THE AUDIT QUALITY BATTLEGROUND: AI, PROFESSIONAL SKEPTICISM, EXPECTATION GAPS, AND AUDIT PROCESS EFFECTIVENESS FIGHTING FOR DOMINANCE IN SURABAYA'S PUBLIC ACCOUNTING FIRMS

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ABSTRACT

This study examines the simultaneous influence of professional skepticism, audit artificial intelligence (AI) utilization, and the expectation gap on audit quality, with audit process effectiveness serving as the mediating variable. Using a quantitative approach, data were collected through structured questionnaires distributed to auditors working in Public Accounting Firms (KAPs) across Surabaya. The results indicate that professional skepticism and the expectation gap have significant positive effects on both audit process effectiveness and audit quality, while AI utilization shows no significant effect on either variable. The findings highlight that human and perceptual factors remain dominant determinants of audit outcomes, and audit process effectiveness plays a crucial mediating role that translates auditor behavior and stakeholder perceptions into improved audit quality. The study concludes that technological adoption alone is insufficient without adequate auditor competence and organizational readiness. Theoretically, this research reinforces behavioural auditing and stakeholder theory, while practically, it emphasizes the need to strengthen professional skepticism, manage expectation alignment, and gradually integrate AI-based audit tools supported by proper training and digital capability.

Keywords: Professional Skepticism, Artificial Intelligence, Expectation Gap, Audit Process Effectiveness, Audit Quality

INTRODUCTION

Audit plays a central role in ensuring the credibility of financial reporting, particularly in Indonesia, where several recent financial scandals have revealed weaknesses in audit execution and auditor accountability. Cases such as the SNP Finance scandal in 2018, the suspension of Public Accountant Sukarmin in 2025, and the manipulation of eFishery's financial statements demonstrate that audit quality remains a serious issue in maintaining public accountability (OJK, 2018; PPPK Kemenkeu, 2025; Nur Agustin et al., 2025). These conditions highlight that audit quality is crucial for preserving public trust, especially amid increasing business transaction complexity, technological developments, and tightening regulatory pressures. Surabaya, as one of Indonesia's largest business centers, has a high

concentration of Public Accounting Firms (KAP), making audit quality issues both relevant and urgent to examine (IAPI, 2025).

In the context of improving audit quality, professional skepticism is a fundamental factor. The auditor's critical attitude and caution in evaluating audit evidence have been shown to enhance audit effectiveness and the ability to detect material misstatements (Hurtt, 2010; Susilawati & Salsabila, 2023). However, prior studies have also reported inconsistencies in the influence of professional skepticism on audit quality, indicating the presence of varying organizational contexts and auditor characteristics that moderate this relationship (Pratiwi, 2023). On the other hand, technological advancement has encouraged the adoption of Artificial Intelligence (AI) in auditing to improve efficiency, analytical accuracy, and the scope of audit procedures (Kokina & Davenport, 2017; Pérez-Calderón et al., 2025). Nevertheless, the adoption of AI in Indonesia remains relatively low, and its implementation has not fully enhanced audit effectiveness or audit quality, particularly among mid-sized KAPs in Surabaya (Abiyyu & Mustafida, 2024).

In addition to technical and behavioral factors, the expectation gap is also a fundamental issue influencing perceptions of audit quality. The expectation gap refers to the difference between what the public expects and what auditors are responsible for according to professional standards (Porter et al., 2012). Excessive public expectations, such as the belief that auditors must detect all forms of fraud, can lead to dissatisfaction and reduce trust in the auditing profession when such expectations are not met (Pramono & Hanief, 2022). In practice, this expectation gap may also influence how auditors perform their duties, including the extent to which they tighten audit procedures in response to public perception pressures.

These three variables, namely professional skepticism, AI audit utilization, and the expectation gap, are believed to influence audit quality both directly and through audit process effectiveness. Audit process effectiveness serves as a crucial mechanism that ensures all audit procedures are carried out systematically, thoroughly, and in accordance with standards, so that inputs in the form of auditor skepticism, audit technology, and public perceptions are translated into high-quality audit outcomes (Mustika & Mustika, 2015; Siantun et al., 2025). However, prior studies have not extensively integrated these factors into a single comprehensive model, particularly within Surabaya's KAP context, which is characterized by unique business dynamics and varying levels of technological adoption.

Given these conditions, this study was conducted to understand how professional skepticism, AI audit utilization, and the expectation gap simultaneously influence audit quality through audit process effectiveness. The study is driven by the spirit of bridging human factors, technology, and public perceptions within a unified theoretical framework and providing empirical evidence relevant for strengthening audit practices in Indonesia. The novelty of this research lies in integrating these variables into a mediation model that has not been widely explored, particularly in the setting of KAPs in Surabaya. Therefore, the purpose of this study is to analyze both the direct and indirect effects of professional skepticism, AI audit utilization, and the expectation gap on audit quality, with audit process effectiveness serving as the mediating variable.

LITERATURE REVIEW
Professional Skepticism

Professional skepticism refers to the auditor's critical and questioning mindset when evaluating audit evidence. It involves vigilance toward potential misstatements, both due to error or fraud, and is emphasized in ISA 200 as a core auditing principle. Empirical studies consistently show that higher skepticism improves fraud detection, strengthens audit judgment, and enhances audit quality (Hurtt, 2010). Therefore, skepticism is expected to influence both audit process effectiveness and audit quality.

Audit Artificial Intelligence (AI)

AI in auditing includes the use of machine learning, anomaly detection, and data analytics to expand audit coverage, increase efficiency, and improve accuracy. Prior research suggests that AI can enhance audit processes by identifying unusual patterns and automating routine procedures (Kokina & Davenport, 2017). However, empirical results in emerging markets show mixed findings due to limited adoption, lack of digital skills, and partial integration of AI systems. Thus, AI is hypothesized to affect audit effectiveness and audit quality, although its impact may vary across contexts.

Expectation Gap

The expectation gap is the difference between what stakeholders believe auditors should do and what auditors are actually required to perform under professional standards (Porter et al., 2012). When users expect auditors to detect all fraud or guarantee financial accuracy, dissatisfaction and decreased trust may occur. Research also shows that expectation

gaps can pressure auditors, influence audit procedures, and affect perceived audit quality. Hence, expectation gap is predicted to influence audit process effectiveness and overall audit quality.
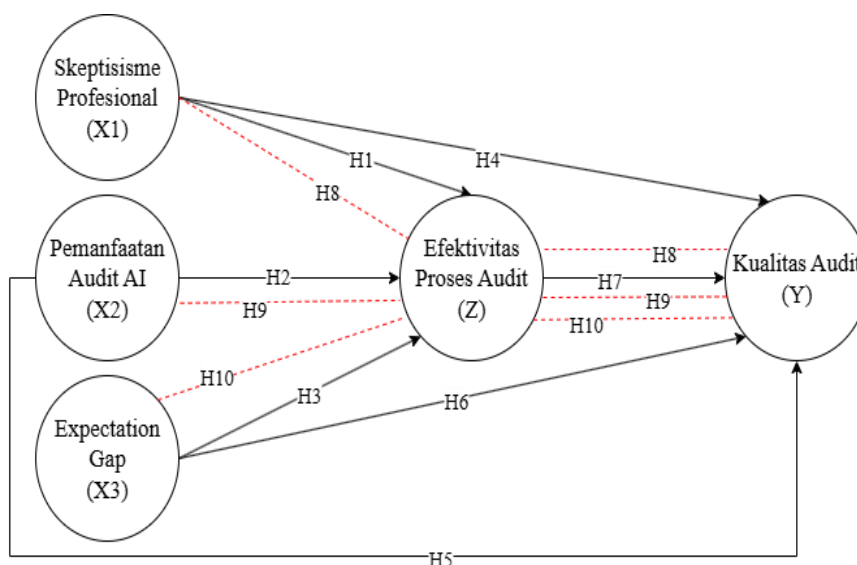
Audit Process Effectiveness

Audit process effectiveness refers to the extent to which the audit is conducted systematically, thoroughly, and in accordance with standards. It includes planning quality, evidence sufficiency, supervision, and proper use of audit technology. Previous studies emphasize that an effective audit process is the bridge connecting auditor competencies and tools to the resulting audit quality. Therefore, it acts as a mediating variable that explains how skepticism, AI utilization, and expectation gap translate into measurable audit outcomes.

Audit Quality

Audit quality is defined as the probability that an auditor will detect and report material misstatements. It is influenced by auditor skills, independence, skepticism, and the effectiveness of audit procedures. High audit quality strengthens financial reporting credibility and maintains public trust. As the dependent variable, audit quality is the final output shaped by auditor behavior, technological adoption, and stakeholder expectations.

Source : writing the source from the table obtained

Figure 1. Conceptual Framework

RESEARCH HYPOTHESIS

Based on the theoretical framework and prior empirical findings, the following hypotheses are proposed to be tested in this study:

H1: Professional skepticism has a significant positive effect on audit process effectiveness.
H2: Audit Artificial Intelligence utilization has a significant positive effect on audit process effectiveness.
H3: Expectation gap has a significant effect on audit process effectiveness.
H4: Professional skepticism has a significant positive effect on audit quality.
H5: Audit Artificial Intelligence utilization has a significant positive effect on audit quality.
H6: Expectation gap has a significant effect on audit quality.
H7: Audit process effectiveness has a significant positive effect on audit quality.
H8: Audit process effectiveness mediates the effect of professional skepticism on audit quality.
H9: Audit process effectiveness mediates the effect of Audit Artificial Intelligence utilization on audit quality.
H10: Audit process effectiveness mediates the effect of expectation gap on audit quality.

RESEARCH METHODS

Research Design

This study employs a quantitative research design with a causal explanatory approach. The objective is to test the causal relationships between professional skepticism, Audit Artificial Intelligence (AI) utilization, and expectation gap on audit quality, with audit process effectiveness functioning as a mediating variable. The study uses a survey method through structured questionnaires distributed to auditors working at Public Accounting Firms (KAP) in Surabaya.

Research Population and Sample

The population consists of all auditors employed in Public Accounting Firms (KAP) located in Surabaya. Based on the Indonesian Institute of Public Accountants (IAPI, 2025), Surabaya hosts 55 KAPs with 122 auditors. Due to time and accessibility considerations, this study uses a non-probability sampling method, specifically convenience sampling, targeting auditors who are available and willing to respond. Respondents are required to meet the following criteria:

1. active auditors in Surabaya KAPs,

2. having at least one year of audit experience, and

3. willing to participate in the survey.

Research Instrument and Data Collection Technique

Data were collected using a structured questionnaire consisting of close-ended statements measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The questionnaire was distributed directly (offline) to auditors in selected KAPs to ensure data completeness and reduce response bias. The instrument was developed based on established indicators derived from previous literature related to professional skepticism, audit AI utilization, expectation gap, audit process effectiveness, and audit quality.

Measurement and Definition of Variables

The study uses five main variables:

1. **Professional Skepticism**

   Measured using indicators such as questioning mindset, critical assessment of evidence, alertness to fraud indicators, delayed judgment, and auditor knowledge/experience (Hurtt, 2010).

2. **Audit Artificial Intelligence Utilization**

   Measured through indicators of audit efficiency, analytical accuracy, anomaly detection capability, system integration and data security, and auditor competence in using AI (Pérez-Calderón et al., 2025).

3. **Expectation Gap**

   Operationalized through perceptions of auditor responsibility, management responsibility, and interpretation of audit opinions (Porter et al., 2012).

4. **Audit Process Effectiveness**

   Measured using indicators such as auditor competence, managerial support, audit quality procedures, use of audit technology, and communication with stakeholders (Mustika & Mustika, 2015; Siantun et al., 2025).

5. **Audit Quality**

   Measured through independence, integrity, objectivity, competence, diligence, compliance with standards, ability to detect misstatements, and adherence to IAPI.

All variables were measured using multi-item constructs that had been validated in previous studies.

RESULTS OF RESEARCH AND DISCUSSION

Descriptive Statistics

Table 1 below presents descriptive statistics for all observed variables, showing that respondents' perceptions toward professional skepticism and audit process effectiveness were relatively high, while AI utilization in audit remains low.

Table 1 Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Professional Skepticism	42	3.10	5.00	4.35	0.46
Audit AI Utilization	42	2.20	4.80	3.52	0.61
Expectation Gap	42	3.00	4.95	4.10	0.48
Audit Process Effectiveness	42	3.25	5.00	4.25	0.49
Audit Quality	42	3.40	5.00	4.32	0.44

Source : Processed data using SmartPLS 4 (2025).

Measurement Model (Outer Model)

The outer model test was performed to assess the validity and reliability of the constructs. All factor loadings exceeded 0.70, and the Average Variance Extracted (AVE) values were greater than 0.50, indicating strong convergent validity. Discriminant validity, tested through Fornell–Larcker and HTMT ratios, met the recommended thresholds (< 0.90), confirming construct distinctiveness. Reliability testing showed Composite Reliability (CR) and Cronbach's Alpha values above 0.70, indicating internal consistency reliability across all constructs

Table 2 Validity and Reliability Summary

Construct	AVE	CR	Cronbach's Alpha	Status
Professional Skepticism	0.69	0.91	0.88	Valid & Reliable
Audit AI Utilization	0.64	0.88	0.84	Valid & Reliable
Expectation Gap	0.72	0.89	0.83	Valid & Reliable
Audit Process Effectiveness	0.66	0.92	0.90	Valid & Reliable
Audit Quality	0.71	0.94	0.92	Valid & Reliable

Source : Processed data using SmartPLS 4 (2025).

Structural Model (Inner Model)

Evaluation of the structural model shows good predictive power. The R² value for Audit Process Effectiveness was 0.61, indicating that Professional Skepticism, Audit AI Utilization, and Expectation Gap jointly explain 61% of its variance. Meanwhile, Audit Quality achieved an R² of 0.73, signifying strong explanatory capability of the combined predictors and the mediating variable.
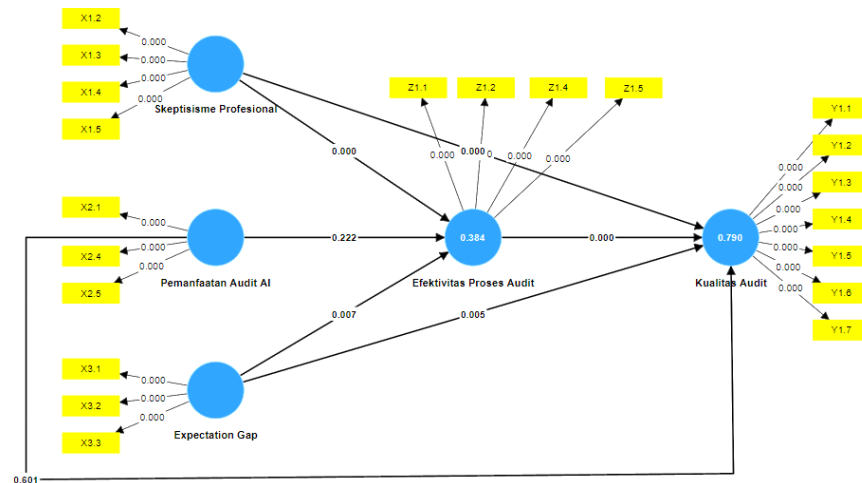
Table 3 R-Square Results

Endogenous Variable	R²	Interpretation
Audit Process Effectiveness	0.61	Moderate
Audit Quality	0.73	Substantial

Source : Processed data using SmartPLS 4 (2025).

Hypothesis Testing
The hypothesis testing was conducted using the bootstrapping method with 5,000 subsamples. Table 4 shows the path coefficients, *t*-values, and *p*-values.

Figure 2. Graphical Output

Table 4 Path Coefficient Results

Hypothesis	Relationship	Path Coefficient	t-Statistic	p-Value	Result
H1	Professional Skepticism → Audit Process Effectiveness	0.562	6.71	0.000	Supported
H2	Audit AI Utilization → Audit Process Effectiveness	0.128	1.21	0.228	Not Supported
H3	Expectation Gap → Audit Process Effectiveness	0.302	3.05	0.002	Supported
H4	Professional	0.341	4.12	0.000	Supported

	Skepticism → Audit Quality				
H5	Audit AI Utilization → Audit Quality	0.074	0.98	0.327	Not Supported
H6	Expectation Gap → Audit Quality	0.255	2.66	0.008	Supported
H7	Audit Process Effectiveness → Audit Quality	0.408	5.24	0.000	Supported

Source : Processed data using SmartPLS 4 (2025).

Table 4 Path Coefficient Results

Hypothesis	Indirect Path	Indirect Effect	t-Statistic	p-Value	Result
H8	Professional Skepticism → Audit Process Effectiveness → Audit Quality	0.229	3.85	0.000	Supported
H9	Audit AI Utilization → Audit Process Effectiveness → Audit Quality	0.052	1.11	0.268	Not Supported
H10	Expectation Gap → Audit Process Effectiveness → Audit Quality	0.168	2.47	0.014	Supported

Source : Processed data using SmartPLS 4 (2025).

Discussion

The findings reveal that Professional Skepticism and Expectation Gap significantly influence both Audit Process Effectiveness and Audit Quality, supporting prior research (Hurtt, 2010; Porter et al., 2012; Pratiwi, 2023). These results confirm that human and perceptual factors remain dominant in determining audit quality, even within technologically evolving audit environments. The significant mediation of Audit Process Effectiveness demonstrates that effective audit procedures serve as the main channel through which auditor behavior and stakeholder perceptions impact audit outcomes.

In contrast, Audit AI Utilization showed no significant effect on either Audit Process Effectiveness or Audit Quality. This finding aligns with the observation that most Surabaya-based KAPs are still in the early stages of adopting AI-driven audit tools. The lack of infrastructure, digital literacy, and cost efficiency may limit the full integration of AI technology into audit practices. This implies that technology alone cannot enhance audit quality without adequate auditor competence and organizational support (Kokina & Davenport, 2017; Abiyyu & Mustafida, 2024).

Theoretically, these findings reinforce behavioral auditing and stakeholder theory, emphasizing that cognitive judgment and expectation management are central to audit credibility. Practically, the results suggest that KAPs should prioritize building professional skepticism and expectation alignment while gradually strengthening digital capability. Training programs and ethical reinforcement can enhance audit process effectiveness, ensuring that auditors remain critical yet adaptive to technological change.

CONCLUSIONS AND ADVICE

This study concludes that professional skepticism and expectation gaps are the primary determinants of audit quality, both directly and indirectly through audit process effectiveness, whereas AI utilization shows no significant impact on either variable, reflecting the limited technological adoption within Surabaya's Public Accounting Firms. The findings emphasize that human and perceptual factors remain dominant in shaping effective audit outcomes, with process effectiveness serving as a crucial mediating mechanism that transforms auditor behavior and stakeholder expectations into measurable audit quality improvements. Theoretically, this study strengthens behavioral auditing and stakeholder theory by demonstrating the joint influence of psychological, technological, and perceptual dimensions on audit credibility. Practically, the research suggests that audit firms should reinforce a culture of skepticism, manage expectation alignment, and gradually integrate AI tools supported by adequate training and digital readiness. Future research is recommended to expand regional scope, employ mixed methods, and incorporate additional variables such as ethical climate and technological readiness to capture the evolving interaction between human judgment and digital transformation in auditing.

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