important to test because audit quality depends heavily on the auditor's ability to distinguish valid digital evidence from incomplete, biased, or potentially manipulated information.

H₃: Professional scepticism positively affects the quality of public sector audits.

Contingency Theory explains that the effectiveness of organizational practices depends on contextual conditions, including governance structures, regulatory systems, and institutional capacities (Otley, 1980; Shonhadji & Maulidi, 2020). CAATs can improve audit quality through better data analysis, transaction testing, and evidence collection. However, those influences depend on whether the

governance environment supports regulatory clarity, quality of internal controls, data access, and institutional accountability. Good governance strengthens regulations, clarifies responsibilities, and ensures audit results are used to improve public finances (Evinita et al., 2025; Jannah & Nirwana, 2025; Mediawati & Rasyid, 2024; Sujanto et al., 2021; Susan & Pan, 2024). In the context of BPK audits in Central Java, CAATs will be more effective at improving audit quality when the audited entity has transparent, accountable governance and adequate internal controls.

The relationship between CAATs and audit quality is conditional because the ability of technology to analyze large amounts of data does not guarantee that it is valid, complete, and free from manipulation. Good governance provides prerequisites in the form of data integrity, clear access rights, standardization of digital audit procedures, effective internal controls, system security, and accountability for the use and follow-up of audit results (Alhebri, 2025; Magnusson et al., 2025; Nadirsyah et al., 2024; Purnamasari et al., 2024). In a robust governance environment, CAATs outputs can be verified, traced, and translated into reliable audit evidence. Conversely, weak governance can lead to CAATs simply speeding up the processing of unqualified data, expanding analysis errors, and creating pseudo-audit confidence. This explains why the results of previous studies on the effect of CAATs on audit Quality have not always been consistent and why governance conditions need to be tested as a factor determining the strength of such relationships (Bin-Nashwan et al., 2025; Senan, 2024; Tetteh et al., 2026; Yamen & Can, 2023). In the BPK as representative of Central Java Province, the influence of CAATs on audit Quality is expected to be stronger when the inspected entity's financial management system is supported by Transparency, internal control, data integrity, and adequate institutional responsibility. Technically, this moderation hypothesis is important to test because audit quality is determined not only by the sophistication of CAATs but by the ability of governance to ensure that the data, analysis processes, and digital evidence produced are trustworthy and accountable.

H₄: Good governance moderates the influence of CAATs on the quality of public sector audits.

Contingency theory explains that the effectiveness of remote audits depends on the governance conditions in which the technology is applied. Remote auditing can improve audit quality through accelerated document access, expanded inspection coverage, and more timely verification of evidence. However, such benefits may not be achieved when auditors encounter unreliable data, weak cybersecurity, limited system integration, unclear digital audit procedures, or limited access to auditee information (Alma'aitah et al., 2024; Al-Hajaya et al., 2025; Al Shbail et al., 2025). Good governance provides the institutional safeguards necessary to address such risks through regulatory clarity, data integrity, information exchange security, effective internal controls, clarity of accountability, and traceability of digital evidence (Magnusson et al., 2025; Nadirsyah et al., 2024; Purnamasari et al., 2024; Yamen & Can, 2023).

Thus, the relationship between remote auditing and audit quality is conditional, not automatic. Under strong governance conditions, evidence obtained remotely can be authenticated, traced, reviewed, and used responsibly, enabling the speed of access and breadth of examination coverage to produce reliable audit findings. Conversely, weak governance can lead to remote audits actually accelerating the collection of incomplete or manipulated data, reducing the reliability of evidence and increasing the risk of improper audit conclusions (Guo et al., 2025; Senan, 2024; Shen et al., 2026). In the context of BPK audits in Central Java, this moderation is technically important because the quality of remote audits depends not only on digital access but also on governance's ability to ensure that remotely obtained data is valid, secure, complete, and accountable.

H₅: Good governance moderates the influence of remote auditing on public sector audit quality.

Agency Theory positions professional scepticism as an essential audit mechanism for challenging management information, evaluating contradictory evidence, and reducing information asymmetry between government institutions and society (Jensen & Meckling, 1976; Hurtt, 2010; Nelson, 2009). However, previous findings indicate that professional scepticism does not consistently translate into higher audit quality. Its effectiveness depends on whether auditors have sufficient access to reliable evidence, institutional independence, authority to conduct additional procedures, and

organisational support to report irregularities objectively (Rahim et al., 2023; Samagaio & Felicio, 2022; Grohnert et al., 2025). This inconsistency suggests that professional scepticism is not solely an individual capability but is also shaped by the governance environment in which audit judgment is exercised.

Consistent with Contingency Theory, good governance functions as an institutional boundary condition that determines whether sceptical judgment can be converted into credible and actionable audit findings. Transparency, regulatory compliance, effective internal control, protected auditor independence, clear responsibility, and accountable follow-up mechanisms enable auditors to challenge unreliable information, extend audit testing, and report indications of manipulation without institutional interference (Alqudah et al., 2023; Nadirsyah et al., 2024; Senan, 2024; Yamen & Can, 2023). Conversely, weak governance may restrict access to evidence, undermine auditor objectivity, and cause professional scepticism to remain merely an individual attitude rather than improving audit outcomes. This issue is particularly relevant to BPK audits in Central Java, where auditors examine entities with different levels of data quality, internal control, and institutional transparency. Therefore, the moderating effect of good governance must be tested to determine whether governance conditions strengthen the conversion of professional scepticism into more reliable evidence, stronger findings, and higher public sector audit quality.

H₆: Good governance moderates the influence of professional skepticism on the quality of public sector audits

The conceptual framework of this study describes the effect of CAATs, remote auditing, and professional scepticism on the quality of public sector audits. Good governance is positioned as a moderating variable that can strengthen these relationships by supporting regulatory oversight, internal controls, accountability, and institutional governance. The research Model is presented in Figure 1.

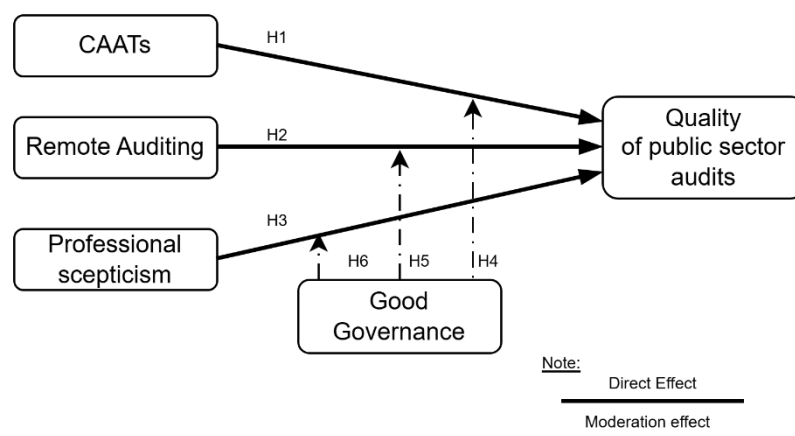


Figure 1. Research Framework

Source: Authors Design

RESEARCH METHOD

This study uses a quantitative approach and survey methods to examine the effects of CAATs, remote auditing, and professional scepticism on audit quality, and the role of good governance in moderating these effects. A method survey questionnaire distribution for the auditor because it can collect auditor-perception data in a structured manner and allow statistical testing of relationships between variables (Bougie & Sekaran, 2025). The unit of analysis in this study is the auditor of BPK, a representative of Central Java province, who is directly involved in the public sector audit process.

Data collection was conducted from May to September 2025 by distributing questionnaires to BPK auditors representing Central Java province. The period is used to obtain auditor perception data in a planned, adequate, and in accordance with the research model testing needs. In quantitative survey research, the determination of units of analysis, the timing of data collection, and the sampling techniques needs to be clearly explained so that the research process can be traced and replicated

(Bougie & Sekaran, 2025; Hair & Sabol, 2025). The collected Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4.0, as this method is suitable for testing predictive models involving latent constructs, direct relationships, and moderation effects (Hair et al., 2021).

The Population is 201 auditors BPK-RI from Central Java. This study uses a probability sampling technique, specifically simple random sampling, so that each auditor in the population has an equal chance of being selected as a respondent (Bougie & Sekaran, 2025). The number of samples is determined using the Slovin formula with an error rate of 5%, which is commonly used to determine the sample size of a finite population (Ahmed, 2024; Sarker & AL-Muaalemi, 2022). Based on the calculations, the minimum number of auditors required in this study is 134. Respondents were selected because they have direct involvement in the public sector inspection process, the use of audit evidence, the implementation of audit procedures, and the assessment of audit quality.

Slovin Formula:

$$n = \frac{N}{1+N(e)^2} \dots \dots \dots (1)$$

$$n = \frac{201}{1+202(0.05)^2}$$

$$n = \frac{201}{1,5025}$$

$$n = 133,77 \rightarrow \mathbf{134}$$

The adequacy of the sample size was further verified through a priori power analysis using G*Power with f-test settings, linear multiple regression: fixed model, R2 deviation from zero, Cohen's f² of 0.15, significance level of 5%, statistical power of 80%, and seven predictors in the most complex structural models. The analysis indicated a minimum requirement of 103 respondents; the 134 responses analyzed were sufficient for PLS-SEM testing.

Measurement of variables is based on theory and relevant previous research. Audit quality is an endogenous variable measured by the accuracy of audit findings, the reliability of audit evidence, recommendations, clarity, benefits, and monitoring (Abu Huson et al., 2024; Juneja et al., 2025; Magboul et al., 2024). CAATs and remote auditing are positioned as exogenous variables because they represent auditing technologies that support data analysis, transaction testing, evidence collection, and expansion of audit coverage. CAATs are measured through performance expectation, effort expectation, social influence, facilitating conditions, intention to use CAATs, and appropriate use of CAATs (Omari et al., 2025; Siew et al., 2020; Tornatzky & Fleischer, 1990). Remote auditing is measured through the use of technology, including technology readiness, remote document verification, remote audit communication, and auditor objectivity (Dragomir & Dumitru, 2023; Tornatzky & Fleischer, 1990; Wassie & Lakatos, 2025).

Professional Scepticism is treated as an exogenous variable that reflects the auditor's critical attitude when assessing the evidence and the risks of manipulation. The indicators include suspension of judgment, critical assessment of evidence, questioning mind, assessment of data reliability, and evaluation of manipulation risk (Hurt, 2010; Rahim et al., 2023; Senan, 2024). Good governance acts as a moderating variable and is measured by transparency, accountability, responsiveness, regulatory compliance, clarity of responsibility, and support for internal controls (Evinita et al., 2025; Rana, 2018; Setyarto & Judijanto, 2025; Susan & Pan, 2024). Table 1 describes the names and positions of variables along with measurement indicators and sources used. Research instruments were adapted from previous research and adapted to the context of public sector audits. Before the main data collection, the questionnaire was tested to 30 respondents who had similar characteristics to the study population and were not included in the main sample. Trials were conducted to assess the clarity of redaction, the relevance of the indicators, the time required to complete the instrument, and the instrument's initial reliability.

This study adheres to the principles of informed consent, voluntary participation, confidentiality, and the protection of respondents' data. Before filling out the questionnaire, the

respondent receives an explanation of the purpose, procedure, and use of the data, as well as the right to refuse or stop participating. Approval was obtained in writing, and the study has received permission from the BPK representative of Central Java province. The respondent's personal identity is not collected, and the data is stored on a password-protected medium and reported only in the aggregate. Data integrity is maintained through completeness checks, conformity of respondent criteria, multiple responses, unnatural answer patterns, and answer consistency.

Table 1. Variable and indicators

No.	Variables	Codes	Indicators	Sources
1	Audit Quality (Endogenous Variable)	AQ	1. Accuracy of audit findings 2. Reliability of audit evidence 3. Recommendation 4. Clarity 5. Benefit 6. Monitoring	(Abu Huson et al., 2024; Juneja et al., 2025; Magboul et al., 2024)
2	Computer-Assisted Audit Techniques (Exogenous Variable)	CAATs	1. Performance expectancy 2. effort expectancy 3. social influence 4. facilitating conditions, 5. intention to use CAATs, appropriate use of CAATs	(Omari et al., 2025; Siew et al., 2020; Tornatzky & Fleischer, 1990)
3	Remote Auditing (Exogenous Variable)	RA	1. Use of remote audit 2. technology readiness 3. remote document verification 4. remote audit communication 5. auditor objectivity	(Dragomir & Dumitru, 2023; Tornatzky & Fleischer, 1990; Wassie & Lakatos, 2025)
4	Professional Skepticism (Exogenous Variable)	PS	1. Suspension of judgment 2. Critical assessment of evidence 3. Questioning mind 4. Assessment of data reliability 5. Evaluation of manipulation risk	(Hurtt, 2010; Rahim et al., 2023; Senan, 2024)
5	Good Governance (Moderating Variable)	GG	1. Transparency 2. Accountability 3. Responsiveness 4. Regulatory compliance 5. Clarity of responsibility 6. Internal control support	(Evinita et al., 2025; Rana, 2018; Setyarto & Judijanto, 2025; Susan & Pan, 2024)

Source: by Authors (2026)

Data collection was conducted through Google Forms from May 12 to September 28, 2025. Of the 140 auditors selected, 134 returned questionnaires, and all responses were declared worthy of analysis. The potential for nonresponse bias was examined by comparing the construct scores of the initial and final respondents using the independent-samples t-test at a significance level of 5%. If the parametric assumptions are not met, the Mann-Whitney U test is performed. The absence of significant differences suggests that nonresponse bias was not a serious problem in the study. Potential common method bias is controlled procedurally through respondent anonymity, neutral instructions, and the assertion that there are no right or wrong answers. Statistically, common method bias was examined using Harman's single-factor test and full-collinearity VIF.

The research Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4.0 (Hair et al., 2019; Hair et al., 2021). Analysis is conducted by evaluating the outer and inner models. This research validity and reliability measure through outer loading, Average Variance Extracted, Cronbach's Alpha, Composite Reliability, Fornell-Larcker Criterion, and Heterotrait-Monotrait Ratio (Hair Jr et al., 2021; Hilkenmeier et al., 2020; Kante & Michel, 2023; Pandey & Pandey, 2021). An inner model test using path coefficients, R-square, F-square, Q-square, t-

statistics, and p-values. The moderation effect of good governance is analysed using a bootstrapping procedure in SmartPLS 4.0 (Hair & Sabol, 2025; Vaithilingam et al., 2024).

RESULTS AND DISCUSSION

Results and Discussion present and explain the research results in a structured manner. The Results section presents the research findings, including respondent characteristics, descriptive statistics, model evaluation, and hypothesis testing. Discussion section interprets the results, explains the findings' meaning, and relates them to relevant theories and previous research.

Results

Respondent characteristics

Table 2 presents the characteristics of the research respondents by gender, age, educational background, and work experience. Based on Table 2, the majority of respondents were men (110, 82.43%), while 24 were women (17.57%). In terms of age, the largest group was 41-50 years, with 50 people (37.84%), followed by 31-40 years, with 40 people (29.73%). Based on educational background, most respondents are undergraduate graduates (69 people, 51.35%), followed by master's graduates (51 people, 37.84%) and doctorate graduates (14 people, 10.81%). In terms of work experience, most respondents have 11-15 years of experience, as many as 47 people or 35.14%, then 15-20 years, as many as 43 people or 32.43%, less than 10 years, as many as 29 people or 21.62%, and more than 20 years, as many as 15 people or 10.81%. The data characteristics of respondents indicate that this study is dominated by male respondents in the productive age, with high educational levels and mature work experience.

Table 2. Respondent Characteristics

Classification	Description	Proportion	Frequency
Gender	Male	82.43%	110
	Female	17.57%	24
Age	<30	16.22%	22
	31–40	29.73%	40
	41–50	37.84%	50
	>51	16.22%	22
Education Background	Undergraduate	51.35%	69
	Master's	37.84%	51
	Doctorate	10.81%	14
Work Experiences	<10 years	21.62%	29
	11–15 years	35.14%	47
	15–20 years	32.43%	43
	>20 years	10.81%	15

Source: Created by Author

Descriptive Statistics of Variables

Table 3 discusses descriptive statistics, including construct indicators, mean, maximum scale, minimum scale, and standard deviation. The data used in this study are 134. Based on the descriptive statistics, all variables have mean values above 3.00, indicating that respondents' responses tend to be in the good enough category. CAATs variables have a range of mean 3,164–3,336, RA of 3,213–3,276, PS of 3,327–3,548, AQ of 3,321–3,448, and GG of 3,328–3,530. In general, the variables PS and GG had higher average values than the other variables.

Model Evaluation and Hypothesis testing

Model evaluation in SEM-PLS comprises outer and inner model evaluation. Outer model evaluation assesses the validity and reliability of measurement models. This evaluation includes convergent validity, discriminant validity, and reliability to ensure that the indicators are valid and reliable in measuring the research construct. Meanwhile, inner-model evaluation is used to assess the relationships among latent variables.

Table 3. Descriptive Statistics

Name Construct Indicators	Mean	Scale min	Scale max	Standard deviation
CAATs1	3.164	2	5	1.016
CAATs2	3.246	2	5	0.91
CAATs3	3.336	2	5	0.93
CAATs4	3.328	1	5	1.056
CAATs5	3.254	1	5	1.034
CAATs6	3.269	2	5	0.848
RA1	3.239	2	5	1.031
RA2	3.276	2	5	0.893
RA3	3.236	2	5	0.941
RA4	3.262	2	5	0.947
RA5	3.213	2	5	0.924
PS1	3.548	2	5	1.072
PS2	3.327	1	5	0.955
PS3	3.376	1	5	0.994
PS4	3.391	1	5	0.965
PS5	3.469	2	5	0.892
AQ1	3.429	2	5	1.098
AQ2	3.321	1	5	1.012
AQ3	3.373	1	5	1.182
AQ4	3.435	1	5	0.943
AQ5	3.321	1	5	0.903
AQ6	3.448	2	5	0.911
GG1	3.419	1	5	1.117
GG2	3.328	1	5	1.063
GG3	3.53	2	5	0.861
GG4	3.388	1	5	0.889
GG5	3.44	1	5	0.981
GG6	3.373	1	5	1.137

Source: Output SmartPLS 4.0 by Authors

This evaluation includes path coefficients, moderation tests, R-square, F-square, and Q-square to assess the direction of influence, the role of moderation, the model's explanatory power, the magnitude of influence, and the predictive relevance of the model. Table 4 displays the results of the measurement model assessment, including construct items, loadings, VIFs, Cronbach's Alpha, Composite Reliability, and AVEs. Discriminant validity was tested using the Heterotrait-Monotrait Ratio (HTMT) Matrix and the Fornell-Larcker Criterion in Table 5.

In this study, convergent validity was tested using factor loadings and Average Variance Extracted (AVE). Based on the results of the outer model in the measurement model assessment, all indicators have loading factors > 0.70 , ranging from 0.721 to 0.888. Table 4 shows that each indicator is well constructed. The AVE values for all constructs are > 0.50 , ranging from 0.648 to 0.676, indicating no problem with convergent validity. Based on Table 5 of discriminant validity, all constructs have met the criteria. In the Fornell-Larcker Criterion, the diagonal value of each construct is greater

than the correlation between the other constructs. In addition, the HTMT value for the entire construct is below the 0.90 or 0.85 threshold, with the highest value being 0.211. Thus, there is no problem of discriminant validity in this research model.

Table 4. Measurement model assessment

Construct item	Loadings	VIF	Alpha	Composite Reliability	AVE
AQ1	0.815	2.877	0.905	0.926	0.676
AQ2	0.787	2.476			
AQ3	0.846	2.531			
AQ4	0.809	2.305			
AQ5	0.845	2.589			
AQ6	0.829	2.246			
CAATs1	0.826	2.180	0.899	0.919	0.654
CAATs2	0.772	2.391			
CAATs3	0.805	2.463			
CAATs4	0.810	2.004			
CAATs5	0.844	2.093			
CAATs6	0.792	2.132			
RA1	0.776	1.858	0.870	0.903	0.651
RA2	0.802	2.005			
RA3	0.859	2.149			
RA4	0.743	1.872			
RA5	0.849	1.980			
PS1	0.770	2.118	0.876	0.902	0.648
PS2	0.869	1.909			
PS3	0.744	1.949			
PS4	0.845	2.111			
PS5	0.791	2.092			
GG1	0.799	2.011	0.904	0.920	0.658
GG2	0.721	2.073			
GG3	0.888	2.558			
GG4	0.845	2.630			
GG5	0.821	3.131			
GG6	0.784	2.033			

Notes: AQ: Audit Quality; CAATs: Computer assisted-audit Techniques; RA: Remote Audit; PS: Professional Scepticism; GG: Good Government.

Source: Output SmartPLS 4.0

Table 5. Discriminant Validity

Construct	AQ	CAATs	GG	PS	RA	AQ	CAATs	GG	PS	RA
AQ						0.822*	0.145**	0.114**	0.134**	0.211**
CAATs	0.144	0.809					0.098**	0.095**	0.087**	0.087**
GG	0.132	0.018	0.811					0.142**	0.134**	0.134**
PS	0.139	0.014	0.029	0.805						0.149**
RA	0.205	0.004	0.036	-0.126	0.807					
Fornell-Larcker criterion						Heterotrait-monotrait ratio				

Source: Output SmartPLS 4.0

In terms of reliability, the value of Cronbach's Alpha is between 0.870 and 0.905, while the value of Composite Reliability is between 0.902 and 0.926. All of these values ($> 0,70$) exceed the minimum limit of 0.70, so the data of this study are considered reliable. Thus, the constructs AQ, CAATs, RA, PS, and GG have met the validity and reliability criteria of the measurement model. In addition, the VIF values range from 1.858 to 3.131, which are still below the limit of 5, so there is no multicollinearity among the indicators.

Evaluation of the Inner model in this study includes path coefficients, moderation Tests, R-square, F-square, and Q-square to assess the direction of influence, the significance of the relationship, the amount of influence, and the predictive ability of the model. Figure 2 shows the results of bootstrapping, which display the value of the original sample and the P-value for hypothesis testing.

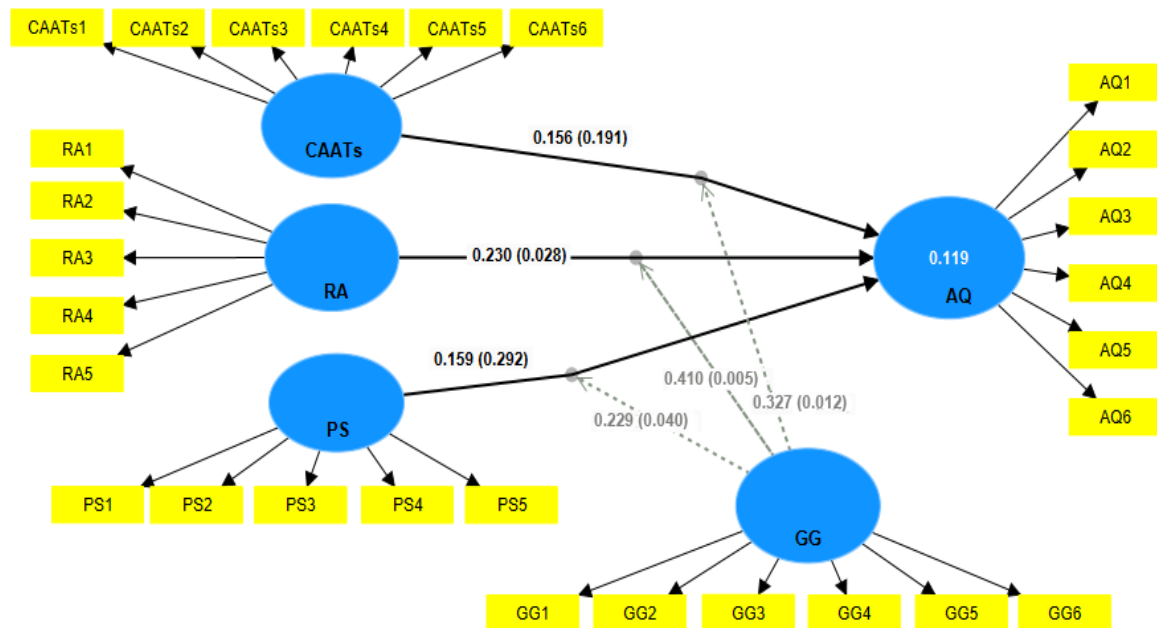


Figure 2. Result of Path coefficients

Source: Output SmartPLS 4.0

Table 6 presents the hypothesis-testing results based on the original sample values, T-statistics, and P-values from bootstrapping in SmartPLS 4.0.

Table 6. Hypothesis-testing results

Hypothesis	Path	Original sample (O)	T statistics ($ O/STDEV $)	P values
1	CAATs $\rightarrow$ AQ	0.156	1.307	0.191
2	RA $\rightarrow$ AQ	0.230	2.202	0.028*
3	PS $\rightarrow$ AQ	0.159	1.054	0.292
4	GG x CAATs $\rightarrow$ AQ	0.327	2.412	0.012*
5	GG x RA $\rightarrow$ AQ	0.410	2.940	0.005*
6	GG x PS $\rightarrow$ AQ	0.229	2.086	0.040*

*) significant

Source: Output SmartPLS 4.0

The results of the hypothesis test in Table 6 showed that CAATs had no significant effect on AQ ($P = 0.191$), so H1 was rejected. RA has a significant effect on AQ ($P\text{-value} = 0.028$), so H2 is accepted. PS has no significant effect on AQ ($P\text{-value} = 0.292$), so H3 is rejected. Furthermore, GG found that GG moderates the relationships among CAATs, RA, and PS and AQ, with P-values of 0.012, 0.005, and 0.040, respectively, thereby supporting H4, H5, and H6.

Discussion

Effect of CAATs on audit Quality

The test results showed that CAATs do not affect the quality of public sector audits. These findings indicate that CAATs have not directly improved audit quality among BPK auditors in Central Java. This finding is not in line with the TOE Framework, which explains that technology adoption can improve organisational performance when supported by technological, organisational, and environmental readiness (Tornatzky & Fleischer, 1990). Conceptually, CAATs can expand audit coverage, strengthen transaction testing, improve data analysis, and enhance audit evidence adequacy (Siew et al., 2020; Omari et al., 2025). However, the results of this study indicate that these benefits are not yet significant. This indicates that audit technology is not impactful enough without adequate data quality, auditor digital competence, system integration, and digital audit procedures.

These results also do not align with those of Siew et al. (2020), Omari et al. (2025), and Alhebri (2025). This study shows that software complexity, implementation costs, and integration difficulties hamper the effectiveness of CAATs. This finding aligns with Alsarayrah and Ali (2025) and Jayanti et al. (2025), who affirm that the limitations of digital infrastructure, weak regulation, low technological literacy, and uneven institutional capacity can limit the benefits of audit technology in developing countries.

Importantly, the insignificant direct effect should not be interpreted as evidence that CAATs are ineffective or inconsistent with the TOE framework. Rather, it indicates an implementation gap between the availability of audit technology and its effective integration into audit decision-making. CAATs can generate analytical value only when auditors have access to complete and standardised data, compatible information systems, sufficient digital competence, management support, and institutional procedures that connect analytical outputs with risk assessment, substantive testing, and audit conclusions (Ismail et al., 2024; Amadu et al., 2025; Bin-Nashwan et al., 2025; Ceki & Moloi, 2025). When these conditions are uneven, CAATs may increase processing capacity without necessarily improving the reliability, relevance, or professional use of audit evidence. The rejection of H1 therefore suggests that BPK auditors may have access to CAATs, but the technology has not yet been fully embedded as an organisational audit capability capable of consistently producing higher-quality audit outcomes. This finding sharpens the TOE explanation by showing that technology adoption alone is insufficient; audit quality depends on the maturity of technological integration, organisational readiness, and institutional support (Tetteh et al., 2026; Wassie & Lakatos, 2025).

In the context of BPK in Central Java, the rejection of H1 can be explained by the use of CAATs that have not been thoroughly integrated into the audit process. CAATs still have the potential to be used as a technical tool, rather than as a primary basis in risk assessment, substantive testing, and audit decision-making. In addition, differences in digital readiness between local government entities can affect the quality, completeness and coherence of the analysed data. So, CAATs are difficult to produce strong audit evidence. In addition, auditors' ability to use technology remains uneven, especially in interpreting data patterns, detecting anomalies, and integrating digital analysis results with professional judgment.

From the perspective of Agency Theory, these results show that CAATs have not been able to reduce information asymmetry and strengthen audit accountability directly. New CAATs have an impact on audit quality if supported by reliable data, auditor competence and adequate digital audit governance. These results suggest that BPK should incorporate CAATs into its digital audit ecosystem. Strengthening auditors' competence, integrating Information Systems, standardising CAAT procedures, improving data quality, and strengthening technology governance need to be a priority so that CAATs can contribute significantly to the quality of public sector audits.

Effect Remote Auditing on Audit Quality

The test results show that remote auditing has a significant positive effect on public sector audit quality, with a p-value of 0.028. This finding indicates that remote auditing directly contributes to higher audit quality among auditors at the BPK Representative Office of Central Java Province. Consistent with the TOE framework, the result demonstrates that audit technology can improve organisational performance

when its use is supported by adequate technological infrastructure, organisational readiness, and environmental support (Tornatzky & Fleischer, 1990). Remote auditing improves audit efficiency by accelerating document access, facilitating communication with audited entities, expanding audit coverage, and increasing flexibility in collecting and verifying audit evidence (Omari et al., 2025; Siew et al., 2020).

The significant effect can be explained by the operational characteristics of public sector auditing. Auditors frequently examine entities located in different regions and require timely access to large volumes of financial documents. Remote auditing reduces geographical and time constraints, enabling auditors to obtain confirmations, review supporting documents, communicate with auditees, and conduct follow-up verification more efficiently. Therefore, its contribution is not limited to reducing audit time but also includes improving the timeliness, continuity, and coverage of audit procedures. Recent studies similarly show that remote auditing improves audit quality by expanding access to information and strengthening evidence-verification efficiency, particularly when supported by technological readiness and auditor capability (Alma'aitah et al., 2024; Al Shbail et al., 2025).

The findings also indicate that the value of remote auditing lies in its ability to maintain the flow of audit evidence throughout the examination process. Digitalisation supports more reliable data collection and processing, while digital confirmation systems improve the timeliness, traceability, and reliability of audit evidence (Lugli & Bertacchini, 2023; Guo et al., 2025). Moreover, investment in information technology and the development of auditors' digital competence can reduce audit risk and improve the effective use of remote-audit procedures (Shen et al., 2026). However, the positive effect of remote auditing should not be interpreted as arising merely from the use of online communication tools. Its effectiveness depends on the validity of digital documents, secure data exchange, clear verification procedures, and auditors' ability to assess remotely obtained evidence critically (Aslan, 2021; Puthukulam et al., 2021).

From the perspective of Agency Theory, remote auditing reduces information asymmetry by enabling auditors to access information more quickly, verify documents more efficiently, and obtain relevant evidence without being constrained by physical distance. Faster access alone does not improve audit quality; the crucial mechanism is the auditor's ability to convert timely digital information into valid, traceable, and evidence-based findings. Thus, remote auditing strengthens public accountability by improving the timeliness and reliability of audit conclusions.

Practically, BPK should strengthen remote auditing through standardised digital-audit protocols, secure data-exchange mechanisms, authentication and traceability standards for digital evidence, integrated information systems, and continuous improvement of auditors' digital competence. Remote auditing should therefore be institutionalised as part of a controlled and accountable audit system rather than treated merely as an alternative communication method.

Effect Professional Scepticism on Audit Quality

The test results indicate that professional scepticism does not have a statistically significant direct effect on public sector audit quality, with a p-value of 0.292. Therefore, H3 is not supported. This finding does not necessarily imply that BPK auditors lack professional scepticism. Rather, it suggests that sceptical attitudes alone may not be sufficient to produce higher audit quality unless they are translated into additional audit procedures, reliable evidence evaluation, and objective reporting.

From the perspective of Agency Theory, professional scepticism supports the auditor's role in reducing information asymmetry by encouraging critical assessment of management information and audit evidence (Jensen & Meckling, 1976). However, the insignificant result indicates that the accountability function of scepticism is not automatic. Auditors may question information and identify inconsistencies, but these concerns may not improve audit outcomes when access to evidence is restricted, audit time is limited, institutional independence is weak, or auditors lack sufficient authority to extend audit procedures. Accordingly, this result refines Agency Theory by demonstrating that individual auditor judgment requires institutional support before it can be converted into stronger audit findings.

The result also differs from studies suggesting that professional scepticism improves fraud detection, evidence assessment, and audit judgment (Anand et al., 2024; Rahim et al., 2023). This difference may be explained by the public sector context, where auditors operate within formal procedures, regulatory requirements, standardised audit programmes, and institutional reporting structures. These conditions may limit the extent to which individual sceptical judgment independently

influences audit quality. In technology-enabled auditing, professional scepticism is also constrained when auditors face incomplete data, inconsistent digital records, differences in auditee technological readiness, and excessive reliance on system-generated outputs (Ahmed & Senan, 2024; Omari et al., 2025; Senan, 2024).

In the context of the BPK Representative Office of Central Java Province, professional scepticism may function more strongly as an individual disposition than as an institutionalised audit capability. Differences in data quality, the complexity of regional financial transactions, and unequal digital readiness among audited entities may prevent auditors from consistently converting critical judgment into verifiable and actionable findings. Thus, the rejection of H3 reflects a conversion gap between sceptical judgment and audit outcomes rather than the absence of professional scepticism.

This finding has an important practical implication. Strengthening professional scepticism requires more than individual training. BPK should support auditors through reliable access to evidence, adequate audit time, protection of auditor independence, supervisory review, clear escalation procedures, and institutional support for additional testing. Professional scepticism is more likely to improve audit quality when auditors are not only encouraged to question evidence but are also empowered to investigate inconsistencies and report irregularities objectively.

Good Governance moderates the influence of CAATs on Audit Quality

The test results indicate that good governance significantly strengthens the effect of CAATs on public sector audit quality [$\beta = 0,327$; $p\text{-value} = 0,012$]. This result supports H4 and demonstrates that the contribution of CAATs to audit quality is conditional rather than automatic. CAATs generate greater audit value when their use is embedded in governance arrangements that ensure data integrity, regulatory compliance, effective internal control, secure information access, and institutional accountability.

This finding is consistent with Contingency Theory, which argues that the effectiveness of organisational practices depends on their alignment with contextual conditions (Otley, 1980; Shonhadji & Maulidi, 2020). It also extends the TOE framework by showing that technological readiness alone is insufficient. The audit benefits of CAATs depend on organisational and institutional mechanisms that govern the quality, accessibility, security, and use of digital data (Tornatzky & Fleischer, 1990). Therefore, good governance operates as an institutional boundary condition that determines whether CAATs can be converted from a data-processing tool into an effective audit capability.

The significant moderation effect also explains why CAATs did not have a significant direct effect in H1. Without adequate governance, CAATs may only accelerate the analysis of incomplete, inconsistent, or poorly controlled data and may therefore fail to produce reliable audit evidence. Under strong governance conditions, data can be authenticated, traced, standardised, and linked to accountable audit procedures. This enables CAATs to strengthen risk assessment, test larger transaction populations, detect anomalies, and improve the adequacy and reliability of audit evidence.

In the context of the BPK Representative Office of Central Java Province, governance is particularly important because auditors examine entities with different information systems, internal-control maturity, and data quality. Transparent data management, clearly defined access rights, effective internal controls, secure information exchange, and accountable follow-up mechanisms allow CAATs outputs to be interpreted and used more reliably in audit decision-making. Conversely, weak governance may reduce the usefulness of CAATs by limiting access to complete data, weakening evidence traceability, and increasing the risk of inaccurate analytical conclusions.

These findings are consistent with studies showing that technology-enabled auditing becomes more effective when supported by transparency, accountability, strong internal controls, and reliable institutional arrangements (Jannah & Nirwana, 2025; Sujanto et al., 2021; Dragomir & Dumitru, 2023; Chouaibi & Fadhli, 2026). From the perspective of Agency Theory, good governance also strengthens the ability of CAATs to reduce information asymmetry because auditors gain access to more reliable, transparent, and accountable information (Jensen & Meckling, 1976).

Practically, the result implies that BPK should not treat CAATs implementation as a stand-alone technological programme. Its effectiveness requires integration with data-governance standards,

system interoperability, access controls, digital-audit protocols, internal-control evaluation, evidence-traceability procedures, and accountable follow-up of audit findings. Accordingly, investment in CAATs should be accompanied by institutional reforms that ensure digital analysis produces credible and actionable audit evidence.

Good Governance moderates the influence of Remote Auditing on Audit Quality

The test results indicate that good governance significantly strengthens the positive effect of remote auditing on public sector audit quality [$\beta = 0,410$; $p\text{-value} = 0,005$]. This result supports H5 and demonstrates that the effectiveness of remote auditing is conditional on the governance environment in which it is implemented. Remote auditing can accelerate document access, facilitate communication with audited entities, expand audit coverage, and improve the timeliness of evidence collection. However, these operational advantages improve audit quality only when remotely obtained information is valid, secure, complete, traceable, and processed through accountable audit procedures.

This result supports Contingency Theory, which explains that the effectiveness of organisational practices depends on their alignment with contextual conditions, including regulation, internal control, institutional capacity, and accountability (Otley, 1980; Shonhadji & Maulidi, 2020). It also extends the TOE framework by demonstrating that technological readiness alone is insufficient to ensure effective remote auditing. Organisational readiness and environmental support are required to regulate data access, digital-document authentication, information security, evidence verification, and responsibility for audit conclusions (Tornatzky & Fleischer, 1990). Good governance therefore functions as an institutional boundary condition that determines whether remote auditing becomes a reliable audit capability or remains merely a means of conducting audit activities from different locations.

The significant moderation effect indicates that the benefits of remote auditing become stronger when governance mechanisms ensure secure data exchange, standardised digital procedures, clear access rights, effective internal controls, and traceable audit evidence. Under strong governance conditions, auditors can authenticate remotely submitted documents, verify their sources, identify changes in digital records, and connect the evidence to accountable audit conclusions. Conversely, weak governance may cause remote auditing to accelerate the collection of incomplete, inconsistent, or manipulated information, thereby increasing the risk of inappropriate audit conclusions despite faster document access.

In the context of the BPK Representative Office of Central Java Province, this moderating effect is particularly relevant because auditors examine entities with different levels of digital readiness, data quality, information-system integration, and internal-control maturity. Good governance reduces these differences by establishing consistent standards for document submission, evidence validation, communication, data protection, and follow-up procedures. Consequently, remote auditing becomes more capable of improving audit timeliness and coverage without compromising the reliability and sufficiency of audit evidence.

These findings are consistent with studies showing that remote auditing contributes more strongly to audit quality when supported by technological readiness, auditor capability, reliable digital evidence, and secure institutional arrangements (Alma'aitah et al., 2024; Al Shbail et al., 2025; Guo et al., 2025; Omari et al., 2025). From the perspective of Agency Theory, good governance also strengthens the ability of remote auditing to reduce information asymmetry by ensuring that information obtained digitally is transparent, verifiable, and accountable rather than merely available more quickly.

Practically, the findings imply that BPK should not treat remote auditing merely as an alternative working arrangement. Its implementation should be integrated with standardised digital-audit protocols, secure information-exchange systems, document-authentication procedures, evidence-traceability mechanisms, internal-control evaluation, and accountable follow-up of audit findings. These governance mechanisms are essential to ensure that the efficiency and flexibility of remote auditing are translated into credible and higher-quality public sector audit outcomes.

Good Governance moderates the influence of Professional Scepticism on Audit Quality

The test results indicate that good governance significantly strengthens the positive effect of professional scepticism on public sector audit quality [$\beta = 0.229$; $p\text{-value} = 0.040$]. This result supports H6 and demonstrates that professional scepticism contributes more effectively to audit quality when exercised within a strong governance environment. A critical and questioning attitude alone may not

produce higher-quality audit outcomes unless auditors have reliable access to evidence, institutional independence, sufficient authority to extend audit procedures, and accountable mechanisms for reporting and following up audit findings.

This finding integrates Agency Theory and Contingency Theory. Agency Theory positions professional scepticism as an audit mechanism that enables auditors to challenge management information, evaluate contradictory evidence, and reduce information asymmetry between government institutions and society (Jensen & Meckling, 1976; Hurtt, 2010; Nelson, 2009). However, consistent with Contingency Theory, the effectiveness of sceptical judgment depends on the institutional conditions in which it is exercised (Otley, 1980; Shonhadji & Maulidi, 2020). Good governance therefore functions as an institutional boundary condition that determines whether professional scepticism remains an individual attitude or is translated into additional testing, credible findings, and objective audit conclusions.

The significant moderation effect also explains why professional scepticism did not have a significant direct effect in H3. Without adequate governance, auditors may identify inconsistencies or question the reliability of information but remain unable to obtain additional evidence, extend audit procedures, maintain independent judgment, or ensure that identified irregularities are followed up. Under strong governance conditions, transparency, effective internal control, regulatory compliance, clear responsibilities, protected auditor independence, and institutional support provide auditors with the authority and evidence required to act on their sceptical judgments (Alqudah et al., 2023; Nadirsyah et al., 2024; Senan, 2024; Yamen & Can, 2023).

In the context of the BPK Representative Office of Central Java Province, this moderating effect is particularly relevant because auditors examine local government entities with different levels of data quality, internal-control effectiveness, institutional transparency, and digital readiness. Strong governance enables auditors to access complete information, conduct additional verification, challenge unsupported explanations, and report indications of manipulation without inappropriate institutional pressure. Conversely, weak governance may restrict evidence access, weaken auditor independence, and prevent sceptical assessments from being converted into reliable and actionable findings.

These findings are consistent with studies showing that professional scepticism contributes more strongly to audit judgment and fraud detection when auditors are supported by reliable information, organisational learning, independence, and effective institutional controls (Rahim et al., 2023; Samagaio & Felício, 2022; Grohnert et al., 2025). From the perspective of public accountability, good governance strengthens the ability of professional scepticism to reduce information asymmetry because auditors are not only encouraged to question information but are also institutionally supported in investigating and reporting inconsistencies.

Practically, BPK should not strengthen professional scepticism solely through individual training. It should also establish governance mechanisms that protect auditor independence, guarantee access to reliable evidence, provide sufficient audit time, support additional testing, strengthen supervisory and quality reviews, and ensure accountable follow-up of audit findings. These institutional conditions are essential for converting professional scepticism into credible evidence, stronger audit findings, and higher public sector audit quality.

CONCLUSION

The findings of the study indicate that the quality of public sector audits is not only influenced by the use of audit technology and auditor considerations, but also by the governance conditions in which both capabilities are applied. Remote auditing had a direct effect on audit quality, whereas CAATs and professional skepticism did not show a direct effect. However, good governance has been shown to strengthen the influence of CAATs, remote auditing, and professional skepticism on the quality of public sector audits. The results show that the contributions of audit technology and professional considerations to audit quality are conditional and do not occur automatically.

The lack of a direct influence of CAATs on audit quality may be due to limitations in data Quality, System Integration, auditors' digital competence, and the standardization of digital audit procedures. Remote auditing improves audit quality by facilitating access to documents, expanding the scope of inspections, and enabling a more efficient verification process. Meanwhile, professional skepticism requires reliable evidence, auditor independence, effective oversight, and institutional support to produce stronger audit findings.

Theoretically, this study extends the application of Agency Theory, the technology–Organization–Environment framework, and contingency theory by positioning good governance as an institutional condition that limits or determines the effectiveness of technology-based public-sector audits. The findings of the study suggest that technological resources and professional skepticism do not in themselves guarantee an improvement in audit quality. Its effectiveness depends on governance mechanisms that support accountability, data integrity, regulatory compliance, internal control, auditor independence, and institutional oversight.

In practical terms, the results show that BPK needs to strengthen digital audit governance through the integration of audit information systems, increasing the auditor's digital competence, standardization of CAATs procedures and remote audits, validation and traceability of digital evidence, strengthening cyber security, implementation of independent quality reviews, and effective follow-up on audit findings. Such measures are necessary to ensure that audit technology is used not only as an administrative tool but also as a reliable analytical capability that supports the quality of public sector audits.

In terms of policy, the results underscore the need for clearer, more consistent standards for the use of CAATs, remote auditing, digital audit evidence, data access, information exchange, cybersecurity, and audit quality assurance. Policymakers and Public Sector audit Institutions also need to establish auditor competency standards, regular digital audit training, accountability mechanisms, and minimum data governance standards for the implementation of technology-based public sector audits.

This study has some limitations. First, the study respondents are limited to auditors at the BPK representative office for Central Java province. Hence, the results of the study have limitations in explaining the condition of Public Sector audit Institutions and other regions. Second, the study used a cross-sectional design and self-reported questionnaire data. Therefore, the results of the study only describe the perception of the auditor at a certain period and have not been able to explain the cause-and-effect relationship fully. Third, measurements of audit technology, governance, and audit quality are based on respondent perceptions, not on objective indicators of audit performance. Although procedural and statistical controls have been implemented, reliance on a single data source still carries the potential for general method and social desirability biases.

Further research is recommended to involve auditors from various BPK representative offices, BPKP, inspectorates, and other public-sector audit institutions to achieve broader generalization. Longitudinal studies are also needed to examine the changing influence of audit technology and governance on audit Quality over time. Subsequent research can combine survey data with interviews, reports on examination results, system usage records, the number of irregularities detected, and other objective indicators of audit performance. In addition, subsequent research may examine dimensions of good governance separately, such as data governance, internal controls, auditor independence, cybersecurity, and management support, and consider other mediation or moderation variables, such as digital competence, system integration, organizational culture, and the complexity of audit tasks.

List of Abbreviations

AQ	: Audit Quality
BPK	: Badan Pemeriksa Keuangan
CAATs	: Computer-Assisted Audit Techniques
GG	: Good Governance
PS	: Professional Skepticism
RA	: Remote Auditing
TOE	: Technology, Organization, and Environment

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Authors' Contribution

All authors contribute equally in the preparation of research concepts, research design, data collection, data analysis, and script writing. The second author revised the manuscript based on the reviewer's input and completed the final version of the article.

Conflict of Interest

The authors declare no competing interests.

Funding

The study received no external funding.

Availability of Data and Materials

The Data and materials used in this study can be obtained from the author of the correspondence upon reasonable request.

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APPENDIX

Questionnaires

Variable	Indicator	Statement	SD	D	N	A	SA
Audit Quality	Accuracy of audit findings	The audit findings accurately reflect the actual conditions identified during the examination.	☐	☐	☐	☐	☐
	Reliability of audit evidence	The audit conclusions are supported by sufficient and reliable audit evidence.	☐	☐	☐	☐	☐
	Recommendation	The audit recommendations provide clear and actionable solutions to the identified problems.	☐	☐	☐	☐	☐
	Clarity	The audit findings and conclusions are presented clearly and are easy to understand.	☐	☐	☐	☐	☐
	Benefit	The audit results contribute to improvements in public financial management.	☐	☐	☐	☐	☐
	Monitoring	The implementation of audit recommendations is monitored systematically.	☐	☐	☐	☐	☐
Computer-Assisted Audit Techniques	Performance expectancy	The use of CAATs improves my effectiveness in performing audit procedures.	☐	☐	☐	☐	☐
	Effort expectancy	CAATs are easy for me to learn and use in audit assignments.	☐	☐	☐	☐	☐
	Social influence	The use of CAATs is supported by supervisors and colleagues in my audit environment.	☐	☐	☐	☐	☐
	Facilitating conditions	Adequate systems, technical resources, and support are available for using CAATs.	☐	☐	☐	☐	☐

	Intention to use CAATs	I intend to continue using CAATs in future audit assignments.	☐	☐	☐	☐	☐
	Appropriate use of CAATs	I use CAATs in accordance with the objectives and procedures of the audit assignment.	☐	☐	☐	☐	☐
Remote Auditing	Use of remote auditing	Remote-audit procedures are used when they are relevant to the audit assignment.	☐	☐	☐	☐	☐
	Technology readiness	The available technological infrastructure adequately supports remote-audit activities.	☐	☐	☐	☐	☐
	Remote document verification	I can verify the authenticity and completeness of audit documents obtained remotely.	☐	☐	☐	☐	☐
	Remote audit communication	Remote communication with audited entities supports an effective audit process.	☐	☐	☐	☐	☐
	Auditor objectivity	I am able to maintain objectivity when conducting audit procedures remotely.	☐	☐	☐	☐	☐
Professional Scepticism	Suspension of judgment	I postpone audit conclusions until sufficient and appropriate evidence has been obtained.	☐	☐	☐	☐	☐
	Critical assessment of evidence	I critically evaluate audit evidence before relying on it.	☐	☐	☐	☐	☐
	Questioning mind	I question information that appears unusual, inconsistent, or unsupported.	☐	☐	☐	☐	☐
	Assessment of data reliability	I verify the reliability of data before using it as audit evidence.	☐	☐	☐	☐	☐
	Evaluation of manipulation risk	I assess the possibility that audit data or documents have been manipulated.	☐	☐	☐	☐	☐
Good Governance	Transparency	Auditors are provided with transparent access to information relevant to the examination.	☐	☐	☐	☐	☐
	Accountability	Responsibilities and decisions related to the audit process can be clearly accounted for.	☐	☐	☐	☐	☐

	Responsiveness	Audited entities respond promptly to audit requests and identified issues.	☐	☐	☐	☐	☐
	Regulatory compliance	Audit activities and the management of audit data are conducted in accordance with applicable regulations.	☐	☐	☐	☐	☐
	Clarity of responsibility	The responsibilities of each party involved in the audit process are clearly defined.	☐	☐	☐	☐	☐
	Internal control support	Effective internal controls support the reliability of information and audit evidence.	☐	☐	☐	☐	☐
