Digital Audit Competencies and Audit Quality: Evidence from External Auditors of Deposit Money Banks in Nigeria

Prince Oden; Neoma Festus Ozomagbo; Ndifon Ojong Ejoh
Department of Accountancy,
University of Cross River State, Nigeria
Corresponding email: princeoden@yahoo.com

https://doi.org/10.56201/ijssmr.vol.12no11.2026.pg256.269

Abstract
This study examines the relationship between digital audit competencies and audit quality among practising external auditors engaged in the statutory audit of deposit money banks in Nigeria. Specifically, it evaluates data literacy in relation to the comprehensiveness of audit evidence, information systems proficiency in relation to the reliability of audit conclusions, and digital professional judgment in relation to the timeliness of misstatement detection. A cross-sectional survey design was adopted. The accessible population comprised 180 practising external auditors affiliated with 21 registered audit firms operating in Cross River State, from which a minimum sample of 124 was determined using the Taro Yamane formula. A total of 135 questionnaires were distributed and 124 valid responses were analysed. Descriptive statistics, Pearson correlations, and ordered logit and ordered probit models were used. The reported estimates indicate positive and statistically significant coefficients for data literacy and evidence comprehensiveness, information systems proficiency and conclusion reliability, and digital professional judgment and timely misstatement detection. The digital professional judgment coefficient was largest across the three focal models. However, the likelihood-ratio tests for the information systems proficiency models were not statistically significant at the 5% level, which qualifies interpretation of that model's overall fit. The findings underscore the importance of developing auditors' analytical, systems-related, and evaluative capabilities alongside investment in audit technology. The study contributes context-specific evidence on the distinct competency dimensions associated with audit quality in a developing-country banking environment.

Keywords: ***d****igital audit competencies; data literacy; information systems proficiency; professional judgment; audit quality; Nigeria*

1. Introduction

The rapid evolution of digital technologies has transformed the audit landscape globally. According to Tysiac (2023), digital competencies are no longer supplementary skills but core requirements for delivering high-quality audit services. While audit technology tools are increasingly available, research suggests that the benefits of these tools depend heavily on the auditor's ability to use them effectively. This shift has moved the conversation from simply adopting audit technology to building the necessary digital capabilities that enable auditors to leverage these tools meaningfully.

Audit quality remains central to the credibility of financial reporting, particularly in the banking sector where large volumes of transactions and complex financial instruments create significant assurance challenges. Deposit money banks in Nigeria handle vast amounts of digital financial data daily, making the auditor's digital proficiency critical to identifying misstatements, detecting fraud, and forming reliable opinions. As noted by the International Auditing and Assurance Standards Board (IAASB, 2022), the effectiveness of any audit technology is fundamentally dependent on the competence of the professional operating it. Despite substantial investments in audit software and infrastructure by Nigerian financial institutions and audit firms, variations in audit quality persist. This observation raises a key question: whether the limiting factor is the availability of technology itself or the varying levels of digital competence among audit professionals. Understanding this distinction is essential because it shifts the focus from procurement decisions to professional development — an equally critical but often overlooked dimension of audit quality improvement. Audit quality, as defined by Shubita (2021), is the auditor's ability to detect material misstatements and reduce inconsistencies in financial reporting. In the digital era, this ability increasingly relies on three core competencies: data literacy, systems proficiency, and digital professional judgment. Together, these determine whether an auditor can effectively navigate complex digital environments and produce work that meets professional standards. The Nigerian banking sector continues to grapple with persistent challenges related to financial reporting reliability, including delayed detection of irregularities, inconsistent audit evidence documentation, and difficulties in tracing complex digital transactions. While many deposit monies banks have upgraded their digital systems and audit firms have acquired modern audit tools, the expected improvements in audit quality have not been uniformly realised across the sector. Public trust in audit reports has remained fragile following high-profile financial irregularities in banks where auditors failed to detect emerging risks on a timely basis. Anecdotal evidence suggests that while technology is available, many audit professionals lack the full range of competencies needed to interpret data analytics outputs, validate algorithmic results, or maintain professional scepticism in highly automated audit environments. This gap creates a situation where advanced tools are underutilised or misapplied, limiting their potential to enhance audit quality.

Most existing studies in the Nigerian context have focused on technology adoption rates rather than the human capabilities required to make that technology effective. Consequently, there is limited empirical evidence on which specific digital competencies matter most for different dimensions of audit quality. This study addresses that gap by examining how three distinct digital competencies — data literacy, systems proficiency, and digital professional judgment — influence audit quality in Nigerian deposit money banks.

Research objectives and hypotheses

The study investigates the relationship between digital audit competencies and audit quality among external auditors involved in the statutory audit of deposit money banks in Nigeria. It addresses three specific relationships:

1.1 Research objectives

•to evaluate the effect of data literacy on the comprehensiveness of audit evidence.
• to examine the effect of Information systems proficiency on the reliability of audit conclusions.
• to assess the effect of digital professional judgment on the timeliness of misstatement detection.

1.2 Null hypotheses are:

H_{01}: Data literacy has no significant relationship with the comprehensiveness of audit evidence.

H_{02}: Information systems proficiency has no significant relationship with the reliability of audit conclusions.

H_{03}: Digital professional judgment has no significant relationship with the timeliness of misstatement detection.

1.3 Significance and scope

This study will benefit multiple stakeholders. For audit firms and bank audit departments, it provides evidence on which specific competencies yield the greatest quality improvements, enabling more targeted training and recruitment strategies. Professional accounting bodies in Nigeria can use the findings to update curriculum standards and continuing professional development requirements. Regulators will gain insights that can inform practice guidelines on digital competence expectations. Academically, the study introduces a competence-based framework that complements existing technology-adoption models, offering a more complete explanation of audit quality variations in digital environments.

The study is restricted to practising external auditors involved in the statutory audit of deposit money banks. Internal auditors employed by banks, bank employees, and non-practising professionals are excluded. The accessible field population was drawn from 21 registered external audit firms operating in Cross River State, Nigeria. Questionnaires were administered between February and March 2026.

Table 1. Operational relationships examined in the study

Competency (predictor)	Audit-quality dimension (outcome)	Operational focus
Data literacy	Comprehensiveness of audit evidence	Accessing, interpreting and analysing datasets; identifying anomalies
Information systems proficiency	Reliability of audit conclusions	Understanding system architecture, controls, data integrity and audit trails
Digital professional judgment	Timeliness of misstatement detection	Applying professional scepticism to technology-generated evidence and algorithmic outputs

2. Literature review

2.1 Conceptual review

2.1,1 Digital audit competencies

Digital audit competencies represent the human side of the digital transformation in the profession. According to the International Federation of Accountants (IFAC, 2023), these competencies extend beyond basic computer literacy to encompass three interrelated domains: technical skills (using specific software), analytical skills (interpreting data outputs), and critical evaluation skills (assessing the validity and limitations of digital evidence). Competence in this context is not merely knowing how to operate software; it involves understanding the underlying logic, potential vulnerabilities, and the appropriate boundaries of reliance on system outputs. As noted by Bierstaker et al. (2021), an auditor can be proficient in using audit analytics software while lacking the conceptual understanding required to challenge or validate its results — a distinction that directly impacts audit quality.

2.1.2 Audit quality in digital environments

Audit quality in the digital context retains its core definition — conformity with professional standards and sufficiency of appropriate evidence — but expands to include dimensions specific to digital work. Comprehensiveness of evidence now includes coverage of digital transactions and system-generated records. Reliability of conclusions depends on validated data integrity rather than physical document authenticity alone. Detection timeliness matters more because digital misstatements can propagate rapidly across interconnected systems.

2.1.3 Competency-quality linkage

2.2 Theoretical review

This study is anchored on two complementary theories: Human Capital Theory and the Task-Technology Fit (TTF) Model.

2.2.1 Human Capital Theory

Originating from Schultz (1961) and Becker (1964), Human Capital Theory posits that individual capabilities — acquired through education, training, and experience — are valuable resources that enhance productivity and performance. Applied to auditing, this theory suggests that investments in developing auditors' digital competencies represent a form of capital that directly improves the quality of their professional output. Unlike physical technology, which depreciates, competencies can be continuously updated and applied across multiple tasks and contexts.

2.2.2 Task–technology fit

Originally proposed by Goodhue and Thompson (1995), the Task-Technology Fit model argues that technology improves performance only when its capabilities match the task requirements and the user possesses the necessary skills to apply it effectively. This model introduces the critical insight that technology and competence are complementary resources — neither alone is sufficient. This theoretical lens guides the present study by framing digital competencies not as an alternative to technology investment but as the essential condition that makes technology investment worthwhile.

2.3 Empirical review

Prior empirical studies reviewed for this research are summarised in Table 2. The reported findings are presented as stated in the source manuscript.

Table 2. Summary of empirical studies

Study	Focus	Reported finding	Relevance
Appah (2025)	Auditor expertise, AI adoption and audit practice in Nigeria	Technology adoption was reported to improve audit quality when accompanied by auditor expertise and experience.	Supports the competency-based focus.
Alma'aitah et al. (2024)	Remote auditing, technology readiness and audit quality in Jordan	Technology readiness alone was reported not to improve audit quality; digital literacy was identified as important.	Separates infrastructure from user competence.
Ditkaew & Suttipun (2023)	Data analytics competencies and audit quality in Thailand	Analytical skills were reported to be more strongly associated with audit	Emphasises effective use rather than mere access.

		quality than software-use frequency.	
Gao et al. (2021)	Data analytics human capital and audit quality	Investment in staff analytical skills was associated with fewer restatements and higher audit quality.	Links human capital to audit outcomes.
Kokina et al. (2025)	AI adoption challenges in auditing	Limited staff competence was identified as a major barrier to AI-related quality benefits.	Highlights competence constraints.
Ladan et al. (2024)	Generalised audit software adoption among Nigerian auditors	IT competence was reported as a stronger predictor of consistent use than availability or cost.	Provides Nigerian context.
Lombardi et al. (2023)	Emerging technologies and auditor judgment	Technology may improve efficiency while weakening critical thinking if professional scepticism is not maintained.	Supports digital judgment as a separate construct.
Torroba et al. (2025)	Auditors' adoption of data analysis and AI in Spain	Regulatory support and training were reported as important predictors of effective adoption.	Highlights institutional training.
Abdelwahed et al. (2025)	Big data analytics adoption in a developing economy	Uneven digital skills were reported to constrain consistent use and quality benefits.	Offers a developing-economy comparison.
Tan et al. (2025)	AI applications and external audit quality in China	Complementary data skills were reported to strengthen the quality benefits of AI adoption.	Supports the technology–competence complementarity argument.

2.4 Research gap

First, most studies frame audit technology primarily as a tool or system to be adopted, rather than distinguishing between the availability of technology and the human capabilities required to use it effectively. Consequently, there is limited empirical evidence isolating the specific contributions of data literacy, information systems proficiency, and digital professional judgment as distinct predictors of audit quality outcomes.

Second, while existing research establishes that auditor competence matters broadly, few studies operationalise and test these three dimensions separately. This approach has obscured whether certain competencies yield greater quality dividends than others — information that is vital for prioritising limited training and development resources.

Third, there is a scarcity of context-specific evidence from developing-country financial sectors, particularly Nigeria, where infrastructure quality, educational foundations, and digital adoption patterns differ significantly from advanced economies. Generalising findings from studies conducted in highly digitalised environments may not provide an accurate basis for policy and practice in the Nigerian context.

3. Methodology

3.1 Research design and population

The study adopted a cross-sectional survey design to collect responses from practising external auditors at one point in time.

3.2 Research population

The accessible population consisted of 180 eligible external auditors identified through 21 registered external audit firms operating in Cross River State, Nigeria. The target professional group comprised external auditors undertaking, supervising, or otherwise professionally involved in statutory bank audits. Bank-employed internal auditors, bank employees, and non-practising professionals were excluded.

3.3 Sample size and sampling procedure

The minimum sample size was estimated using the finite-population formula attributed to Taro Yamane (1967):

$n = N / [1 + N(e)^2]$

where n is the sample size, N is the population (180), and e is the precision level (0.05).

Thus,

$n = 180 / [1 + 180(0.05^2)]$

$= 180 / 1.45$

$= 124.14.$

The study therefore adopted 124 as the minimum valid sample size.

A stratified random sampling procedure was reported, with respondents grouped by professional rank across the 21 firms. A total of 135 questionnaires were distributed and 124 valid responses were returned, giving a valid-response rate of 91.85%.

Table 3. Distribution of questionnaires by professional rank

Professional rank	Proportion (%)	Questionnaires distributed	Valid responses
Audit partners	25	36	36
Audit managers	35	43	40
Senior audit officers	25	31	28
Junior audit officers	15	25	20
Total	100	135	124

3.4 Measurement and data analysis

The questionnaire measured data literacy, information systems proficiency, digital professional judgment, and the three audit-quality dimensions on five-point response scales. Age, work experience, and educational qualification were included as control variables. Descriptive statistics (frequencies, percentages, means and standard deviations) were used to summarise responses. Pearson correlation coefficients were used to examine bivariate associations. Ordered logit and ordered probit regressions were estimated because the dependent variables were measured on ordinal scales.

3.5 Model specification

Three separate models were estimated to align each competency with its corresponding audit-quality dimension. The models are expressed as follows:

Model 1: $COMP_i = \beta_0 + \beta_1 DATLIT_i + \beta_2 AGE_i + \beta_3 EXP_i + \beta_4 EDU_i + \mu_i$

Model 2: $REL_i = \alpha_0 + \alpha_1 ISPROF_i + \alpha_2 AGE_i + \alpha_3 EXP_i + \alpha_4 EDU_i + \mu_i$

Model 3: $DETECT_i = \gamma_0 + \gamma_1 DIGJUD_i + \gamma_2 AGE_i + \gamma_3 EXP_i + \gamma_4 EDU_i + \mu_i$

COMP denotes comprehensiveness of audit evidence; DATLIT, data literacy; REL, reliability of audit conclusions; ISPROF, information systems proficiency; DETECT, timeliness of misstatement detection; DIGJUD, digital professional judgment; AGE, respondent age; EXP, years of work experience; EDU, educational qualification; μ, the error term; and i, the respondent. The a priori expectation is that β_1, α_1 and γ_1 are positive.

3.5 Validity, reliability and ethics

Face validity was addressed through review of the clarity and structure of questionnaire items. Content validity was supported by drawing on related literature and review by academic experts. The instrument was pre-tested with respondents outside the final sample. Cronbach's alpha was specified as the internal-consistency measure, with 0.70 or higher treated as an acceptable threshold; however, the source manuscript does not report the obtained alpha coefficients. Participation was voluntary, confidentiality was assured, and responses were stated to be used solely for academic purposes.

4. Results

4.1 Descriptive statistics

Table 4. Descriptive statistics

Variable	N	Mean	Std. dev.	Min	Max
Data literacy	124	3.685	0.872	1	5
Information systems proficiency	124	3.427	0.915	1	5
Digital professional judgment	124	3.790	0.784	1	5
Comprehensiveness of evidence	124	3.718	0.801	1	5
Reliability of conclusions	124	3.597	0.843	1	5
Timeliness of detection	124	3.653	0.826	1	5
Age	124	2.452	0.858	1	4
Experience	124	2.629	1.013	1	4
Education	124	2.871	0.675	1	4

Digital professional judgment recorded the highest mean among the three competency measures (3.790), while information systems proficiency recorded the lowest (3.427). The mean scores for the three audit-quality dimensions ranged from 3.597 to 3.718.

4.2 Correlation analysis

Table 5. Pearson correlation matrix

Variable	DATLIT	ISPROF	DIGJUD	COMP	REL	DETECT	Age	Exp.	Educ.
Data literacy	1.000	—	—	—	—	—	—	—	—
IS proficiency	0.582	1.000	—	—	—	—	—	—	—
Digital judgment	0.541	0.493	1.000	—	—	—	—	—	—

Evidence comprehensiveness	0.462	0.375	0.418	1.000	—	—	—	—	—
Conclusion reliability	0.391	0.448	0.405	0.537	1.000	—	—	—	—
Detection timeliness	0.354	0.329	0.516	0.482	0.471	1.000	—	—	—
Age	0.147	0.123	0.186	0.175	0.152	0.168	1.000	—	—
Experience	0.215	0.268	0.234	0.229	0.257	0.241	0.648	1.000	—
Education	0.134	0.182	0.149	0.161	0.155	0.143	0.276	0.328	1.000

Note. The source manuscript states that correlations exceeding 0.176 are significant at the 5% level. Source: Survey data, 2026.

The three focal competency outcome correlations are positive: data literacy and evidence comprehensiveness (r = 0.462), information systems proficiency and conclusion reliability (r = 0.448), and digital professional judgment and detection timeliness (r = 0.516). The largest reported correlation among the competency variables is 0.582. These bivariate associations do not, by themselves, establish causality.

4.3 Regression and hypothesis tests

Table 6. Ordered logit and probit estimates: data literacy and evidence comprehensiveness

Variable	Coefficient	Std. error	z-statistic	p-value
Panel A: Ordered logit				
Data literacy	0.382	0.145	2.63	0.009
Age	0.094	0.161	0.58	0.561
Experience	0.167	0.135	1.24	0.215
Education	0.125	0.180	0.69	0.488
Panel B: Ordered probit				
Data literacy	0.234	0.088	2.66	0.008
Age	0.059	0.097	0.61	0.543
Experience	0.103	0.082	1.26	0.207
Education	0.076	0.109	0.70	0.486

Model statistics

Statistic	Ordered logit	Ordered probit
LR χ^2 (4)	11.36	11.48
Prob. > χ^2	0.0228	0.0217
Pseudo R^2	0.0647	0.0654
Observations	124	124

Data literacy has a positive coefficient in both specifications and is statistically significant (ordered logit: $\beta = 0.382$, $p = 0.009$; ordered probit: $\beta = 0.234$, $p = 0.008$). Both likelihood-ratio tests are significant at the 5% level. The null hypothesis is therefore rejected for this relationship.

Table 7. Ordered logit and probit estimates: information systems proficiency and conclusion reliability

Variable	Coefficient	Std. error	z-statistic	p-value
Panel A: Ordered logit				
IS proficiency	0.315	0.141	2.23	0.026
Age	0.108	0.159	0.68	0.497
Experience	0.189	0.133	1.42	0.155
Education	0.142	0.178	0.80	0.425
Panel B: Ordered probit				
IS proficiency	0.194	0.086	2.26	0.024
Age	0.067	0.096	0.70	0.484
Experience	0.116	0.081	1.43	0.152
Education	0.087	0.108	0.81	0.419

Model statistics

Statistic	Ordered logit	Ordered probit
LR χ^2 (4)	8.79	8.91
Prob. > χ^2	0.0666	0.0634
Pseudo R^2	0.0503	0.0510
Observations	124	124

The coefficient for information systems proficiency is positive and statistically significant in both specifications (ordered logit: $\beta = 0.315$, $p = 0.026$; ordered probit: $\beta = 0.194$, $p = 0.024$). However, the likelihood-ratio tests for the full models are not significant at the 5% level ($p = 0.0666$ and $p = 0.0634$). Accordingly, the focal coefficient is statistically significant conditional on the included controls, but the evidence for the overall model fit is weaker. This qualification should be retained when interpreting the second hypothesis.

Table 8. Ordered logit and probit estimates: digital professional judgment and detection timeliness

Variable	Coefficient	Std. error	z-statistic	p-value
Panel A: Ordered logit				
Digital professional judgment	0.448	0.151	2.97	0.003
Age	0.081	0.158	0.51	0.609
Experience	0.142	0.132	1.08	0.280
Education	0.101	0.177	0.57	0.568
Panel B: Ordered probit				
Digital professional judgment	0.274	0.092	2.98	0.003
Age	0.050	0.095	0.53	0.594
Experience	0.087	0.080	1.09	0.277
Education	0.062	0.107	0.58	0.564

Model statistics

Statistic	Ordered logit	Ordered probit
LR χ^2 (4)	13.12	13.19
Prob. > χ^2	0.0107	0.0104
Pseudo R^2	0.0748	0.0752
Observations	124	124

Digital professional judgment has a positive and statistically significant coefficient in both specifications (ordered logit: $\beta = 0.448$, $p = 0.003$; ordered probit: $\beta = 0.274$, $p = 0.003$). Both likelihood-ratio tests are significant at the 1% level. The null hypothesis is rejected. Among the three focal coefficients, this relationship has the largest reported coefficient in the respective model specifications; coefficient magnitudes across separate ordered models should nevertheless be compared cautiously.

5. Discussion

5.1 Data literacy and comprehensiveness of audit evidence

The results indicate that data literacy significantly enhances the comprehensiveness of audit evidence. When auditors possess strong data literacy skills, they are better equipped to access diverse data sources, interpret complex datasets, and identify patterns and anomalies that warrant further investigation. This leads to broader coverage in evidence gathering — moving beyond traditional sampling approaches to examine complete datasets more effectively. This finding aligns with Ditkaew and Suttipun (2023), who observed that data analytical skills were more strongly associated with audit quality outcomes than simple software usage frequency.

5.2 Information systems proficiency and reliability of audit conclusions

Information systems proficiency demonstrates a significant positive relationship with the reliability of audit conclusions. Understanding the underlying systems that generate financial data enables auditors to assess data integrity risks, validate control effectiveness, and exercise appropriate scepticism when relying on system-produced information. When auditors understand how data is generated and processed, their conclusions are grounded in a more complete understanding of potential system vulnerabilities. This supports the Task-Technology Fit model — technology produces reliable outputs only when the user understands its operational logic (Goodhue & Thompson, 1995). The positive focal coefficients are consistent with the proposition that understanding the systems generating financial information helps auditors assess data integrity, controls and system-related risks. Nevertheless, the non-significant likelihood-ratio tests for the full models mean that the overall explanatory performance of these specifications should not be overstated.

5.3 Digital professional judgment and timely misstatement detection

Digital professional judgment emerged as the strongest predictor of timely misstatement detection. This suggests that in complex digital environments, the ability to maintain professional scepticism, recognise algorithmic limitations, and balance technological outputs with critical evaluation is the most valuable competency. Technology can identify anomalies, but human judgment determines which anomalies represent actual risks requiring attention. This finding reinforces Lombardi et al. (2023), who warned that over-reliance on technology without critical judgment could delay or obscure the detection of emerging issues.

6. Conclusion and Implications

6.1 Conclusion

The reported results indicate that digital audit competencies are positively associated with important dimensions of audit quality among the surveyed external auditors. Data literacy is positively associated with the comprehensiveness of audit evidence, information systems proficiency has a positive focal coefficient in the reliability model, and digital professional judgment is positively associated with timely misstatement detection. The information systems model requires cautious interpretation because its overall likelihood-ratio tests are not significant at the 5% level. As the study uses a cross-sectional self-report survey, the findings should be interpreted as associations rather than definitive causal effects.

6.2 Practical implications and recommendations

First, for data literacy: Audit firms and professional training providers should integrate practical data interpretation exercises into basic and continuing professional development programmes. Training should move beyond "how to use software" to include "how to understand, question, and validate the data produced by it." Partnerships with data science departments in Nigerian universities could help develop appropriate foundational curricula.

Second, for information systems proficiency: Professional accounting bodies should introduce a foundational information systems examination or certification requirement. Auditors need not become systems engineers, but they must understand system architectures, control frameworks, and data integrity risks. This could be structured as a modular requirement within existing professional qualifications such as ICAN and ANAN. Third, for digital professional judgment: Professional bodies and audit firms should develop specific guidance and training on maintaining professional scepticism in digital environments. This includes understanding the limitations of automated tools, recognising algorithmic bias, and balancing efficiency gains with thorough verification. Case studies focusing on situations where technology produced misleading or incomplete results would be particularly effective.

Fourth, for policy and curriculum development: Educational institutions offering accounting and auditing programmes in Nigeria should review their curricula to ensure that digital competencies are not treated as optional add-ons but are integrated throughout core courses. This study provides empirical evidence that these competencies directly impact professional performance outcomes.

6.3 Contribution to knowledge

Empirically, it provides context-specific evidence from Nigeria demonstrating that different digital competencies yield different quality outcomes, with judgment capabilities emerging as the most critical factor. Methodologically, the study operationalises and tests three distinct competency dimensions separately, rather than combining them into a single broad construct, offering a more nuanced understanding of where competency investments yield the highest returns.

Theoretically, the findings reinforce both Human Capital Theory and the Task-Technology Fit model by showing that technology investments must be accompanied by corresponding investments in people for benefits to materialise. The study proposes an extended framework: Technology + Competence = Quality. Practically, it provides audit firm leaders, professional bodies, regulators, and educators with evidence-based guidance for prioritising resource allocation in professional development — suggesting that while all three competencies are valuable, digital professional judgment and data literacy may offer the greatest immediate return on investment.

6.4 Limitations and directions for further research

The study is limited to 124 valid questionnaire responses from practising external auditors accessible through audit firms in Cross River State. The findings should not automatically be generalised to all external auditors or all deposit money banks in Nigeria. The use of self-reported, cross-sectional measures also limits causal interpretation and may introduce common-method and response biases. The source manuscript does not provide the questionnaire, item-level data, obtained Cronbach's alpha coefficients, or full model diagnostics. Future studies should report these materials, replicate the analysis with independently collected data, and consider objective audit-quality indicators and broader geographical coverage.

IJSSMR

References

Abdelwahed, A., Elnady, M., & Elbardan, Y. (2025). Big data and analytics adoption in the auditing profession: Evidence from Egypt. *Journal of Applied Accounting Research, 26*(2), 245–264. https://doi.org/10.1108/JAAR-06-2024-0187

Alma'aitah, M., Al-Hayale, T., & Mason, L. (2024). Remote auditing technology readiness and audit quality: The mediating role of digital literacy. *International Journal of Auditing, 28*(3), 412–428. https://doi.org/10.1111/ijau.12452

Appah, E. (2025). Auditor expertise, artificial intelligence adoption and audit quality in Nigeria's public sector. *African Journal of Business Management, 19*(2), 45–58. https://doi.org/10.5897/AJBM2024.9621

Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. Columbia University Press.

Bierstaker, J. L., Lombardi, D. R., & Mock, T. J. (2021). The effects of big data on the audit process and audit quality. *Journal of Emerging Technologies in Accounting, 18*(1), 1–17. https://doi.org/10.2308/JETA-2020-035

Ditkaew, P., & Suttipun, M. (2023). Data analytics competencies, skills, and audit quality: Evidence from Thailand. *Journal of Financial Reporting and Accounting, 21*(4), 589–607. https://doi.org/10.1108/JFRA-08-2022-0256

Gao, S., Lin, T., & Wang, H. (2021). Data analytics capability and audit quality: Evidence from restatements. *Auditing: A Journal of Practice & Theory, 40*(3), 73–96. https://doi.org/10.2308/AJPT-2020-021

Goodhue, D. L., & Thompson, R. L. (1995). Task-technology fit and individual performance. *MIS Quarterly, 19*(2), 213–236. https://doi.org/10.2307/249689

International Auditing and Assurance Standards Board. (2022). *Technology in the audit — A global survey*. International Federation of Accountants.

International Federation of Accountants. (2023). *Digital readiness framework for the accountancy profession*. IFAC Publications.

Kokina, J., Davenport, T. H., & Miller, J. (2025). Artificial intelligence in auditing: Opportunities and implementation challenges. *Journal of Information Systems, 39*(1), 123–145.

Ladan, M., Sanni, A., & Oke, B. (2024). Determinants of generalized audit software adoption among Nigerian auditors. *Journal of African Business Studies, 15*(1), 89–104.

Lombardi, D. R., Dull, R. B., & Schmidt, M. B. (2023). Emerging technologies and auditor judgment: Maintaining professional scepticism in automated environments. *Journal of Business Ethics, 178*(2), 345–362. https://doi.org/10.1007/s10551-021-04902-7

Schultz, T. W. (1961). Investment in human capital. *The American Economic Review, 51*(1), 1–17.

Shubita, M. F. (2021). The impact of audit quality on financial performance: Evidence from Jordan. *International Journal of Financial Research, 12*(2), 1–14. https://doi.org/10.5430/ijfr.v12n2p1

Tan, Y., Wang, S., & Zhou, D. (2025). Client artificial-intelligence applications and external audit quality. *Journal of Accounting and Economics, 67*(1), 101–128. https://doi.org/10.1016/j.jacceco.2024.101623

Torroba, J., Garcia, I., & Martinez, C. (2025). Factors influencing auditors' adoption of data analysis and artificial intelligence techniques. *Accounting, Auditing & Accountability Journal, 38*(2), 345–368. https://doi.org/10.1108/AAAJ-03-2024-6689

Tysiac, K. (2023). The digital mindset: Reimagining the future of the accounting profession. *Journal of Accountancy*, *234*(3), 28–35.

IJSSMR