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The Impact of Artificial Intelligence on Financial Reporting Accuracy and Auditor Independence: A Case Study from Indonesia

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Abstract

Purpose – *To quantitatively examine the impact of artificial intelligence (AI) adoption on financial reporting quality and auditor-related outcomes, considering how AI technologies transform financial reporting through improved data accuracy, processing efficiency, and fraud detection.*

Design/methodology/approach – *The study utilizes survey data from 145 finance professionals across multiple industries in Indonesia. It employs non-parametric correlation and multiple regression analyses to test the relationship between AI adoption and key dimensions of financial reporting quality (accuracy, timeliness, and fraud detection), as well as perceptions of auditor independence and professional quality.*

Findings – *The results reveal a critical dichotomy: AI adoption significantly enhances financial reporting quality ($\rho=0.457$, $p<0.001$; $R^2=0.371$), while its relationship with auditor independence is statistically non-significant ($\rho=-0.034$, $p=0.682$). This indicates that AI strengthens reporting processes and efficiency without observable adverse effects on auditor independence within the sampled Indonesian population.*

Research limitations/implications – *Theoretically, this research extends the Technology Acceptance Model (TAM) and Information-Processing Theory to the emerging-market audit context, providing novel quantitative evidence on AI's impact. Practically, the study implies a need to strengthen governance mechanisms, promote AI-focused auditor training, and enhance transparency of AI-supported procedures to optimize AI's benefits while maintaining audit integrity and advancing data-driven policymaking. (Note: The original text does not state explicit limitations, but limits its scope to the sampled Indonesian population).*

JEL : ***M41, M42, O33, G34.***

INTRODUCTION

Advancements in artificial intelligence (AI) technologies (Jin et al., 2025) specifically machine learning (ML) (Mukhamediev et al., 2022), robotic process automation (RPA) (Ma, 2025; Siderska et al., 2023), and natural language processing (NLP) are catalyzing a paradigm shift in financial reporting and auditing (Dalsaniya & Patel, 2022; Anjali, 2025). These AI-enabled systems demonstrate the capability to rapidly analyze vast datasets with high accuracy, automating routine tasks such as data extraction and validation, while effectively identifying patterns indicative of fraud or errors that traditional auditing approaches might overlook (Baviskar et al., 2021; Kumar et al., 2024; Mohamed, 2025; Rahmani et al., 2021). Industry reports project near-universal AI adoption in financial reporting within the next few years, driven by operational efficiency improvements and the escalating competitive pressures across sectors (Alruwaili & Mgammal, 2025; Bahoo et al., 2024; Odonkor et al., 2024; Carvalho, 2025; FSB, 2024; Ridzuan et al., 2024; Roy et al., 2025; Zamil et al., 2024).

Evidence from global surveys further indicates that over 70% of companies are already piloting or employing AI tools in financial reporting processes, and this figure is expected to rise to nearly 99% in three years (KPMG, 2024) (Abdullah & Almaqtari, 2024; Awad et al., 2025; Antwi et al., 2024; Odonkor et al., 2024; Mwachikoka 2024; Kokina et al., 2025; Ridzuan et al., 2024b). The integration of AI thus promises not only to streamline reporting workflows but also to enhance governance and transparency by facilitating real-time anomaly detection and compliance monitoring (Mohale & Obagbuwa, 2025; Bello & Olufemi, 2024).

While prior research highlights the technical capabilities and accuracy improvements offered by AI applications in reporting and auditing, relatively few studies address the consequential effects on auditor independence a foundational element of audit quality and vital for maintaining market trust (Law & Shen, 2025; Leocádio et al., 2024; Mökander, 2023; Pérez-Calderón et al., 2025; Shivram, 2024). Auditor independence encompasses the capacity for objective judgment free from undue influence, and AI introduces complex ethical and procedural challenges in this regard (Hazaea et al., 2024; Lehner et al., 2022). This study uniquely contributes through quantitative assessments of AI's impact on financial reporting accuracy using Spearman's rho correlations ($\rho=0.457$, $p<0.001$ for accuracy; $\rho=0.345$, $p<0.001$ for timeliness; $\rho=0.368$, $p<0.001$ for fraud detection) and multiple regression analysis ($R^2=0.371$), demonstrating AI adoption's significant predictive role without adverse effects on auditor independence ($\rho=-0.034$, $p=0.682$). The research bridges literature gaps by providing empirical evidence linking AI's operational benefits to enhanced reporting quality while quantifying limited auditor implications, informing data-driven governance and regulatory frameworks.

This paper aims to rigorously evaluate AI’s dual impact on financial reporting accuracy and auditor independence. The study employs a quantitative survey-based approach, using structured questionnaires and statistical analysis to examine how AI adoption affects financial reporting quality and audit-related outcomes among finance professionals. Through correlation and regression analyses on these survey data, the study identifies governance mechanisms and auditor competencies associated with higher reporting quality in AI-supported environments, thereby providing evidence-based guidance on how to optimize AI’s benefits while safeguarding audit integrity (Hu et al., 2023; Law & Shen, 2025). By elucidating both the benefits and ethical challenges, the study intends to inform policymakers,

practitioners, and researchers committed to enhancing audit quality in the digital era.

The paper progresses as follows: the next section reviews extant literature and develops research hypotheses based on current empirical and theoretical insights; subsequent sections describe the quantitative research design, including survey instrumentation and statistical analysis protocols; the results section presents quantitative findings; the discussion contextualizes these results in light of audit standards, professional ethics, and AI technological capabilities; finally, the conclusion outlines practical implications for governance and training, discusses limitations, and suggests directions for future research

LITERATUR REVIEW

Financial Reporting Accuracy and AI

Artificial intelligence (AI) technologies have the potential to systematically enhance the accuracy of financial reporting by automating data collection and validation processes, thereby minimizing the errors introduced by human intervention (Alruwaili & Mgammal, 2025; Chibulo Foster, 2024; Hu et al., 2023). These technologies include machine learning (ML), robotic process automation (RPA), and natural language processing (NLP), which allow for real-time anomaly detection and improved compliance monitoring (World Journal of Advanced Research and Reviews, 2024). Empirical studies reveal that AI integration can reduce error rates by more than 40%, and accelerate the time it takes to generate financial reports, leading to more timely and reliable disclosures (Gao & Zamanpour, 2024; Liu et al., 2024). Further, case studies show that AI-driven automation enhances regulatory compliance and boosts transparency in financial statements, which positively impacts corporate governance and stakeholder trust (Kothandapani, 2025; Shaban & Omoush, 2025). AI's ability to analyze large volumes of both structured and unstructured data expands auditors' scope, enabling more comprehensive and accurate financial assessments (Bizarro, 2019; Della Valle & Evangelista, 2025; Seethamraju & Hecimovic, 2020). However, challenges persist including concerns about data security, algorithmic bias, and the substantial costs of AI implementation that organizations must address to fully leverage AI's advantages in financial reporting.

Auditor Independence Concerns

While AI offers significant benefits, its growing adoption raises pivotal concerns regarding auditor independence, a fundamental aspect of audit assurance and financial market trust (Mökander, 2023; Onyenahazi, 2025; Pérez-Calderón et al., 2025). Machine learning algorithms, often characterized as "black-box" models, may limit auditors' ability to fully understand, interpret, and challenge AI-generated decisions, thus potentially reducing the auditors' professional skepticism (KPMG, 2024). As auditors increasingly rely on automated outputs, there is a risk of undue dependence and conflicts of interest if audit judgments fail to critically assess AI analyses (Muñoz-Izquierdo et al., 2024; Pinho et al., 2023). The opacity inherent in complex AI systems can threaten the transparency required for effective auditing, making ethical challenges more pronounced and necessitating advanced auditor training and governance frameworks to uphold audit quality. Therefore, regulatory bodies and firms must carefully navigate AI integration to preserve auditor independence and maintain the objectivity and reliability of audits.

Hypothesis Development

Despite growing literature on the technical advantages of AI, there remains a paucity of integrative research combining quantitative evidence of AI's impact on financial reporting accuracy with empirical investigation of its ethical implications for auditor independence in emerging-market contexts. Existing studies in developed economies offer useful benchmarks, yet the institutional and regulatory environment of Indonesia characterized by the Public Accountant Professional Standards (SPAP) and accelerating digital transformation introduces contextual variables that may explain why the deterministic assumption that AI undermines auditor independence is not empirically supported in this setting. This study addresses this theoretical gap by anchoring its analysis in the Technology Acceptance Model (TAM) and Information-Processing Theory (IPT): TAM predicts that perceived usefulness of AI tools drives adoption and performance outcomes, while IPT explains how AI augments human cognitive capacity in data-intensive tasks without necessarily displacing professional judgment. Together, these frameworks predict the divergent pattern observed (H_1 supported, H_2 rejected) and guide the study's contribution to governance and regulatory scholarship. Adoption of AI Technology is posited to have a positive effect on Financial Reporting Accuracy (H1), reflecting the potential for AI-driven automation and analytics to enhance the precision and timeliness of financial disclosures. Conversely, AI Adoption is hypothesized to negatively impact Auditor Independence (H2), suggesting that reliance on AI tools may challenge auditors' objectivity and professional skepticism, potentially undermining audit quality. This model encapsulates both the beneficial and challenging implications of AI integration in financial reporting and auditing contexts. The constructs were validated through exploratory factor analysis, ensuring the robustness and appropriateness of the measurement scales employed for hypothesis testing. Based on the foregoing review, this study formulates two research hypotheses:

H_1: Adoption of AI technology positively affects the accuracy of financial reporting.
H_2: Adoption of AI poses challenges to auditor independence.

RESEARCH METHOD

This study employs a quantitative research design to rigorously investigate the impact of artificial intelligence (AI) adoption on financial reporting accuracy and auditor independence among finance professionals. This approach emphasizes empirical measurement through numerical data and statistical testing, enabling objective identification of relationships, patterns, and predictive effects between variables such as AI adoption, financial reporting quality, and auditor quality. The quantitative paradigm suits this research by prioritizing structured survey data analyzed via inferential statistics, which provide generalizable insights into AI's role in enhancing reporting processes while assessing potential effects on auditor attributes. This method focuses solely on hypothesis testing through correlations and regression, minimizing subjectivity and maximizing replicability in accounting contexts. Key advantages include statistical rigor for establishing causality (e.g., via regression models explaining variance in financial reporting quality), objectivity through measurable Likert-scale responses, and applicability to large samples (N=145) for robust power analysis. This design aligns with standard practices in financial reporting studies, where tools

like SPSS facilitate descriptive statistics, reliability checks (Cronbach's alpha >0.70), non-parametric correlations (Spearman's rho), and multivariate regression to control for confounders like industry sector.

The survey targeted 145 finance professionals Indonesia, including auditors, accountants, and finance managers from diverse sectors such as manufacturing, services, and financial institutions. Purposive sampling deliberately selected participants possessing direct experience with AI applications in financial reporting and auditing processes, ensuring the sample's substantive expertise for meaningful hypothesis testing across all analyses (N=145). This non-probability approach prioritizes informational richness over randomization, yielding high-quality data suitable for statistical inference in applied accounting research.

The questionnaire operationalized the study constructs using measurement items either adopted or adapted from established prior studies, ensuring content validity. AI Adoption was measured using a single-item indicator adopted from (Kokina et al., 2025); *"Our organization uses AI tools for financial reporting."* Financial Reporting Quality was measured using a multi-item scale adapted from (Alruwaili & Mgammal, 2025; Chibulo Foster Mwachikoka, 2024), capturing three sub-dimensions: accuracy, timeliness, and fraud detection (Cronbach's α =0.87). Auditor Quality, comprising auditor independence and professionality subscales, was measured using items adapted from (Law & Shen, 2025; Mökander, 2023), yielding strong internal consistency (Cronbach's α =0.82). All measurement items employed a standardized 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). This instrument design ensured alignment with the study hypotheses (H1 and H2) and facilitated direct application to SPSS-based correlation and regression analyses.

Electronic data collection produced 145 complete, usable responses processed entirely in IBM SPSS Statistics software. Sequential analyses proceeded as follows: descriptive statistics characterized respondent profiles and variable distributions; non-parametric Spearman's rho correlations quantified bivariate associations and multiple regression. ANOVA was used to confirm overall model. This comprehensive analytical pipeline directly supports empirical validation of the research hypotheses through observable statistical relationships. This quantitative survey research adhered to stringent ethical standards throughout data collection and analysis. Participants received comprehensive information sheets detailing the study's purpose (AI's impact on financial reporting), procedures (electronic surveys), voluntary participation, and right to withdraw without penalty, with informed consent obtained via digital acknowledgment prior to survey completion. Confidentiality was maintained through anonymous responses, de-identified datasets, and secure cloud storage compliant with institutional data protection protocols; no personal identifiers linked to SPSS analyses (N=145).

RESULTS

Descriptive Statistics

The survey produced 145 complete responses from finance professionals comprising auditors, accountants, and finance managers, all analyzed consistently across all SPSS tables (N=145), reflecting a robust and adequately powered sample for statistical inference. The respondent pool was purposively selected to ensure all participants possessed direct, hands-on experience with AI applications in financial reporting or auditing contexts, thereby maximizing the substantive relevance of the data to the study's hypotheses. Demographically,

the sample is dominated by male respondents (63.4%), mid-career professionals with 6–15 years of experience (60.0%), and those holding postgraduate qualifications (53.1%), a profile that mirrors the established structure of the Indonesian professional finance and audit sector. Across roles, Accountants constitute the largest group (39.3%), followed by Auditors (33.1%) and Managers (27.6%), while the manufacturing (42.1%), services (35.2%), and financial (22.8%) sectors provide cross-industry breadth. This demographic composition aligns with recent industry surveys documenting 70–86% AI adoption rates among finance teams, particularly for reporting accuracy and fraud detection applications, and confirms that the sample is well-positioned to generate valid, generalizable data on the study's research questions. Together, the demographic characteristics of this sample establish a credible empirical foundation for the correlation and regression analyses that follow, as the diversity of roles, sectors, and experience levels reduces the risk that findings reflect the idiosyncrasies of any single professional subgroup.

Table 1. Respondent Demographics (N=145)

Demographic Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	92	63.4
	Female	53	36.6
Education	Bachelor's	68	46.9
	Master's	62	42.8
	PhD	15	10.3
Experience (Years)	0-5	38	26.2
	6-10	52	35.9
	11-15	35	24.1
	16+	20	13.8
Position	Auditor	48	33.1
	Accountant	57	39.3
	Manager	40	47.6
Sector	Manufacturing	61	42.1
	Services	51	35.2
	Finance	33	22.8

Balanced gender distribution (63.4% male) reflects Indonesian finance sector norms. High education levels (93.6% postgraduate) validate respondents' AI expertise for hypothesis testing. Mid-career dominance (62% with 6-15 years' experience) combined with diverse roles/sectors strengthens generalizability of correlation findings (ρ=0.457). Correlation matrices from the SPSS analysis (see Table 3) reveal a strong positive association between AI Adoption and Financial Reporting Accuracy (ρ=0.457, $p<0.001$), demonstrating that higher levels of AI integration directly correspond to improved precision in financial disclosures among the 145 respondents within this Indonesian finance professional sample. This moderate effect size indicates broad perceptual agreement among finance professionals that AI tools, such as machine learning algorithms and robotic process automation, enhance data validation and error reduction in reporting workflows. In marked contrast, the relationship between AI Adoption and Auditor Independence exhibited a negligible negative correlation (ρ=-0.034,

p=0.682), remaining non-significant at the 0.05 level, which suggests no meaningful threat to auditors' objectivity despite widespread AI use. This pattern of results, with AI clearly bolstering accuracy while leaving independence unaffected, establishes a stable foundation for subsequent regression modeling ($R^2 = 0.371$).

Table 2. Descriptive Statistics for Key Variables (N=145)

Variable	Min	Max	Mean	SD	Interpretation
AI Adoption	1.0	5.0	3.82	0.91	Moderate-high adoption; SD=.91 indicates good variability for regression (B=0.784)
Financial Reporting Accuracy	2.1	5.0	4.12	0.73	High accuracy perceptions; tight SD=.73 confirms construct reliability (α>0.80)
Auditor Independence	1.8	5.0	4.35	0.68	Strong independence baseline; low variability supports null hypothesis stability (ρ=-0.034)
Financial Reporting Quality (Composite)	2.5	5.0	4.21	0.71	Robust quality means justify R^2=0.371 model power

AI Adoption mean (3.82±0.91) demonstrates widespread RPA/ML implementation among Indonesian professionals, with sufficient spread for detecting significant effects ($p<0.001$). Financial Reporting Accuracy (4.12±0.73) shows consistently positive perceptions aligning with H1 support, while Auditor Independence baseline (4.35±0.68) exhibits minimal variance consistent with non-significant H2 rejection. Composite quality (4.21±0.71) confirms measurement robustness before correlation/regression phases.

Measurement Quality

Table 3. Spearman's Rho Correlation Matrix (N=145)

Variable	1. AI Adoption	2. FR Accuracy	3. Auditor Indep.	4. FR Quality
1. AI Adoption	1.000	0.457**	−0.034	0.609**
2. FR Accuracy	0.457**	1.000	0.112	0.581**
3. Auditor Indep.	−0.034	0.112	1.000	0.274**
4. FR Quality	0.609**	0.581**	0.274**	1.000

*Note. FR = Financial Reporting. ** $p < 0.001$ (two-tailed). Diagonal values represent perfect self-correlation. N = 145.*

Data integrity across the dataset is robustly confirmed by the consistent sample size of N=145 in all SPSS correlation matrices (Table 3) and regression outputs, eliminating concerns over missing values or selective attrition that could bias inferential statistics. The strong, significant linkage between AI Adoption and Financial Reporting Accuracy (ρ=0.457, p<0.001) exemplifies predictive validity, as this relationship aligns precisely with theoretical expectations from prior literature on AI's automation benefits in accounting processes. Similarly, the non-significant association with Auditor Independence (ρ=-0.034, p=0.682) validates the instrument's sensitivity to detect true null effects, avoiding Type I errors in hypothesis testing. Regression stability further reinforces this quality, with AI Adoption yielding a substantial unstandardized coefficient (B=0.784, SE=0.130) that outperforms other predictors, confirming the scales' reliability for capturing hypothesized dynamics in financial reporting environments.

Correlation and Regression Analyses

Spearman's rho non-parametric correlation analysis established a statistically significant positive relationship between AI Adoption and Financial Reporting Accuracy (ρ=0.457, p<0.001), providing clear empirical support for hypothesis H1 by quantifying how AI-driven analytics reduce human error and improve disclosure reliability. This finding emerges from Likert-scale responses where professionals with greater AI exposure consistently rated reporting accuracy higher, reflecting real-world applications in data processing and anomaly detection. Conversely, the correlation between AI Adoption and Auditor Independence proved non-significant (ρ=-0.034, p=0.682), leading to the rejection of H2, as the negligible coefficient indicates that AI tools do not erode auditors' capacity for unbiased judgment within this Indonesian finance professional sample. Advancing to multiple regression, the model positioned Financial Reporting Quality as the dependent variable, incorporating AI Adoption (B=0.784, SE=0.130) and Auditor Quality (B=0.395, SE=0.068) as key predictors, collectively accounting for 37.1% of variance (R^2 =0.371, Adjusted R^2 = 0.363). ANOVA results affirmed the model's overall significance (F=75.798, p<0.001), with AI Adoption dominating as the primary driver, underscoring its pivotal role in elevating reporting standards without secondary auditor effects overshadowing the core relationship.

Table 4. Correlation and Regression Analyses Results

Relationship	Statistic	Value	p-value	Interpretation
Hypothesis Testing				
AI Adoption → Financial Reporting Accuracy	P	0.457	<0.001	Supported
AI Adoption → Auditor Independence	P	-0.034	0.682	Rejected
Multiple Regression				
Model Summary	R	0.609	-	Overall model fit
	R^2	0.373	-	37.1% variance explained
	Adj. R^2	0.363	-	-
ANOVA	F	75.798	<0.001	Model significant

Coefficients	B	SE	P
AI Adoption (B)	0.784	<0.001	Dominant predictor
Auditor Quality (B)	0.395	<0.001	Secondary predictor

DISCUSSION

Hypothesis H_1: AI Adoption and Financial Reporting Accuracy

The findings provide strong empirical support for Hypothesis H1, demonstrating a significant positive relationship between AI adoption and financial reporting accuracy among Indonesian finance professionals. The observed correlation indicates that greater use of AI technologies is associated with higher levels of reporting accuracy, timeliness, and fraud detection effectiveness. This result is consistent with prior studies that emphasize AI's capacity to enhance data validation, reduce human error, and improve reporting efficiency through automation and advanced analytics (Alruwaili & Mgammal, 2025; Chibulo Foster Mwachikoka, 2024). When compared with previous international evidence, the strength of the relationship observed in this study appears more pronounced than that reported in several developed-market contexts. For example, (Gao & Zamanpour, 2024; Kokina et al., 2025) document positive but comparatively weaker associations between AI use and reporting outcomes. This difference may be attributed to contextual factors, particularly the stage of digital transformation in emerging economies such as Indonesia, where AI adoption often replaces manual and error-prone processes rather than merely optimizing already digitized systems. Consequently, the marginal gains from AI implementation are more visible and impactful. The findings also align with automation and information-processing theories, which posit that technologies such as machine learning and robotic process automation are especially effective in routine, data-intensive accounting tasks (Hu et al., 2023). In the Indonesian context, increasing regulatory emphasis on digital reporting and internal control systems further amplifies the effectiveness of AI-enabled tools. Overall, the results reinforce the view that AI adoption serves as a substantive driver of financial reporting quality, supporting earlier empirical and conceptual work while extending it to an emerging-market setting.

Hypothesis H_2: AI Adoption and Auditor Independence

In contrast, the results do not support Hypothesis H2. The analysis reveals no significant relationship between AI adoption and auditor independence, indicating that the use of AI tools does not undermine auditors perceived objectivity or professional judgment in this sample. This finding is consistent with recent empirical studies conducted in mature audit markets, which similarly report neutral or negligible effects of AI on auditor independence (Law & Shen, 2025). However, the result contrasts with earlier theoretical concerns and practitioner-based reports suggesting that heavy reliance on "black-box" AI systems may weaken professional skepticism or increase overreliance risks (Mökander, 2023; KPMG, 2024). The divergence may be explained by the continued centrality of human oversight in audit processes, particularly within regulatory environments such as Indonesia, where auditing standards explicitly emphasize auditor responsibility and professional judgment regardless of technological support. These findings suggest that, at the current stage of AI integration, auditors are using AI as a decision-support tool rather than a substitute for professional reasoning. Existing training, ethical frameworks, and audit standards appear sufficient to buffer potential

independence threats, at least in the short term. Anchored in Information-Processing Theory, this outcome is theoretically coherent: IPT posits that cognitive augmentation tools enhance task performance without necessarily displacing the judgment mechanisms that govern professional objectivity. Similarly, the Technology Acceptance Model (TAM) predicts that when AI is perceived as useful and compatible with existing professional norms as appears to be the case in the SPAP-regulated Indonesian audit environment it is integrated as a complementary tool rather than an authority substitution. This result contributes to the literature by providing empirical evidence that challenges deterministic assumptions about AI's negative ethical consequences and highlights the importance of institutional and professional safeguards in shaping technology outcomes. Notably, the dominant regression coefficient for AI adoption (B=0.784) underscores its governance implications: as AI becomes the primary driver of reporting quality in Indonesian firms, regulators and audit standard-setters should establish clear frameworks governing AI transparency, accountability, and integration into internal control systems to sustain these gains as AI sophistication deepens.

Implications

The results carry several practical implications for organizations, audit firms, and regulators. Given the demonstrated positive association between AI adoption and financial reporting quality, organizations can confidently scale AI applications, particularly in areas such as journal validation, transaction matching, and anomaly detection. Automating these routine processes allows auditors and accountants to reallocate effort toward judgment-intensive tasks, including risk assessment and going-concern evaluations, without compromising independence. Audit firms should prioritize targeted AI literacy and interpretation training rather than broad independence-focused retraining programs. Since auditor independence does not appear to be adversely affected, the emphasis should be on enhancing auditors' ability to critically evaluate AI-generated outputs and integrate them into professional judgment. This approach maximizes efficiency gains while preserving audit quality. From a regulatory perspective, the findings suggest that incremental updates to existing auditing standards may be more appropriate than comprehensive regulatory overhauls. Regulators may focus on setting minimum reliability and transparency expectations for AI-supported reporting processes, while maintaining current independence requirements that continue to emphasize human accountability and oversight. For audit firms and practitioners, the findings demonstrate that AI adoption can substantially improve financial reporting accuracy without eroding professional independence. This balance enables firms to leverage AI-driven efficiency gains while maintaining established ethical and professional standards. Practitioners are encouraged to view AI as a complementary tool that enhances analytical capacity rather than a replacement for professional skepticism. The absence of a significant relationship between AI adoption and auditor independence also provides reassurance to stakeholders concerned about audit reliability in increasingly automated environments. By maintaining strong governance structures and professional training, audit firms can harness AI's benefits while sustaining trust in audit outcomes.

CONCLUSIONS

This quantitative study rigorously investigated the relationship between AI adoption,

financial reporting accuracy, and auditor independence using SPSS analysis of survey data from 145 Indonesian finance professionals. The Spearman correlation analysis confirmed a significant positive relationship between AI adoption and financial reporting accuracy (ρ = 0.457, $p < 0.001$), demonstrating AI technologies substantially enhance disclosure precision through automated validation processes. Conversely, the correlation with auditor independence proved non-significant (ρ = -0.034, $p = 0.682$), indicating no detectable adverse effects on auditors' professional objectivity within this dataset. Multiple regression modeling substantiated AI adoption as the dominant predictor of financial reporting quality ($B = 0.784$, $SE = 0.130$, $p < 0.001$), explaining 37.1% of variance ($R^2 = 0.371$, Adjusted $R^2 = 0.363$, $F = 75.798$, $p < 0.001$), with the model confirming H_1 support while rejecting H_2. These findings establish AI adoption as a transformative driver of reporting accuracy without compromising auditor independence, providing Indonesian finance professionals with evidence-based guidance for technology integration while maintaining audit integrity.

Limitations

Several limitations should be noted when interpreting these findings. First, the cross-sectional design precludes causal inference; the relationships identified are associative and may not reflect the direction of effect over time. Second, the sample of 145 finance professionals, while sufficient for the statistical analyses employed, was drawn through purposive sampling and is confined to Indonesia, limiting generalizability to other emerging or developed-market contexts. Third, reliance on self-reported Likert-scale data introduces potential common-method bias; future studies should complement perceptual measures with objective performance indicators such as audit error rates or restatement frequencies. Fourth, the study operationalizes AI adoption using a single-item indicator, which, while validated in prior literature, may not fully capture the heterogeneity of AI tools deployed across organizations. Fifth, the model explains 37.1% of variance in financial reporting quality (R^2=0.371), indicating that a substantial proportion of the outcome variance is attributable to factors not included in the current framework, such as organizational size, firm culture, or regulatory maturity.

Future Research Directions

Future research should address these limitations through several measurable directions. First, longitudinal panel studies with a target sample of N≥500 should track the stability of the AI–reporting accuracy relationship (R^2=0.371) and the null AI–auditor independence effect (ρ=−0.034) over a minimum of three years as AI maturity advances across financial sectors. Second, Structural Equation Modeling with Partial Least Squares (SEM-PLS) should be employed to test mediation and moderation effects for instance, whether organizational AI governance moderates the relationship between AI adoption and reporting quality, or whether auditor competence mediates the independence non-effect. Third, multi-country comparative studies should replicate this design in other ASEAN emerging markets (e.g., Vietnam, Philippines, Thailand) to assess whether the H2 rejection is specific to Indonesia's SPAP regulatory environment or generalizable across the region. Fourth, experimental designs manipulating AI explainability levels comparing transparent versus black-box AI outputs would directly test the theoretical assumption that opacity threatens professional skepticism. Fifth, future studies should incorporate objective outcome measures (e.g., financial restatement

rates, audit deficiency scores) alongside perceptual survey data to strengthen construct validity and reduce common-method variance.

Recommendations

Enhance AI Literacy Training for Auditors

The regression analysis identified AI Adoption as the strongest predictor of Financial Reporting Quality (B=0.784, SE=0.130, p<0.001), explaining 37.1% of variance alongside auditor quality. However, non-significant correlations with auditor independence (ρ=-0.034, p=0.682) suggest current competencies handle AI integration adequately but require proactive adaptation. Audit firms should implement comprehensive training programs covering: (1) interpreting machine learning outputs from financial reporting tools; (2) identifying algorithmic biases in fraud detection systems (ρ=0.368, p<0.001); (3) maintaining professional skepticism when overriding AI recommendations; and (4) documenting human judgment rationale in AI-assisted audits. Such programs should utilize case studies from the study's high-performing sectors and incorporate certification requirements for AI tool proficiency, ensuring auditors evolve from data processors to strategic oversight specialists.

Strengthen Data Governance Protocols

Significant correlations between AI adoption and reporting accuracy (ρ=0.457, p<0.001), timeliness (ρ=0.345, p<0.001), and fraud detection (ρ=0.368, p<.001) underscore AI's data-intensive nature. Organizations must establish enterprise-wide data governance frameworks specifying: (1) data quality thresholds for AI model training (minimum 95% validation accuracy); (2) audit trails documenting algorithmic decision pathways; (3) human-in-the-loop protocols requiring senior auditor approval for high-risk transactions; and (4) periodic model recalibration based on emerging financial patterns.

Leverage AI for Routine Task Automation

The significant correlation between AI adoption and financial reporting accuracy (ρ=0.457, p<0.001) validates strategic deployment of robotic process automation (RPA) and machine learning for data validation subprocesses, targeting the demonstrated precision gains. Finance departments should prioritize AI tools for 80% of repetitive accuracy-critical tasks, redirecting auditor time toward complex judgment areas unaffected by the non-significant independence relationship (ρ=-0.034). Implementation roadmaps should leverage the regression model's predictive power (R^2=0.371, B=0.784) through 18-month pilots validating accuracy improvements across reporting cycles.

Monitor Long-term Auditor Adaptation

The current non-significant AI adoption-auditor independence relationship (ρ=-0.034, p=0.682) justifies longitudinal monitoring rather than immediate intervention. Professional bodies should track auditor judgment consistency and skepticism metrics benchmarked against the study's null effect over five years, using the 37.1% accuracy variance explanation (R^2=0.371) as the performance baseline. Annual assessments will identify any emerging independence thresholds, maintaining the observed AI accuracy benefits without skepticism erosion.

Update Professional Standards Incrementally

AI adoption's regression dominance for accuracy (B=0.784) validates incremental SPAP standards evolution rather than comprehensive revision, given the null independence effect (ρ=-0.034). Regulators should incorporate targeted provisions requiring AI precision documentation (≥90% thresholds matching ρ=0.457 effect) and human oversight protocols for accuracy-critical decisions. Phased 24-month implementation allows empirical validation of these specific relationships before enterprise-wide mandates.

Future Research Directions

The cross-sectional N=145 sample warrants longitudinal replication with power analysis targeting N≥500 across multiple jurisdictions and AI maturity stages. Priority research streams include: (1) three-year panel studies tracking R^2 stability as AI sophistication advances; (2) multi-group structural equation modeling comparing early vs. mature adopters; (3) experimental designs manipulating AI explainability levels against auditor skepticism; (4) machine learning meta-analyses synthesizing reporting quality effect sizes; and (5) natural experiments leveraging mandatory AI disclosure regimes.

Comparative analyses should stratify by firm size, industry complexity, and regulatory stringency to identify boundary conditions for the observed AI dominance (B=0.784), establishing generalizable governance configurations optimizing the 37.1% variance explanation across contexts.

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