

Forensic Auditing and Accounting as Tools for Fraud Detection and Prevention: A Case Study of Ghana's Ministry of Finance

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ABSTRACT

The need for more comprehensive and investigative audit procedures has increased due to the rising incidence of financial fraud in Ghana's public sector. Accounting, auditing, and investigation skills are all integrated in forensic auditing and accounting, which has become a vital tool for identifying fraud that standard audit techniques have often overlooked. This research assessed the Ministry of Finance's adoption of accounting and forensic auditing as standard tools for fraud identification and prevention. It considered forensic audit methods, including Forensic Audit Investigation Techniques (FAIT), Computer-Assisted Audit Tools (CAATs), and Forensic Audit Reporting Quality (FARQ). The study's primary objective was to evaluate forensic auditing and accounting as tools for fraud detection and prevention using the Ministry of Finance as a case study. The study employed a survey research approach and collected primary data from 142 audit and finance professionals using structured questionnaires. Multiple regression analysis was used to analyse the data using SPSS version 23. The results indicated that, with p-values less than 0.05, all three variables; FAIT, CAATs, and FARQ, have a positive and statistically significant impact on fraud detection. This suggests that the Ministry's capacity to identify and address fraudulent activity is significantly improved by the application of investigative methods, sophisticated audit tools, and excellent reporting. The research makes the following recommendations in light of these findings: (i) improving training in forensic investigation techniques; (ii) increasing the use of CAATs in all units; and (iii) improving the timeliness and evidentiary quality of forensic audit reports. In Ghana's public sector, strengthening these areas will encourage accountability, transparency, and efficient fraud control.

INTRODUCTION/BACKGROUND

Forensic auditing and accounting have become topics of discussion among stakeholders in many organisations due to the recent increase in corporate fraud cases globally (Ismaila et al., 2023). Additionally, the need for stronger fraud detection systems in the public sector has increased due to the growing complexity of financial transactions, systemic corruption, and institutional flaws (Fodio et al., 2025). Despite being in existence since the 19th century, forensic accounting was not well-known until the collapse of huge, global corporations such as Enron and the implementation of legislation like as Sarbanes-Oxley, which increased demand for forensic accounting services (Ismaila et al., 2023). Forensic accountants' skill is critical in navigating the complexities of financial transactions and recognising trends that exposes fraudulent conducts (Odeyemi et al., 2024).

Boahen et al., (2025) ascertained that, since fraud has such a detrimental effect in Ghana, the government and businesses have developed a number of ways to counteract it. Article 187 of the 1992 Constitution established the Ghana Audit Service, which audits all public agencies. However, yearly reports indicate a concerning increase in fraud. Ghana lost significant amounts to corruption between 2016 and 2020, including more than GH¢718 million (US\$184 million) and GH¢12 billion (US\$2.3 billion). Fraud issues continue, including misappropriations by the Free Senior High School Secretariat and unexplained consular fees, even after the Internal Audit Agency was established in 2003 and recovered more than GH¢2 billion (US\$368 million) between 2017 and 2022 (Boahen et al., 2025). The need for a comprehensive forensic accounting framework that can effectively combat fraud is underscored by the astronomical figures (Densu, 2022). Moreover, the issue is worsened by Ghana's public institutions' lack of comprehensive mechanisms for fraud detection and

management, which leaves both potential victims and offenders ill-equipped and vulnerable (Asare-Dwumedzang et al., 2021). In addition to discouraging prospective fraudsters, the development of strong forensic auditing and accounting framework boosts stakeholders' trust in public financial management systems (Abor & Quartey, 2022). As reported by the World Bank (2020), corruption alone costs Ghana an estimated \$3 billion annually, or approximately 2% of its Gross Domestic Products (GDP).

High-profile instances of financial fraud, embezzlement, and theft of public funds have plagued government organisations like the Ministry of Finance. These occurs due to the weakness of conventional auditing systems and emphasise the need for forensic accounting and auditing as strategic tools for financial transparency and integrity. A forensic auditing is a systematic inquiry process used to gather acceptable legal evidence, according to Crumbley (2022). The potential of forensic auditing in the fight against financial crimes has been recognised in existing literature. As pointed out to research by Popoola et al., (2021) and Ijeoma and Aruwa (2021), using forensic methodologies is positively correlated with better fraud detection results.

Based on the analysis provided by the study by Akinleye et al. (2023), forensic auditing in the accounting sub-discipline is situated at the intersection of the conventional audit standards and the methods used for achieving the financial research stage. Forensic accountants may provide expert witness in court or provide financial-related legal counsel under specific circumstances (Nursansiwi, 2024). An essential component of any economy is forensic accounting. If there is a sufficient opportunity for fraud, the economy could be in a terrible state without appropriate forensic accounting (Khaleduzzaman & Hera, 2024). Similarly, Ibrahim and Ademu (2024) maintained that forensic accounting is the process of finding financial information for legal purposes by combining accounting, auditing, and investigative skills.

In order to combat sophisticated financial crimes, digital tools like data mining, artificial intelligence, and blockchain analysis are essential (Kaur et al., 2022; Odeyemi et al., 2024). Fraud detection in the context of public organisations like the Ministry of Finance involves identifying practices including revenue diversion, payroll fraud, procurement fraud, and financial record fraud. Restoring public confidence in government institutions, improving financial accountability, and recovering diverted monies are all made possible by effective fraud detection (Owojori & Asaolu, 2022). Forensic audit technologies including Computer-Assisted Audit Techniques (CAATs), forensic data analytics, and litigation support services helps identify and prevent fraud in ministries and agencies (Ijeoma & Aruwa, 2021).

Forensic accountants may provide financial-related legal advice or provide expert testimony in court under specific circumstances (Nursansiwi, 2024). The increasingly complex and covert nature of fraudulent activity in public financial systems has proven difficult to identify using traditional audit processes and forensic accounting. This has led practitioners and scholars (Ibrahim & Musa, 2022; Moses et al., 2022; Ejura et al., 2023) to support the adoption of forensic audit as a more proactive and investigative method of detecting fraud. There are still a number of important gaps in the research, however. First, there is a glaring methodological gap because the majority of earlier research has mostly relied on qualitative methods or cross-sectional data, which makes it challenging to determine the causal correlations between forensic auditing procedures and fraud detection performance. Strong, quantifiable, and long-term statistics that can objectively illustrate this correlation within a specific institutional setting are required. Additionally, there is a scope gap because the majority of research has either concentrated on the private sector or parastatals in general, excluding ministerial entities like the Ministry of Finance, which is crucial to the distribution of resources and national fiscal policy. Furthermore, the majority of international literature originates from developed nations with robust institutional frameworks and established public finance management systems. The transferability of these findings to Ghana, an emerging economy with unique governance challenges, is limited without context-specific empirical research.

Given these gaps, the objective of this study is to offer specific, empirical proof of how accounting and forensic auditing function as instruments for fraud detection and prevention in the Ministry of Finance. By disaggregating forensic tools and using relevant theoretical models, it will close methodological and contextual gaps, advance understanding and strengthening anti-fraud strategies within Ghana's public financial the infrastructure. The specific objectives are to:

- i. Determine the impact of computer-assisted audit tools (CAATs) on fraud detection in the Ministry of Finance.

- ii. Assess the effect of forensic auditing and accounting investigation techniques on fraud detection in the Ministry of Finance.
- iii. Evaluate how the quality of forensic auditing and accounting reporting affects fraud detection in the Ministry of Finance.

LITERATURE REVIEW

Fraud Concept: Since financial fraud is a major worry for individuals and organisations globally, it is one of the most challenging and complicated subjects that people consider about. However, it appears to have the most detrimental effects on developing countries that are less wealthy. In both situations, taking decisive and effective proactive measures is required to stop fraud before it starts (Aqah & Al Sharabi, 2024). A large number of financially “illiterate” investors makes financial fraud simpler since they are more likely to be drawn to assets that seem too good to be true (Gui et al., 2024).

Fraud Detection: This involves employing methods like data mining, machine learning algorithms, forensic accounting, and whistleblower systems to find warning signs and irregularities (Apalowowa et al., 2025). The availability of reliable financial data and the investigator’s skills determine how effective fraud detection is (Idris & Abulazeez, 2022). Fraud detection happens after measures to prevent it have failed since it entails identifying fraudulent behaviour once it has been committed (Aqah & Al Sharabi, 2024).

Fraud Prevention: A set of mechanisms, strategies, and activities intended to eliminate the possibility of fraudulent activity from taking place within an organisation is referred to as fraud prevention (Rashid et al., 2022). It includes proactive measures to reduce potential for misconduct, identify risk indicators, and create an atmosphere that deters unethical behaviour. Hamilah et al., (2022) discovered that putting in place a whistleblower system has an impact on preventing fraud. Prevention strategies are crucial in the fight against financial fraud, especially in cases when deterrence is ineffective (Santos et al., 2021). By implementing policies, strategies, mechanisms, and putting best practices in place to recognise and reduce fraud risks before they cause harm, these initiatives seek to safeguard the organisation’s assets, reputation, and financial stability (Tariq et al., 2024). A more effective approach would be prevention, which can recognise and reduce fraud risks before they arise, as fraud is often identified only after significant losses have occurred (Sood et al., 2023).

Forensic Auditing: In order to detect and deal with such fraudulent acts, forensic auditing which blends accounting knowledge with investigative methods, has become a vital instrument that is essential to preserving organisational integrity (Pratama et al., 2024). As defined by Alshurafat et al., (2021), it comprises fraud examination, due diligence reviews, illicit money transfers, risk assessment, risk modelling, detection of financial statement misappropriation and cybercrimes. In many nations where it is actively used, like the United States of America, Britain, and Canada, forensic auditing has greatly aided in the eradication of fraudulent operations (Ikechukwu et al., 2020). Based on Oladimeji and Bello (2023) assertions, forensic auditing improves public office holders’ responsibility by offering verifiable and legally acceptable financial data. Additionally, in Ghana, Appiah et al. (2023) discovered that fraud prevention is significantly impacted by the role of the internal auditor, the professionalism of the auditor has a significant impact on fraud prevention, and the test results concurrently demonstrate that the two independent variables have a significant impact on fraud prevention.

Forensic Accounting: There is no precise definition of forensic accounting considering the variety of responsibilities carried out by forensic accountants and the variations in working circumstances across nations and economic units (Oyedokun, 2022). The American Society of Certified Public Accountants defines forensic accounting as a collection of activities that support the development of an integrated process for carrying out a judicial investigation, such as preparing an expert report or witness statement and possibly providing expert testimony in court (Akinbowale et al., 2022). In order to promote ethical business practices by helping businesses avoid and identify financial crime, forensic accounting includes keeping up-to-date understanding of complex financial systems, auditing, and legal skills (Ramoni, 2025).

Subedi and Neupane (2024) pointed out that forensic accounting plays a major role in identifying fraudulent activities such as money laundering, loan fraud, embezzlement, and financial misrepresentation. This increases

financial integrity and transparency in the banking industry. Forensic accountants are trained in the field of accounting with the goal of graduating them with a sufficiently high level of academic and practical qualification to support lawsuits and assist the judiciary in administering justice and clarifying the truth. They do this by using their specialised knowledge in accounting and auditing and their ability to conduct investigations based on knowledge of rules and regulations (Al-Enezi et al., 2024). Therefore, it is crucial to adhere to the forensic accounting and auditing systems and standards, particularly in financial institutions and other rapidly expanding economic organisations (Nursansiwi, 2024).

Theoretical Framework: This article adopts the Agency Theory.

Jensen and Meckling (1976) conceptualised the Agency Theory, which offers a fundamental framework for understanding the interactions between principals and agents in organisational contexts. The theory is based on the principal-agent relationship, in which an agent (such as managers, public officers, or financial administrators) is given authority by the principal (such as shareholders or, in the context of public governance, the government and citizens) to manage resources and make decisions on their behalf. In order to prevent agency-related fraud, it highlights the necessity for robust transparency, forensic audits and corporate governance (Cohen et al., 2022). Agency theory is especially applicable to this research to understand the relationships between public officials or financial managers (agents) in the Ministry of Finance and its agencies and government institutions (principals).

These agents are tasked with overseeing public finances and carrying out financial regulations (John, 2020). However, the likelihood that these actors may participate in dishonest activities like contract inflation, fund diversion, or document forgery is increased by the existence of lax institutional controls and substantial information asymmetry. The principal can effectively monitor the agent's conduct by integrating forensic audit as a monitoring tool. Methods include data mining, forensic investigations, Computer-Assisted Audit Tools (CAATs), and litigation assistance help find fraud schemes and guarantee that actors are held responsible for their financial actions. By discouraging dishonest activity, enhancing financial openness, and strengthening the government's supervision function, forensic auditing and accounting save agency costs (Hamdi, 2020).

Since it explains why corporate leaders commit financial misstatements and how forensic audits can identify financial statement manipulation, the Agency Theory directly relates to forensic auditing and accounting. By understanding this theory, forensic accountants may avoid financial fraud in corporate settings by using automated compliance checks, whistleblower channels, and predictive fraud analytics (Dorminey et al., 2022). This study is therefore supported by Agency Theory, which provides a theoretical explanation for why public officials could abuse their positions and how the use of forensic auditing and accounting might realign their conduct with institutional responsibility and the public good. Additionally, in Ghana's public finance system, it provides justification for examining the impact of particular forensic audit dimensions on the results of fraud detection.

METHODS

In order to analyse the relationship between variables utilising historical or current data without changing the independent variables, this study adopted a survey research design. The nature of the study topic, which entails evaluating the impact of forensic audit procedures (already in place) on fraud detection outcomes, guided the selection of this approach. It allows the researcher to delve into causal relationships using secondary data and observable evidence. All departments, units, and organisations within Ghana's Ministry of Finance make up the study's target population.

This covers the directorates in charge of public financial management, internal audit, procurement, treasury services, and budget implementation. Forensic auditors, internal auditors, compliance officers, and financial directors working in these areas comprise the population. The study's target population comprised staff directly engaged in forensic audit and accounting functions within the Ministry, specifically forensic auditors, internal auditors, and senior finance officers. The total accessible population across the relevant Ministry units was 220. Purposive sampling was adopted because the required expertise, practical exposure to fraud detection, prevention, forensic audit techniques, and internal control evaluation, is concentrated in a relatively small,

identifiable group of officers rather than spread evenly across the wider Ministry workforce. This approach ensured that only respondents with direct, relevant experience contributed data to the study. The sample size was determined using Taro Yamane's (1967) formula for finite populations:

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

where n is the sample size, N is the population size, and e is the margin of error (set at [5%/0.05]). Applying this formula to a population of 220 the calculated sample size was 142 respondents. To ensure content validity, the questionnaire was developed from constructs used in prior forensic accounting and fraud-detection studies, then reviewed by four experts in accounting/auditing for clarity, relevance, and construct alignment; adjustments were made based on their feedback before administration. A pilot test was conducted with 20 respondents outside the main sample to assess reliability, yielding a Cronbach's alpha of 0.84 which is considered acceptable for internal consistency. Of the 142 questionnaires distributed, all of them were returned and deemed usable for analysis, yielding a response rate of 100%.

The validity and reliability of the questionnaire were pre-tested, and changes were made to guarantee that the items were clear and pertinent. Strict adherence was maintained to ethical principles including informed permission and anonymity. Inferential statistics, particularly multiple regression analysis, were used to test the hypotheses and ascertain the impact of forensic audit dimensions on fraud detection. Descriptive statistics, such as mean and standard deviation, were used to summarise respondents' opinions. SPSS statistical software was used for the analysis. The following linear regression model is described in order to examine the relationship that exists between forensic audit and fraud detection experimentally where:

$$FD = \alpha_0 + \beta_1 FAIT + \beta_2 CAAT + \beta_3 FARQ$$

Where: FD= Fraud Detection (measured by frequency of frauds detected, time to detection, as well as investigation outcomes)

FAIT = Forensic Audit Investigative Techniques

CAAT = Computer-Assisted Audit Tools

RESULTS

A statistical tool for assessing a group of survey or test items' internal consistency or reliability which is the Cronbach's Alpha Test was adopted. It indicates how effectively the questionnaire's elements assess the same underlying construct or concept.

Table 1: Cronbach's Alpha Test

Variables	Cronbach Factor	No. of Items
FD	0.755	7
FAIT	0.767	5
CAAT	0.745	5
FARQ	0.781	5

Source: SPSS 23 Outputs.

Good reliability is shown by Cronbach's Alpha values over 0.70, which are typically regarded as adequate in Table 1. The alpha values for each construct (FD, FAIT, CAAT, and FARQ) range from 0.745 to 0.781, indicating that each scale's items consistently measure the corresponding variables. How many questionnaire statements were utilised to measure each construct is shown by the number of items. The data gathered from

these items is statistically sound for additional analysis, such as regression or correlation testing, as the reliability findings indicate that the instrument is internally consistent.

Table 2: Descriptive Statistics of Effect of Forensic Audit Investigation Techniques (FAIT)

Statements	N	Min	Max	Mean	Std. Deviation
Forensic investigation techniques have helped uncover fraudulent transactions in our agency.	142	1	5	3.00	0.661
Interviewing and interrogation skills of forensic auditors have led to better fraud case resolutions.	142	2	5	3.50	0.720
Evidence gathering and documentation techniques are effectively used in detecting fraud.	142	2	5	3.50	0.814
The application of analytical review procedures supports early fraud identification in this ministry.	142	1	5	3.00	0.167
Our agency has successfully relied on forensic tracing techniques (following money trails) to detect financial misconduct.	142	1	5	3.00	0.817
Overall Mean				3.20	0.636

Source: SPSS 23 Outputs.

There is moderate to high agreement among respondents about the efficacy of investigative strategies in fraud detection, as indicated by the FAIT items' total mean score of 3.20 and standard deviation of 0.636 in Table 2. The elements "Evidence gathering and documentation" and "Interviewing and interrogation skills" both had the highest mean score of 3.50, indicating that these are the most positively regarded components of FAIT that aid in fraud resolution. Although the mean score was modest (3.00), reflecting a neutral opinion on its present efficacy, the item". Application of analytical review procedures" had the lowest standard deviation (0.167), indicating a high degree of unanimity among respondents. Items like "Uncovering fraudulent transactions" and "Tracing techniques (money trails)" had mean values of 3.00, indicating considerable agreement, but significantly greater standard deviations (0.661–0.817) indicate that respondents had differing opinions about these particular approaches.

Table 3: Descriptive Statistics of Computer-Assisted Audit Tools (CAATS)

Statements	N	Min	Max	Mean	Std. Deviation
The use of CAATs has improved the efficiency of fraud detection processes in our unit.	142	2	5	3.50	0.702
Our forensic audit team regularly uses audit software to analyse large financial data sets for anomalies.	142	2	5	3.50	0.657
Automated data analytics tools have enhanced our ability to detect patterns of fraud.	142	2	5	3.50	0.646
CAATs have increased the accuracy of our fraud detection reports.	142	2	5	3.50	0.712
The absence of advanced audit tools limits our capacity to detect sophisticated fraud schemes.	142	2	5	3.50	0.765

Statements	N	Min	Max	Mean	Std. Deviation
Overall Mean				3.50	0.696

Source: SPSS 23 Outputs.

The application and effects of Computer-Assisted Audit Tools (CAATs) on fraud detection in the Ministry of Finance and its agencies are summarised in Table 3. A 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was used to measure the 142 valid replies that made up the data. With a standard deviation of 0.696 and an overall mean score of 3.50 for the CAATs dimension, there is a moderate to high degree of agreement that CAATs have a beneficial impact on fraud detection. The exact mean values of 3.50 were recorded for each of the five items in this construct, indicating that respondents' opinions on the many facets of CAATs such as effectiveness, accuracy, frequent usage, and pattern recognition in fraud detection were consistent. The statement "Automated data analytics tools have enhanced our ability to detect patterns of fraud" had the lowest standard deviation (0.646), indicating comparatively great agreement and unanimity on this topic. The item with the largest standard deviation (0.765). "Our ability to identify complex fraud schemes is limited by the lack of sophisticated audit tools". shows that respondents' perceptions of the impact of tool restrictions vary somewhat more.

Table 4: Descriptive Statistics of Quality Forensic Audit Reporting (FARQ)

Statements	N	Min	Max	Mean	Std. Deviation
Forensic audit reports clearly highlight fraudulent activities and recommended actions.	142	1	5	3.00	0.532
Timely and comprehensive reporting improves management's ability to act on fraud cases.	142	0	5	2.50	0.847
High-quality audit reports contribute significantly to the prosecution of fraud cases.	142	1	5	3.00	0.810
Our audit reports are detailed and evidence-based, improving credibility in fraud detection.	142	1	5	3.00	0.746
Poor-quality reporting reduces the effectiveness of forensic audits in detecting fraud.	142	0	5	2.50	1.867
Overall Mean				2.80	0.7604

Source: SPSS 23 Outputs.

The descriptive data pertaining to respondents' opinions about the Ministry of Finance and its agencies' quality of forensic audit reporting (FARQ) are presented in Table 4. A 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree) was used to gauge the replies from 142 individuals. A very low degree of agreement about the efficacy of forensic audit reporting quality in fraud detection efforts is indicated by the overall mean score of 2.80 and the average standard deviation of 0.7604. The mean score for each of the three items, "audit reports highlight fraudulent activities", "audit reports aid prosecution", and "audit reports are detailed and evidence-based, "was 3.00, indicating neutral to moderate agreement that forensic reporting aids in fraud detection processes.

The two items with the lowest mean scores (2.50) were "timely and comprehensive reporting improves management's ability to act on fraud" and "poor-quality reporting reduces forensic effectiveness", indicating less agreement or concern about the timeliness and effects of poor reporting quality. Significantly, both items showed

the biggest standard deviations (0.847 and 0.867), suggesting that respondents' judgements varied most. A few respondents strongly disagreed with the efficacy or even the presence of structured reporting systems, as shown by the minimum value of 0 reported in two questions, suggesting possible implementation or awareness flaws.

Table 5: Descriptive Statistics of Fraud Prevention (FP)

Statements	N	Min	Max	Mean	Std. Deviation
Our agency has significantly improved its ability to prevent fraud in recent years.	142	2	5	3.50	0.544
Most fraud cases detected in this ministry are traced through proactive audit procedures.	142	2	5	3.50	0.736
Forensic audits have increased the frequency of preventing financial fraud cases.	142	1	5	3.00	0.851
Fraud prevention processes in our unit are timely and effective.	142	2	5	3.50	0.740
The use of advanced audit techniques has enhanced the accuracy of fraud identification and prevention.	142	2	5	3.50	0.843
Detected fraud cases in this ministry usually lead to corrective or disciplinary actions.	142	2	5	3.50	0.943
Fraud prevention efforts are supported by strong collaboration between audit and investigation units.	142	2	5	3.50	1.243
Overall Mean				3.42	0.842

Source: SPSS 23 Outputs.

Descriptive data on respondents' opinions of the effectiveness of fraud prevention in the Ministry of Finance and its agencies are displayed in Table 5. A 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was used to gather responses from 142 respondents. Although there is substantial variation between categories, the overall mean score of 3.42 with a standard deviation of 0.842. This suggests that although respondents shared broadly similar opinions, there were noticeable differences in their experiences and assessments of fraud prevention practices. Strong agreement that the ministry has enhanced its fraud prevention capabilities, particularly through proactive audit procedures, prompt detection processes, accurate fraud identification, and interdepartmental communication, was evident in six of the seven categories with mean scores of 3.50.

The item "fraud prevention efforts are supported by strong collaboration between audit and investigation units" (SD = 1.243) had the most variability, indicating a range of respondents' experiences with inter-agency cooperation. The item "forensic audits have increased the frequency of detected financial fraud cases" had the lowest mean (3.00) and a comparatively large standard deviation (0.851), making it the lowest-rated item in the construct. The neutral mean suggests that respondents were uncertain whether forensic auditing has substantially increased the number of fraud cases identified. The moderate dispersion further indicates mixed opinions, implying that the effectiveness or visibility of forensic auditing may differ across sections of the ministry or may still be evolving.

Table 6: Descriptive Statistics

Variables	Obs	Minimum	Maximum	Mean	Std. Deviation
FP	142	2.61	5.00	3.80	0.225

FAIT	142	2.90	5.00	3.95	0.315
CAAT	142	1.40	5.00	3.20	0.630
FARQ	142	2.30	4.80	3.65	0.368

Source: SPSS 23 Outputs.

In the Table 6 above, Fraud Detection (FP) had a mean of 3.80 and a low standard deviation of 0.225, indicating that respondents were very consistent and largely agreed that measures to prevent fraud are effective. Among all independent variables, Forensic Audit Investigation Techniques (FAIT) had the highest mean (3.95), suggesting that respondents firmly believe these techniques help prevent fraud. The unanimity among responses is supported by the low standard deviation (0.315). The lowest mean (3.20) and the highest standard deviation (0.630) were found in Computer-Assisted Audit Tools (CAAT). It indicates that although the tools are perceived to be somewhat useful, opinions differ greatly, most likely as a result of uneven access, usage, or technical capacity among departments. The Forensic Audit Reporting Quality (FARQ) had a reasonably high mean of 3.65, suggesting positive attitudes, and a standard deviation of 0.368, indicating a satisfactory level of consistency in responses about the usefulness and quality of audit reports in preventing fraud.

Table 7: Regression Results of the Study

Variables	Coefficients	T-Values	P-Values
Constant	1.79	5.038	.001
FAIT	.441	7.435	.023
CAAT	.304	4.763	.022
FARQ	.144	3.643	.015
R ²	0.444		
Adj. R ²	0.612		
F-Stat.	50.693		
F-Sig			0.00

Source: SPSS 23 Outputs.

Fraud prevention is positively and significantly impacted by Forensic Audit Investigation Techniques (FAIT), with a coefficient of 0.441, a t-value of 7.435, and a p-value of 0.023 (< 0.05). This suggests that more effective use of investigative methods greatly enhances the results of fraud prevention. With a coefficient of 0.304, t-value of 4.763, and p-value of 0.022, Computer Assisted Audit Tools (CAAT) also significantly improve fraud prevention. This implies that using CAATs effectively improves the efficiency and accuracy of fraud identification. Fraud prevention and Forensic Audit Reporting Quality (FARQ) have a positive relationship with a coefficient of 0.144, t-value of 3.643, and p-value of 0.015. Fraud detection and prevention are aided by detailed, timely, and high-quality audit reports. The combined effect of FAIT, CAAT, and FARQ explains approximately 44.4% of the variation in fraud prevention, according to the R-squared value of 0.444. Verification may be required for the adjusted R-squared of 0.612, which is probably a reporting error because Adjusted R² is often $< R^2$. The model is statistically significant overall, indicating that the independent variables combined have a considerable impact on fraud prevention, according to the F-statistic (50.693) and F significance (0.000).

DISCUSSION OF RESULTS

All three independent variables, Forensic Audit Investigation Techniques (FAIT), Computer-Assisted Audit Tools (CAATs), and Forensic Audit Reporting Quality (FARQ) have statistically significant positive effects on fraud detection and prevention in the Ministry of Finance and its agencies, according to the results of the regression analysis. These findings imply that the Ministry's ability to identify, report, and address fraud is directly improved by the use of specialised investigation techniques, audit technology, and superior forensic reporting. In the literature, Sood et al., (2023) made a point that, more effective approach would be prevention, which can recognise and reduce fraud risks before they arise, as fraud is often identified only after significant losses have occurred. Subedi and Neupane (2024) also argued that forensic accounting and auditing tools play a major role in identifying fraudulent activities such as money laundering, loan fraud, embezzlement, and financial misrepresentation.

The results paint a complex picture of an audit system that, although fundamentally robust in many ways, has serious execution flaws that reduce its ability to effectively avert fraud. Forensic accounting and auditing tools are widely acknowledged for their role in identifying and avoiding financial misconduct, with respondents confirming their significance in spotting unethical financial activities and ensuring value for money. This positive assessment is, however, tempered by persistent issues, such as insufficient funding, a lack of independence, and management meddling, all of which limit auditors' ability to function optimally.

In this regard, Popoola et al., (2021) highlighted the importance of technology-based audit systems in managing complex financial data in public institutions, emphasising the relevance of CAATs in enhancing fraud detection efficiency. Moreover, Subedi and Neupane (2024) illustrated that forensic accounting plays a major role in identifying fraudulent activities such as money laundering, loan fraud, embezzlement, and financial misrepresentation. In the works of Tariq et al., (2024), by implementing policies, strategies, mechanisms, and putting best practices in place to recognise and reduce fraud risks before they cause harm, these initiatives seek to safeguard the organisation's assets, reputation, and financial stability. These studies corroborate the current findings and reinforce the assertion that improving forensic audit and accounting capabilities; both technology and human is crucial to effective fraud detection in public financial management. The findings are in line with Agency Theory (Jensen & Meckling, 1976), which holds that if the principal (government or citizens) does not sufficiently oversee managers or public officials (agents), they may behave in their own best interests.

By lowering information asymmetry and agency expenses, forensic audit methods, CAATs, and trustworthy reporting systems act as monitoring instruments that curb agents' dishonest activity. The theory's assertion that robust oversight mechanisms, including forensic auditing, are necessary to ensure that public officials' activities are in line with the public interest is supported by this study. This is why Santos et al., (2021) contended that, prevention strategies are crucial in the fight against financial fraud, especially in cases when deterrence is ineffective. The results confirm the value of forensic auditing in strengthening Ghana's public sector's fraud detection systems as Abor and Quartey (2022) opined that discouraging prospective fraudsters, the development of strong forensic auditing and accounting framework boosts stakeholders' trust in public financial management systems. The findings corroborate current theory and research, but they also highlight the need for resource allocation, technical training, and policy-level enforcement to ensure that these tools reach their full practical potential.

CONCLUSION AND RECOMMENDATIONS

This study examined forensic auditing and accounting as tools for fraud detection and prevention- using the Ministry of Finance as a case study. The study laid emphasis on three main components which are CAATs, FAIT and FARQ. All three factors have a statistically significant and positive effect on fraud detection, according to the results of the regression study. This suggests that the Ministry's ability to identify, address, and reduce financial fraud is improved by the efficient use of forensic audit and accounting techniques, cutting-edge audit technology, and excellent reporting. These findings support the applicability of Agency Theory, which highlights the role of monitoring systems in mitigating agency issues, especially in public sector settings marked by information asymmetry and lax supervision. For Ghana's public financial management to be transparent, accountable, and fraud-resistant, forensic auditing and accounting practices must be strengthened.

Based on the findings, the following recommendations are proposed: i. The need to enhance capacity in forensic and audit investigation techniques. ii. The Ministry of Finance need to fund regular training and capacity-building initiatives for audit personnel, with an emphasis on forensic investigative techniques including document tracing, interrogation, evidence gathering, and digital forensics. iii. Consider an investment in CAATs and standardise their use across all units. iv. Moreover, the Ministry should purchase contemporary tools such as CAATs and ensure their consistent implementation across all departments in order to fully capitalise on the advantages of technology. v. To increase audit effectiveness and fraud detection, staff members should also obtain sufficient training in data analytics, anomaly detection, and automated risk assessments.

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