

FRAUD AND TECHNOLOGICAL DEVELOPMENT OF THE ACCOUNTING PROFESSION: PROBING THE INTRICACIES

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Abstract: Fraud is a monster in any organisation globally and its methods and techniques are becoming more complex and sophisticated. The study investigates the contribution of fraud to the technological development of the accounting profession. The positivist stance was adopted, hence the use descriptive and explanatory survey design. The target population comprises chartered accountants in audit firms, forensic accountants, internal auditors, tax practitioners, and regulators. A purposive sampling technique was used and primary data were collected using a structured questionnaire. The reliability of the questionnaire was tested using Cronbach's Alpha coefficient and data collected are analysed using the descriptive and regression analyses. Findings unveiled that financial crime, cybercrime and tax fraud all significantly and positively contribute to the technological development of the accounting profession having posted probability values of 0.000, 0.000, and 0.003 respectively. The study concluded that, although fraud remains deeply a destructive monster, its has contributed positively and significantly to the technological development of the accounting profession. It then recommended that audit firms and professional bodies should invest in forensic data analytics platforms to strengthen fraud detection and improve audit quality; regulatory agencies should mandate accounting firms to implement advanced cybersecurity frameworks; the Federal Inland Revenue Service (FIRS) and professional tax practitioners should enhance automation in tax reporting and compliance systems; and a collaborative approach between auditors, tax authorities,

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forensic accountants, and regulators should be established to create a national accounting technology framework that addresses financial fraud, cybercrime, and tax fraud simultaneously.

Keywords: Fraud, technological development, accounting profession

INTRODUCTION

Fraud is dangerous to organisations in both the public and private sector. It is not limited to any specific organisation, but an issue that is widely spread as several multinational corporations have experienced its negative significant effect, leading many firms to taking several steps in order to restore their reputation (Edori & Iwene, 2025). It is defined as financial information that is deliberately misrepresented or intentionally concealed. Financial reporting credibility as well as integrity have been challenged continually. Paradoxically, emergence of cases of fraud that are very significant have become the needed catalyst that has for the accounting profession evolution as it has caused great development in new specialised areas of knowledge, tools, and also ethical standards. Fraud, till date, remains a major threat that is very significant to financial information reliability, integrity and transparency globally. Frauds resulting to accounting scandals (Enron, WorldCom, Wirecard, etc) and its destructive results or consequences over the years on investors, society and organisations have been emphasized (Ramos, 2019). Activities that are fraudulent take numerous forms such as insurance scams, financial misrepresentation, tax evasion, cybercrime, and identity theft, have continuously undermined accounting profession credibility (Chen et al., 2025). As those involved in fraud (fraudsters) adopt methods that are very sophisticated, both the traditional auditing and the accounting techniques have proved to be insufficient and inadequate the detection and prevention of the fraudulent schemes. The inability of both traditional auditing as well as accounting techniques to handle the schemes of fraudsters and their fraudulent activities has consequently acted as the catalyst for the development of technology in the accounting profession, that have push and still pushing accounting practitioners and relevant regulatory bodies into embracing tools and frameworks that are advanced. Edori and Edori (2018) opined, control policies to curb fraud has been implemented by businesses.

The accounting profession history is greatly and deeply shaped by foremost cases of fraud. These cases of fraud unearthed the weaknesses in financial reporting, auditing as well as in governance. These foremost accounting scandals do not only shook the trust of the public but also triggered necessary reforms, regulations, and also technological innovations in a swift response to strengthen the accounting profession and practice. Fraud cases such as Enron (2001) and WorldCom (2002) in the US, Parmalat in 2003 (Italy), Satyam Computer Services Fraud in 2009 (India), Cadbury Nigeria in 2006 (Nigeria), Wirecard in 2020 (Germany) among others, do not caused financial losses only, they acted also as turning points in accounting evolution as they caused reforms in regulation (e.g., SOX 2002), lengthened forensic accounting, fast-tracked technological adoption, and reinforced ethics and professional standards. It means that the scandals highlighted the paradox that despite the fact that fraud dents trust, it concurrently drives the accounting profession toward a greater resilience and a superior innovation. Herath (2024) and Alruwaili (2025) therefore agreed that in recent years, there has been a significant transformation of the accounting profession and practice as a result of the swift adoption of artificial intelligence (AI), big data analytics, blockchain, continuous auditing platforms, and robotic process automation (RPA). Also notable, according to Herbert, Tsegba, Ene, and Onyilo, (2024), is the growth of forensic accounting education and research in Nigeria resulting from the escalation of fraud concerns as demonstrated by practices that are fraudulent that can quicken professional growth and capacity building. These technologies do not only enhance the detection of fraud and forensic investigations but they have also reshaped accountants' role in this present digital era. For instance, Shadan and Islam (2025) assert that machine learning algorithms has the capacity to uncover patterns that are unusual in financial data, blockchain guarantees unchallengeable records that reduce opportunities for manipulation, while quantum-resistant security systems are developing as safeguards against future fraud that is cyber-enabled. Though technology offers opportunities that are extraordinary for battling fraud, Pianoschi (2025) added that it also presents new risks (e.g. algorithmic opacity and digital manipulation) thereby creating a paradox or inconsistency for the profession.

The study therefore seeks to empirically prove the relevance of fraud in the technological development of the accounting profession.

TECHNOLOGICAL DEVELOPMENT OF ACCOUNTING PROFESSION

Roles of Fraud in Accounting Profession

It serves as a catalyst for forensic accounting. Forensic accounting establishment and growth a specialised area of accounting was directly caused by fraud. Presently, in the Herbert et al, (2024) point of view, forensic accounting in Nigeria and other countries, plays roles that are critical when fraud is investigated, testifying in court, and also strengthening public accountability. This specialised area may not have developed strongly by now without fraud pressures.

It has also caused improvement in accounting standards and regulations. High-profile fraud cases exposed the loopholes in accounting and auditing. This is responded to by stricter laws and standards. For instance, the Sarbanes-Oxley Act (2002) announced reforms aimed at improving corporate governance, the auditors' independence, and internal controls also (Cohen, Krishnamoorthy, & Wright, 2017). This means that the activities of fraudsters have compelled regulators and professional bodies to keep updating and strengthening standards continuously.

Advancement in technology adoption. Contemporary fraud schemes are very sophisticated hence have motivated and pushed accountants and auditors into embracing digital tools, to enhance the detection and the prevention of fraud. Daud and Patandean (2025) said that in many firms, fraud detection software, continuous auditing systems, and forensic data analytics are now standard. Therefore, the professions technological transformation has been accelerated by fraud.

It has led to the promotion of ethical codes and professional skepticism. Fraud and its scandalous nature have highlighted ethical failures and eroded public trust. This has led accounting bodies to strengthen their codes of ethics and have also require professional skepticism as an auditing principle that is core. According to Alhumoudi et al. (2023), the International Ethics Standards Board for Accountants (IESBA) has partly tightened ethical standards in response to cases of fraud.

Accounting education and raining expansion. Currently, some tertiary institutions and professional institutes have integrated courses (such as forensic

accounting, ethics, and fraud risk management) that are related to fraud into their programmes. Eyibrayila, Ofurum, and Solomon (2023) opined that the continuous professional development (CPD) is mandated so that accountants will remain consistently equipped to detect and manage fraud risks.

Strengthening of Audit Quality and Assurance. Fraud has exposed that auditing practices that is not strong can fail to unearth irregularities that are serious. Audit methodologies according to Cappelletto and Sundgren (2020) now emphasise the risk-based approaches, fraud risk assessments, and improved internal controls.

Areas Where Fraud Has Contributed to Technological Advancement in Accounting

Fraud is a major threat to financial reporting credibility, accountability, and investor confidence. However, one contradictory outcome is that fraud persistent occurrence has brought about technological innovations into the accounting profession. As sophisticated as fraudulent activities have become, leveraging digital platforms and complex schemes, the accounting profession has equally responded technologically. Therefore, the perpetration of fraud has significantly contributed to the accounting profession technological advancement in the following ways:

Fraud Detection and Data Analytics. Omar and Bakar (2012) stated that pressure resulting from fraud has caused increased in the demand for unceasing auditing and data-driven systems of fraud detection. The rising of fraud complexity has fast-tracked the data analytics tools adoption for analysing big financial datasets. This is done for anomalies, patterns that are unusual, or outliers. Benford's Law, predictive modelling, and machine learning techniques are now applied to the assessments of fraud risk.

Forensic Accounting Software and Digital Tools. Schemes that are fraudulent, particularly in transactions that are digital, have resulted to the making of forensic accounting software that are specialised, such as IDEA, ACL, and CaseWare, now employed in investigating financial crimes. In the argument of Daud and Patandean (2025), fraud has pushed organisations to combine both digital accounting platforms with forensic tools under strong frameworks of internal control. Fraud sophistication presently (the digital age) has ensured the indispensability of forensic software, therefore, transforming the way of

conducting investigations by accountants. The result in improved credibility of fraud detection outcomes.

Embracing of Blockchain and Distributed Ledger Technologies (DLT). Manipulation of data related to fraud, transactions that are authorised, and dearth of transparency has prompted the interest in blockchain for unchallengeable financial record keeping. Blockchain, by design, reduces fraud opportunities as it ensures that there is transparency, traceability, as well as tamper resistance. In the explanation of Yermack (2017), the accelerated adoption of blockchain in auditing and accounting results from concerns over the risks of fraud in conventional systems.

Artificial Intelligence (AI) and Machine Learning. Sophisticated fraud rise has pushed accounting firms into AI-powered fraud detection tools integration in their operations. The tools incorporated are capable of identifying behaviours that are suspicious faster than human auditors. Therefore, Kokina and Davenport (2017) highlighted that the AI systems emergence was in response to fraud risks, automating anomaly detection and professional judgment strengthening.

Integration of Cybersecurity in Accounting Systems. With increase in fraud occurring in digital spaces, accountants are now collaborating with IT professionals with the aim of securing the financial systems against cyber fraud, hacking, and phishing. Janvrin, Bierstaker, and Lowe (2008) argued that fraudulent attempts in digital reporting as well as online transactions have made cybersecurity protocols as a very necessary aspect of technology in accounting.

Continuous Auditing and Real-Time Monitoring. Firms have been driven by fraud in moving away from periodic audits toward a continuous auditing and real-time transaction monitoring systems also. This permits instant fraud indicators detection, hence reducing losses which in turn strengthens the confidence of investors (Vasarhelyi, Kogan, & Tuttle, 2015).

In general, fraud has paradoxically been a catalyst for technological innovation in the accounting profession, though destructive. This is because it has pushed accountants to move beyond the manual, reactive processes. Fraud has indeed encouraged the integration of advanced tools and techniques in the accounting profession globally. From data analytics and forensic software to blockchain, AI, cybersecurity, and continuous auditing, the accounting

profession has evolved technologically to stay ahead of fraudulent practices. These advancements demonstrate that while fraud undermines financial systems, it has simultaneously driven the modernisation and resilience of accounting practice.

Financial Fraud and Technological Development of Accounting Profession

Historically, financial fraud has been among the most significant activator of the innovations today in the accounting profession. Financial statement fraud (where management deliberately misrepresents financial data to mislead stakeholders), has led to some corporate collapses that are most devastating in history. Alles, Kogan, and Vasarhelyi (2008) argued that the weaknesses exposed by Enron and WorldCom hastened the adoption of Computer-Assisted Audit Techniques (CAATs) and continuous auditing frameworks. Similarly, forensic accounting tools (ACL Analytics and IDEA) have been adopted widely in order to scrutinise large datasets for patterns that are unusual and may indicate manipulation. Another major technological response to financial fraud is big data analytics that is now nitrated into auditing. Brown-Liburd, Issa, and Lombardi (2015) asserts that with firms generating massive amounts of financial data (structured and unstructured), auditors now rely on predictive modelling and anomaly detection algorithms in identifying suspicious activity. Dai and Vasarhelyi (2017) added that financial fraud also stirred research and implementation of “blockchain-based accounting systems”, which provide unchallengeable (immutable) ledgers and real-time transparency of transactions.

In summary, financial fraud has pushed accounting professionals to move beyond traditional audit sampling, therefore moved towards data-driven, AI-enabled, and blockchain secured accounting systems. These innovations were not purely improvements that were voluntary but improvements that are direct responses to the risks and reputational damages that are associated with frauds of high-profile

Ho₁: Financial fraud, cybercrime, and tax fraud has not significantly contributed to technological development of the accounting profession.

Cybercrime and Technological Development in the Accounting Profession

Cybercrime involves fraudulent manipulation of digital systems. It comprises phishing attacks, hacking, ransomware, and financial records unauthorised

alterations. Distinct from traditional fraud in operation, it operates in real-time and frequently involves perpetrators that are not within the organisation, Therefore, making the risk complex to manage. According to Kokina and Davenport (2017), a paradigm shift in accounting has resulted from cybercrime, a situation where auditors must integrate cybersecurity risk assessments into their assurance services. The American Institute of Certified Public Accountants (AICPA) (2017) introduced a cybersecurity risk management reporting framework. The framework guides auditors in the evaluation of how organisations mitigate risks of cyber fraud. Cybercrime has accelerated the adoption of cloud accounting platforms (QuickBooks Online and Xero), which incorporate advanced security measures (like encryption and multifactor authentication). While cloud platforms initially raised concerns about data vulnerability, they now represent one of the most secure approaches to financial data management due to constant vendor updates and monitoring. Another response to cybercrime has been the incorporation of artificial intelligence (AI) and machine learning (ML) into fraud detection systems. These tools have the capacity to analyse thousands of transactions per second and flag anomalies that deviate from normal patterns. Kokina and Davenport (2017) said that machine learning algorithms are used now widely in the banking sector to detect suspicious transactions that may indicate fraudulent transfers or identity theft. Additionally, blockchain technology has been deployed as a safeguard against cyber manipulation, since its decentralised and immutable nature makes it nearly impossible for hackers to alter financial data once validated (Yermack, 2017). Thus, cybercrime has transformed accounting from a purely financial discipline into a tech-driven field, where professionals must collaborate with IT experts and cybersecurity specialists to protect financial integrity.

Ho₂: Cyber crime has not significantly contributed to technological development of the accounting profession.

Tax Fraud and Technological Development of the Accounting Profession

Tax fraud is another area where fraudulent activities have spurred significant technological advancements in accounting and taxation practices. Tax fraud occurs when individuals or corporations deliberately misrepresent financial information to evade tax obligations. Tax fraud is done through underreporting income, claiming false deductions, and offshore evasion. Governments

worldwide have responded by investing heavily in electronic taxation systems (e-taxation). In Nigeria and the US, the Federal Inland Revenue Service (FIRS) and the Internal Revenue Service (IRS) both employ digital tax filing systems that improve accuracy and reduce human interference. The OECD (2020) emphasised that e-taxation has become one of the most effective ways of curbing fraud by providing digital trails and automated reconciliation of taxpayer records. In addition, big data analytics has become a central tool in tax audits. Alsharairi (2021) noted that forensic accountants are increasingly being employed in tax investigations, using digital forensics tools to uncover hidden or encrypted financial transactions. Blockchain technology is also being piloted in several countries to enhance Value-Added Tax (VAT) collection and real-time monitoring of business transactions. By recording transactions on an immutable blockchain ledger, governments can prevent falsification of sales records and ensure timely tax remittances (Dai & Vasarhelyi, 2017). Tax fraud has accelerated the adoption of e-tax platforms, forensic data analytics, blockchain enabled tax collection, and digital forensic investigations, transforming tax administration into a technologically advanced system. Forensic accountants increasingly use digital evidence gathering tools to detect hidden transactions and offshore schemes (Alsharairi, 2021).

Ho₃: Tax fraud has not significantly contributed to technological development of the accounting profession.

Composite Hypothesis

Fraud in its various dimensions has broadly driven technological responses in accounting, it is therefore useful to also examine the joint effect of financial fraud, cybercrime, and tax fraud on accounting innovation

Type of Fraud	Technological Development in Accounting Profession
Financial Fraud	AI and data analytics, forensic accounting software (IDEA, ACL), blockchain, continuous auditing.
Cybercrime	Cybersecurity tools, cloud accounting, AI anomaly detection, blockchain for secure ledgers.
Tax Fraud	E-tax filing systems, big data in tax audits, blockchain for VAT/tax collection, digital forensics.

Ho₄: Fraud (financial fraud, cybercrime, and tax fraud) has not significantly contributed to technological development of the accounting profession.

THEORETICAL FRAMEWORK

Fraud Triangle Theory

The Fraud Triangle Theory was developed by Donald Cressey (1953), who argued that fraud occurs when three conditions coexist: pressure (incentive to commit fraud), opportunity (ability to commit fraud without detection), and rationalisation (personal justification for committing fraud). Scholars have expanded on this idea by demonstrating how fraud pressure and opportunity have fuelled the demand for automated fraud detection technologies. Morales, Gendron, and Guénin-Paracini (2014) note that as fraud schemes become more complex, organisations respond with more sophisticated auditing tools such as data mining and continuous auditing systems. Likewise, Lokanan (2015) emphasized that digital accounting systems and forensic software have been designed to minimize opportunities for fraud, directly linking the theory to technological advancements. The Fraud Triangle justifies why the accounting profession has embraced blockchain, AI-driven anomaly detection, and forensic accounting tools.

Fraud Diamond Theory

Wolfe and Hermanson (2004) extended Cressey's model by adding a fourth factor (capability) to explain why only certain individuals can commit and sustain large-scale fraud. Abdullahi and Mansor (2015) argue that fraud prevention now requires matching the fraudster's capability with advanced forensic technologies, including digital forensic accounting and cybersecurity auditing. Similarly, Free and Murphy (2015) found that organisations increasingly use forensic data analytics as a counterbalance to fraudsters' evolving capabilities. The Fraud Diamond illustrates why the accounting profession has moved from manual auditing to AI-based fraud detection, forensic software (ACL, IDEA), and cyber forensic tools, technologies designed to neutralize the "capability" of skilled fraudsters.

Innovation Diffusion Theory

Everett Rogers (1962) proposed the Innovation Diffusion Theory, which explains how new technologies spread through a social system over time. This theory has been applied to accounting to explain the rapid adoption of XBRL

reporting, blockchain, and AI auditing systems. A recent study by Appelbaum and Nehmer (2017) shows that scandals such as Enron and WorldCom accelerated the diffusion of forensic accounting and continuous auditing technologies. Similarly, Dai and Vasarhelyi (2017) argued that fraud scandals have been critical catalysts in pushing accounting firms toward early adoption of blockchain. Fraud has acted as a trigger event that accelerates the diffusion of accounting innovations, making this theory essential in explaining how fraud contributes to technological development in the profession.

Structuration Theory

Anthony Giddens (1984) introduced Structuration Theory, which highlights the dynamic relationship between social structures (rules, systems) and human agency (actions). Scholars such as Englund, Gerdin, and Burns (2011) have applied this theory to accounting, arguing that fraud and regulatory failures reshape institutional practices, which in turn influence professional standards. Power (2013) also observed that fraud scandals led to new auditing structures and technological adoption in accounting firms. Fraud has reshaped the structures of accounting regulation, ethics, and practice, resulting in the adoption of forensic accounting methods, digital tools, and cybersecurity protocols. Structuration Theory, therefore, explains how fraud-driven changes in institutional structures foster technological development in accounting.

Study Methodology

This study adopts the positivist research philosophy. This is because it emphasises objectivity, quantifiable data, and empirical testing of hypotheses. Positivism assumes that social phenomena, such as fraud and the technological development of the accounting profession, can be studied objectively using scientific methods (Saunders, Lewis, & Thornhill, 2019). Since this research seeks to establish causal relationships, a positivist stance is most appropriate. The study employs a descriptive and explanatory survey design. While the descriptive aspect helps in understanding fraud prevalence and nature within the accounting profession, the explanatory aspect seeks to establish causal links between fraud and technological advancement in the accounting profession. Creswell and Creswell (2018) believes that this design is suitable because it allows the researcher to collect information that are standardised from a large

population and statistically test hypotheses. The target population comprises professionals within the Nigerian accounting profession who are directly or indirectly exposed to fraud related issues and technological innovations. These include chartered accountants in audit firms, forensic accountants, internal auditors, tax practitioners, and regulators from agencies such as the Financial Reporting Council (FRC). A purposive sampling technique was used to select respondents with relevant expertise. Stratification was employed across sub-groups to capture different perspectives. Primary data were collected using a structured questionnaire. The questionnaire will use a 5-point Likert scale ranging from *Strongly Disagree (1)* to *Strongly Agree (5)*. The reliability of the questionnaire was tested using Cronbach's Alpha coefficient. According to Nunnally and Bernstein (1994), an alpha value of 0.70 and above indicates acceptable reliability. And in this case the alpha values were above the threshold of 0.70. Data collected are analysed using the descriptive and regression analyses.

DATA ANALYSES

Variables Descriptive Statistics

Financial Fraud

<i>Item</i>	<i>Question</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Interpretation</i>
FF1	Financial fraud has led to the development of forensic accounting tools.	4.12	0.65	High agreement
FF2	Financial fraud has influenced the use of data analytics in auditing.	4.05	0.72	High agreement
FF3	Financial fraud has pushed accountants to adopt advanced technologies.	3.97	0.61	High agreement
FF4	Financial fraud detection requires digital accounting solutions.	4.15	0.67	Strong agreement
FF5	The fight against financial fraud has modernised audit practices.	3.88	0.70	High agreement

Aggregate Mean = 4.03. This means that respondents strongly agree that financial fraud drives technological progress.

Cybercrime

<i>Item</i>	<i>Question</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Interpretation</i>
CC1	Cybercrime has increased the adoption of blockchain in accounting.	4.21	0.59	Strong agreement

<i>Item</i>	<i>Question</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Interpretation</i>
CC2	Cybercrime has accelerated the use of cybersecurity systems in auditing.	4.29	0.61	Strong agreement
CC3	Cybercrime challenges promote continuous software upgrades.	4.11	0.63	High agreement
CC4	Cybercrime has made regulators demand digital compliance tools.	3.96	0.72	High agreement
CC5	Cybercrime has encouraged stronger authentication in accounting systems.	4.00	0.65	High agreement

Aggregate Mean = 4.11. Therefore, cybercrime is seen as the strongest driver of technological development.

Tax Fraud

<i>Item</i>	<i>Question</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Interpretation</i>
TF1	Tax fraud has promoted electronic tax filing systems.	3.89	0.60	High agreement
TF2	Tax fraud has driven the automation of tax compliance.	3.76	0.68	Moderate-high
TF3	Tax fraud has influenced the use of AI in tax auditing.	3.69	0.66	Moderate-high
TF4	Tax fraud has led to real-time tax monitoring technologies.	3.72	0.64	Moderate-high
TF5	Tax fraud has enhanced the use of digital records in taxation.	3.75	0.58	Moderate-high

Aggregate Mean = 3.76. The interpretation is that, respondents agree that tax fraud contributes positively, but less strongly compared to financial fraud and cybercrime.

Technological Development of Accounting Profession

<i>Item</i>	<i>Question</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Interpretation</i>
TD1	Technology has improved fraud detection and prevention.	3.59	0.54	Moderate-high
TD2	Technology has enhanced the quality of financial reporting.	3.55	0.58	Moderate-high
TD3	Accountants now rely more on digital tools than manual processes.	3.66	0.60	High agreement
TD4	Adoption of technology was accelerated due to fraud-related challenges.	3.61	0.55	Moderate-high
TD5	Emerging technologies are reshaping the accounting profession.	3.49	0.52	Moderate-high

Aggregate Mean = 3.58. This means that respondents confirm that technology development in accounting is positively linked to fraud-related pressures.

Linear Regression Analysis

Hypothesis 1 (Ho₁): *Financial fraud has not significantly contributed to technological development of the accounting profession.*

Predictor	β (Coefficient)	Std. Error	t-value	p-value	Decision
Constant	2.35	0.18	13.06	0.000	–
Financial Fraud	0.30	0.07	4.28	0.000	Significant

Model Summary: $R^2 = 0.145$, $F(1,77) = 18.29$, $p < 0.001$

Financial fraud has a positive and significant effect on technological development. Ho₁ is rejected. That is, financial fraud has significantly contributed to technological development of the accounting profession.

Hypothesis 2 (Ho₂): *Cybercrime has not significantly contributed to technological development of the accounting profession.*

Predictor	β (Coefficient)	Std. Error	t-value	p-value	Decision
Constant	1.97	0.20	9.85	0.000	–
Cybercrime	0.40	0.05	7.85	0.000	Significant

Model Summary: $R^2 = 0.361$, $F(1,77) = 61.56$, $p < 0.001$

Cybercrime is the strongest predictor, showing that rising cybercrime has significantly accelerated technological adoption in accounting. Ho₂ is rejected.

Hypothesis 3 (Ho₃): *Tax fraud has not significantly contributed to technological development of the accounting profession.*

Predictor	β (Coefficient)	Std. Error	t-value	p-value	Decision
Constant	2.78	0.21	13.24	0.000	–
Tax Fraud	0.21	0.07	3.02	0.003	Significant

Model Summary: $R^2 = 0.106$, $F(1,77) = 9.12$, $p = 0.003$

Tax fraud has a moderate but significant effect on technological development. Ho₃ is rejected.

Hypothesis 4 (Ho₄): *Fraud (financial fraud, cybercrime, and tax fraud) has not significantly contributed to technological development of the accounting profession.*

Predictor	β (Coefficient)	Std. Error	t-value	p-value	Decision
Constant	0.362	0.18	2.01	0.047	–
Financial Fraud	0.201	0.05	4.18	0.000	Significant
Cybercrime	0.406	0.05	7.59	0.000	Significant
Tax Fraud	0.197	0.06	3.19	0.002	Significant

Model Summary: $R^2 = 0.544$, $F(3,75) = 29.81$, $p < 0.001$

Fraud variables explain 54.4% of the variation in technological development of the accounting profession. All predictors are significant, with cybercrime as the strongest factor. H4 is rejected.

DISCUSSION OF RESULTS

The purpose of this study was to examine how fraud has contributed to the technological development of the accounting profession, focusing on financial fraud, cybercrime, and tax fraud. Based on the analysis of responses from 79 practitioners (chartered accountants, auditors, forensic accountants, tax practitioners, and regulators), the findings strongly indicate that fraud-related challenges have accelerated technological adoption within the profession.

Financial Fraud and Technological Development of Accounting Profession (Ho₁)

The study found that financial fraud contributes a positively and significantly on technological development in the accounting profession ($\beta = 0.30$, $p < 0.001$). This implies that the rise in fraudulent financial schemes complexity has made significant contribution to the adoption of forensic accounting software, audit data analytics, and AI-powered fraud detection tools. The finding aligns with prior studies such as Okoye and Akamobi (2009), and Rezaee and Riley (2010), which argue that the growth of forensic accounting and data-driven auditing is a direct response to financial scandals and manipulations. Thus, this empirical evidence supports the view that financial fraud acts as a stimulus for innovation in fraud detection technologies in the accounting profession.

Cybercrime and Technological Development (Ho₂)

The results demonstrate that cybercrime is the strongest driver of technological adoption ($\beta = 0.40$, $R^2 = 0.361$, $p < 0.001$). The respondents agreed that

cybercrime has led to the implementation of blockchain systems, stronger cybersecurity frameworks, and continuous software upgrades in accounting practice. This finding is consistent with global evidence that cyber related risks force organisations to innovate rapidly in order to protect financial data (Vacca, 2017; KPMG, 2020). In Nigeria, the increasing sophistication of cybercrime (phishing, hacking, and ransomware attacks) has compelled firms to adopt multifactor authentication, encrypted financial reporting systems, and real-time transaction monitoring. This assertion supports Chukwunedu et al. (2021) argument that cybercrime has transformed accounting into a more technology-intensive profession.

Tax Fraud and Technological Development (H_3)

The analysis showed that $\beta = 0.21$ while $p = 0.003$, meaning that tax fraud has a moderate but significant effect on technological development of accounting profession. Tax evasion and aggressive avoidance strategies have compelled governments and accounting professionals to embrace e-filing systems, automated tax compliance software, and AI-driven auditing tools. This aligns with earlier studies such as Alm (2012) and Adebisi and Gbegi (2013), who argued that tax evasion challenges stimulate innovation in tax administration. In Nigeria, the Federal Inland Revenue Service (FIRS) has increasingly deployed technology (such as e-Tax platforms and blockchain considerations) to improve compliance and reduce leakages. Thus, tax fraud is not merely a challenge but also a driver of modernisation in tax accounting practice.

Combined Influence of Fraud Variables (H_4)

From combination of financial fraud, cybercrime, and tax fraud together into the regression model, the result showed that they jointly explained 54.4% of the variation in technological development of accounting profession since $R^2 = 0.544$, and $p < 0.001$. This specifies that fraud in its various forms exerts a strong collective influence on how the accounting profession evolves technologically. Among the three, cybercrime had the strongest impact, followed by financial fraud, and lastly tax fraud. This finding underscores the multifaceted nature of fraud as a catalyst for accounting innovation, pushing professionals towards forensic tools, cybersecurity measures, digital reporting, and AI adoption.

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This study examined how fraud (financial fraud, cybercrime, and tax fraud) contributes to the technological development of the accounting profession, using a sample of 79 respondents (chartered accountants, auditors, forensic accountants, tax practitioners, and regulators). The following key findings emerged: Financial fraud significantly and positively influences technological; cybercrime showed the strongest positive impact on technological development; and tax fraud had a moderate but significant effect on technological advancement. When financial fraud, cybercrime, and tax fraud were tested jointly, they explained 54.4% of the variation in technological development ($R^2 = 0.544$, $p < 0.001$). Overall, the findings reject all four null hypotheses (H_{0_1} - H_{0_4}). Fraud in its various forms has significantly and positively contributed to technological development in the accounting profession. While fraud poses threats to credibility and transparency, it has paradoxically served as a catalyst for innovation, modernisation, and professional advancement.

Although fraud remains deeply a destructive monster, its occurrence and frequency has brought about innovations that have sharpened the technological development of the accounting professional in great and profound ways. The study concludes that while fraud poses serious risks to financial accountability, it has been a catalyst for technological development in the accounting profession. Therefore, fraud should not only be viewed as a negative phenomenon but also as a driver of positive technological change in the professional practice.

Based on the findings, the following recommendations are provided:

- Audit firms and professional bodies should invest in forensic data analytics platforms (such as IDEA, ACL, and AI-based audit tools) to strengthen fraud detection and improve audit quality.
- Regulatory agencies (e.g., FRC, EFCC) should mandate accounting firms to implement advanced cybersecurity frameworks, including blockchain, two-factor authentication, and real-time monitoring of transactions, to mitigate cybercrime risks.
- The Federal Inland Revenue Service (FIRS) and professional tax practitioners should enhance automation in tax reporting and compliance systems by integrating artificial intelligence for real-time detection of suspicious tax activities.

- A collaborative approach between auditors, tax authorities, forensic accountants, and regulators should be established to create a national accounting technology framework that addresses financial fraud, cybercrime, and tax fraud simultaneously.

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