

The Forensic Accounting and the Financial Fraud Detection: The Case of Saudi Arabia

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Abstract

The aim of this research was to study the impact of forensic accounting tools on detecting and preventing the different forms of financial fraud including not limited to misappropriation of assets and misleading users of financial statements by some practices that were inconsistent with generally accepted accounting and auditing standards as well as the fraud resulting from the weakness of the internal control systems in Saudi Arabia.

To achieve the study's goal, the researcher used a quantitative approach to study the relationship between forensic accounting tools as independent variables and fraud detection and prevention as a dependent variable. The researcher used the questionnaire tool to collect the primary data required to achieve the research objective and the descriptive statistics and least square regression models were used to test the research hypothesis.

The results of the statistical analysis indicated that the forensic accounting tools in the field of fraud detection and prevention were more effective than the traditional external auditor's tools. The results also indicated that forensic accounting tools in the fields of designing and analyzing internal control systems and discovering creative accounting practices had a positive and statistically significant impact on detecting and preventing financial fraud in all its forms. The results of the study had an impact on the decisions of many stakeholders, including but not limited to external and internal auditors and the regulatory authorities.

Keywords: Internal Control - Financial Reporting – External Auditor - Creative Accounting- Auditing standards

1. Introduction

Senan, N. A. M., & Swalih, M. (2019) explained that Economic crimes increased at an accelerated pace in terms of volume, as the average annual cost of fraud reached about 5% of corporate revenues, bringing the total cost to trillions. The large volume of the financial fraud led to the urgent need for forensic accounting, which involves specialized skills in the fields of accounting, auditing, and finance. Forensic accounting had become concerned with collecting the required evidence in the case of criminal procedures and was considered one of the 20 best professions in the future

Uwojori and Asaolu, (2009) indicated that in the past, detecting fraud was one of the tasks of the internal and external auditors

through periodic audits. However, the role of the auditor was limited to verifying that the accounting records adhere to generally accepted accounting principles, auditing standards, and company policies. The Statutory audit was unable to deal with the financial crimes because it was constrained by laws and standards Thus the need for forensic accounting services to detect financial fraud.

Institute of Turkwash Hwastory (1998) defined the fraud as an intentional act of misjudgment and misleading one party participate in a contract without which the party may not participate. Fraud was a global game that contain different forms. Therefore, courts were limited to a few general rules for examining and eliminating fraud.

Demir ve Bahadır, (2009) explained that the fraud in the financial statements that conforms to the accounting standards and principles

may be classified as compliance activities with the standards and principles because the purpose of that was to give a good picture of the financial performance. However, the Fraud may be classified as financial fraud if the managers engaged in activities that violate the accounting principles and standards.

Toroslu, (2012); Serçemeli, (2018) explained that the unfair use of assets and the inaccuracy of financial reports may be attributed to errors or fraud, as the distinction was made between error and fraud based on the intentional criterion. As the error occurs in the accounting records, while fraud occurs deliberately through falsification of operations, falsification of records, and documents. Fraud was of two types, the first intended to mislead the users of financial reports, the second intended to use the organization's assets for personal purposes without having an impact on the financial reports.

Bhadin, M. (2007) explained that Forensic accounting services had witnessed an increasing demand recently, as these services include examining financial fraud committed by employees, examining financial disputes, settling the rights of a partner leaving the company, arbitration services, settling disputes and examining cases of professional negligence.

Bhadin, M. (2007) explained that the forensic accountant should have a number of professional skills and competencies such as in depth understanding of financial statements, comprehensive understanding of fraud methods, full understanding of internal control systems, proficiency in the use of information technology, the command of the basics of psychology, effective communication skills, familiarity with civil and criminal law and court administration and the command of corporate governance systems.

Crumbly (2003) defined the Forensic accounting as the application of laws to Human. Law and judiciary scholars were, in fact, examiners and interpreters of evidence and facts in legal matters. Therefore, they need the opinions of the forensic accounting in financial matters.

Joshi MS. (2003) explained that the Forensic accounting provided reports on the liability for forgery activities and provides evidence used by the courts or to take appropriate administrative measures. **Zysman A. (2004)** explained that the Forensic accounting involved integrating accounting, auditing, and analytical skills. **Coenen TL. (2005)** explained that the Forensic reasoning involved the use of accounting and auditing Concepts, skills, and procedures to solve problems. **Howard S. and Sheetz M. (2006)** defended the Forensic accounting as a way to interpret and summarize complex financial and non-financial matters in the courts and to submit a report, as the forensic accountant was considered an expert.

Sudhi, Y. and Sushama, Y. (2013) defended the Forensic accounting as one of the fields of specialization in accounting. The forensic accountant used professional skills in the field of accounting regarding complex matters related to actual or potential civil or criminal litigation as among those matters were accounting and auditing principles and standards and identifying lost assets and net profits as well as evaluating internal control systems.

Akkeren, v. et al. (2016) explained that Forensic accounting services were provided by practitioners from the accounting and auditing profession and from other professions. Because of the overlapping of forensic accounting specializations with other professional specializations, professional organizations in the field of accounting and auditing face challenges in regulating and controlling the practice of the forensic accounting profession.

LOWojori, A. A and Seoul T. O. (2009) defined the Forensic accounting as a specialized area of accounting that described engagements and litigation arising from actual or expected disputes. The word "forensic" means using it in courts, where the forensic accountant provides expert evidence and applied a set of forensic accounting methods that suit the nature of the engagement assigned to him and he should provide the expert evidence in the final trial.

Ozil, p. k. (2020) indicated that the forensic accounting theory explained why and how methods were chosen to discover creative accounting or manipulation in financial and non-financial reports, and that the choice of these methods depended on financial and non-financial decisions taken by the forensic accounting. Therefore, this theory was useful for practitioners and academics because it was useful in the problem-solving process.

Lamba, J. and Jain.E (2020) defined the Forensic accounting as one of the emerging fields in the accounting profession, as it involved recording records, auditing, and analytical expert to combat financial crimes, as it was a strategic tool for combating financial fraud.

1.2. Research problem

Forensic accounting played a critical role in the prevention and detection of financial frauds in the organizations. However, there was a lack of research on whether there were understanding and awareness of the concept of forensic accounting and whether there was a need for its services? Therefore, this study attempts to assess the role played by forensic accounting tools in the prevention and detection of financial fraud in Saudi Arabia

1.3. Study Scope

Services provided by the forensic accountant can be divided into two categories: litigation services, in which the forensic accountant played the role of an expert, and examination services, in which the forensic accountant was using his skills and tools in dealing with financial fraud. Therefore, this study focused on investigation services only.

1.4. Research Importance

The results of this study will be paramount to many stakeholders including but not limited to the forensic accountants, governmental organizations, private sector owners, auditors, and organizations concerned with combating fraud.

2. Literature Review

Alrawashdeh, B. (2021) conducted a study to examine the obstacles of using information technology in forensic accounting and the role of information technology to activate the forensic accounting to discover the financial fraud. The study used the

survey method as a tool for data collection, where the questionnaire was divided into three parts, where the first part included demographic information about the participants in the survey, while the second part included information about the obstacles to using information technology in the forensic accounting, while the third part included information about the role of information technology in activating forensic accounting in the field of fraud detection. The results showed that the high costs of the technological infrastructure and the lack of training constitute major obstacles to the use of information technology in forensic accounting. The results also indicated that the use of information technology leads to the activation of forensic accounting in the discovery of the financial fraud.

Alshurafat, H., et al. (2021) conducted a study to provide a comprehensive understanding of the strengths and weaknesses of forensic accounting from a professional and educational perspective. The strengths were represented in the benefits of forensic accounting for students and practitioners of the accounting profession, as it provided new job opportunities and its effectiveness in combating fraud. While the weaknesses of forensic accounting were it did not have a regulatory framework, lack of rules that define entry controls into the profession, incompatibility regarding methods of teaching forensic accounting: understanding of its essential objective, lack of qualified practitioners and absence of public recognition of the forensic accounting profession.

Elzain, E. O. (2021) conducted a study to determine the importance of forensic accounting and the need to include it within the curricula of accounting departments in Saudi universities. The study relied on the survey method to collect the required data and the study analyzed the collected data using descriptive analysis. The study sample included 126 faculty members in Saudi universities out of 150 questionnaires distributed representing 84%. The results of the study indicated that all faculty members of the accounting department in Saudi universities were aware of the importance of forensic accounting and agreed to include forensic accounting within the curricula of accounting departments in Saudi universities.

Eko, E. U., et al. (2020) conducted a study to evaluate the forensic accounting methods applied in preventing or detecting fraud in commercial banks in Nigeria. The methods of data processing, ratio analysis, and trend analysis were used in preventing and detecting fraud. The data of the study were analyzed using the least square regression models. The results indicated that the application of the aforementioned forensic accounting methods significantly improved the detection and prevention of fraud. The study also indicated that most commercial bank employees lack the ability and the awareness of data processing technology.

Akinbowale, O.A et al. (2020) conducted a study to develop an innovative approach to combating economic crime through the use of forensic accounting methods. The researchers proposed two theoretical models to try to integrate forensic accounting methods into the organizations' internal control system in order to reduce fraud. The first model included the inclusion of forensic accounting in the organizational structure of the organization, while the second

model included the comprehensive and detailed analysis of uncovered fraud.

Al-Dhubaibi, A. A. (2020) conducted a study to explore the opinions of both the external auditor and the preparers and users of the financial statements regarding the responsibility of the external auditor in detecting fraud. The study used the survey method, where 1015 questionnaires were sent to the respondents, and the number of responses reached 261, or 26%. The results of the study indicated that there was a huge expectation gap in the Kingdom of Saudi Arabia regarding the responsibility of the external auditor for detecting fraud, as the preparers and users of the financial statements assumed that the external auditor should provide absolute assurance that the financial statements were free of all material distortions, including fraud, and that any discovery of fraud after approving the financial statements, the external auditor remain responsible for that before the beneficiaries.

Chukwu, N. et al. (2019) conducted a study to assess the effect of the basic skills of forensic accounting, which include communication skills, evaluation and analysis skills, accounting and auditing skills, and socio-psychological skills, on the credibility of financial reports of companies registered on the Nigerian Stock Exchange in 2018. The study followed the survey method, as the study sample included the users of the financial statements, who were the investment advisors. The sample also included the auditors of the four major auditing firms in Nigeria. The results indicated that, with the exception of communication skills, which showed a negative effect, the rest of the basic skills of forensic accounting had a significant positive effect on the credibility of financial reports.

KURNAZ, N. et. al. (2019) explained that despite of the advantages of using information technology represented in reducing time and cost, the use of information technology contributed to finding new methods of financial fraud. This study aimed to identify the basic competencies and effective characteristics in detecting financial fraud in a digital environment. Whereas Manipulation, Misrepresentation and Misapplication, Competence played a role in fraud .The study indicated that the reports of forensic audit and forensic accounting had become very important .The study relied on the survey method to collect primary data, as the study sample included auditors who had the authority to issue transparency reports. The results of the study indicated that the basic characteristics and competences of the forensic auditor were the same as for the forensic accountant. However, there was no software to detect fraud in a digital environment in forensic accounting, as the detection of financial fraud was done by the forensic auditor during the auditing of financial fraud.

Alturki, K.H. (2017) conducted a study to clarify the role of forensic accounting in detecting fraud in the Kingdom of Saudi Arabia as a developing country. Where the study indicated the importance of developing appropriate governance rules and mechanisms in response to the indicators of financial fraud and clarifying the expected role of forensic accounting in companies registered in the Saudi Stock Exchange while analyzing the

opinions of academics and regulators regarding the expected role of forensic accounting. The data were analyzed using least squared regression models, as the results indicated that providing of the forensic accountant services in companies listed on the Saudi Stock Exchange did not affect the level of financial fraud activities.

Terengganu, K. and Badak, G. (2014) conducted a study to determine the role of the forensic accountant in identifying fraud risk factors using Fraud Diamond Theory. The study relied on a theoretical approach, as the study’s information was obtained from scientific journals, books, and internet sources. The results indicated that the forensic accountant's use of the fraud theory did not contribute to reducing fraud if it was not eliminated.

Okoye, E.I and Fcna, F. (2013) conducted a study to examine the role of the forensic accountant in detecting and preventing fraud in public sector organizations in the state of Nigeria. The study adopted a mixed approach that included the survey method and the content analysis approach through interviews to collect the necessary data for the study. The study used regression model and analysis of variance to test the hypotheses of the study. The results indicated that the use of forensic accounting did not result in reducing the incidence of financial fraud in public sector organizations and the forensic accountant will replace the traditional auditor in the future..

Famous, I. and Okoeguale, I p. (2012) conducted a study to examine the common financial crimes in organizations in Nigeria, especially since some financial scandals were caused by financial crimes, which requires professional organizations in accounting to think of a new model for dealing with financial crimes away from legal audit. The results indicated that the motives behind financial crimes were based on risk factors, which included incentive, opportunity, and justification for financial crimes. The research stressed the importance of introducing the forensic accounting to deal with financial crimes through the use of inference.

3. Methodology and Empirical Results

3.1. Target sample and Study Method

This study used the quantitative method to analyze data and test the study hypothesis and the study used the questionnaire method to collect the data. The study sample included workers in accounting, auditing, and finance departments in Saudi companies and Participants with diverse professional backgrounds. The sample was drawn from this target population using a cluster random sampling approach where the population shall be divided into clusters of different industries and the sample shall be drawn randomly from these clusters. The researcher sent 150 online questionnaires, out of which 111 questionnaires were received representing 74% of total questionnaires.

3.2. Research Hypotheses

H1: Forensic accounting tools and techniques had positive impacts on the detection and prevention all forms of financial fraud in Saudi Arabia.

3.3. Model Specifications

The researcher divided the questionnaire into three parts, where the first part deals with demographic information about the participants in the survey and surveying the opinion of the respondents about the concept of forensic accounting and the extent of the need for its services. while the second part included financial fraud information as a dependent variable, while the third part dealt with information about the independent variables that were tools and techniques used by forensic accounting in detecting and preventing fraud in all its forms as independent variables.

$$FF = \alpha + \beta X_1 FAT + \beta X_2 FA FR + \beta X_3 FA IC + \epsilon \quad (1)$$

Whereas:

FF = Financial Fraud; FAT=Forensic Accounting’s Tools; FA FR = Forensic Accounting’s Financial Reporting; FA IC = Forensic Accounting’s Internal Control; E = Error Term

$$FR = \alpha + \beta X_1 FAT + \epsilon \quad (2)$$

$$FR = \alpha \beta X_2 FA FR + \epsilon \quad (3)$$

$$FR = \alpha + \beta X_3 FA IC + \epsilon \quad (4)$$

3.4. Analysis of Results

Cronbach’s Alpha was used to measure the internal consistency of the questionnaire, as the scale was useful in determining whether the survey questions measure the same dependent variable Cronbach’s Alpha was measured as follows:

$$\alpha = (K / (K - 1)) \cdot (S_{y2} - \sum Si^2 / S_{y2})$$

α = stands for Cronbach’s Alpha; K = stands for the number of items in the scale; Si stands for the sum of the item scores for the each items; S stands for the sum of the total scores for all items. Score = 0.9252 Cronbach’s alpha of 0.7 or higher was considered acceptable. Therefore, it can be said that survey questions measure the same construct.

The gender analysis in table ((1) indicated that the largest proportions of the participants were men, which indicated that accounting, auditing and finance professionals were still men, who were the largest percentage in these jobs.

Table (1) Analysis of Participants by Gender

Gender	Respondents	%
Female	10	9.01%
Male	101	90.99%
Total	111	100%

The work experience analysis of the participants in the study in table (2) indicated that the largest percentage of the participants were individuals with experience of more than 20 years, which adds accuracy and quality to the study information.

Table (2) Analysis of Participants by Work Experience

Work Experience	Respondents	%
0-5 Years of Experience	14	12.61%
6-10 Years of Experience	33	29.73%
11-15 Years of Experience	10	9.01%

16-20 Years of Experience	5	4.50%
More Than 20 Years of Experience	49	44.15%
Total	111	100

Analysis of the participants in the survey according to the type of departments in table (3) indicated that the percentage of participants in the survey from the accounting and finance department amounted to about 19%, which was the largest percentage compared to participants from other departments.

Table (3) Analysis of Participants by Departments

Department	Respondents	%
Accounting & Finance, Auditing	7	18.92%
Administration	17	15.32%
Human Resources	9	7.10%
Information Technology	9	9.11%
Marketing	2	1.80%
Operations	21	6.31
Other	46	41.44%
Total	111	100

Analysis of the participants in the survey by the type of sector in the table (4) indicated that the largest percentage of the participants were from the health care sector, with a percentage of 37.84.

Table (4) Analysis of Participants by sectors

Department	Respondents	%
Health care	42	37.84%
Information & Communications Technology	8	7.21%
Manufacturing & Commodities	4	3.60%

Table (7) Model (1) Overall Model

Multiple R	0.6206			
R Square	0.5351			
Adjusted R Square	0.5119			
Standard Error	0.6908			
F	16.5995			
Significance F	0.0000			
ANOVA	Coefficients	Standard Error	t Stat	P-value
Intercept	1.9839	0.2585	7.6745	0.0000

Media & Entertainment	3	2.70%
Oil & Gas	30	27.03%
Other	22	19.82%
Retail	2	1.80%
Total	111	100

It was clear from the table (5) that all participants in the survey, except for 2 participants, had knowledge of the concept and services of forensic accounting.

Table (5) Do you understand the concept of forensic accounting?

Yes	Respondents	109
No	Respondents	2
Total		111

It was clear from the table (6) that all participants in the survey, except for 2 participants were aware of their organizations' need for forensic accounting services

Table (6) does the organization at which you work need the services of a forensic accountant?

Yes	Respondents	109
No	Respondents	2
Total		111

The results of the statistical analysis of the least square regression model in the table (7) indicated that the model was statistically significant according to the significance parameter and the F-test. The results of the analysis of variance indicated that there was a statistically significant and positive impacts of all independent variables on the financial fraud in all its forms as dependent variable. Despite the significance of the model, however, the explanatory power of 36.19% was above average.

Forensic Accounting's Tools	0.0644	0.1020	0.6310	0.00200
Forensic Accounting's Financial Reporting	-0.0524	0.1059	-0.4951	0.0040
Forensic Accounting's internal control	0.2792	0.0942	2.9655	0.0037

Predictor: FF predictor - Significance Level 5%

To find out the individual effect of the skill and efficiency of the forensic accountant in detecting, examining, and preventing fraud, least square models were run and we found different compared to the results of the overall model.

The results of the second regression model in the table (8) indicated that the model was statistically significant and that there was a positive and statistically significant effect of Forensic Accounting's Tools in detecting fraud with an explanatory power of 33.7%. The results conformed to the result of the overall model.

Table (8) Model (2) Forensic Accounting's Tools

Multiple R	0.5857			
R Square	0.3431			
Adjusted R Square	0.3370			
Standard Error	0.7352			
F	56.9227			
Significance F	0.0000			
ANOVA	Coefficients	Standard Error	t Stat	P-value
Intercept	2.2954	0.2296	9.9957	0.0000
Forensic accounting' tools	0.4535	0.0601	7.5447	0.0000

Predictor: FF predictor - Significance Level 1%

The results of the second regression model in the table (9) indicated that the model was statistically significant and that there was a positive and statistically significant impact of the Forensic Accounting's Financial Reporting tools on detecting and preventing the financial fraud with an explanatory power of about 23 %.

Table (9) Model (3) Forensic Accounting's Financial Reporting

Multiple R	0.4804			
R Square	0.2308			
Adjusted R Square	0.2237			
Standard Error	0.7955			
F	32.6990			
Significance F	0.0000			
ANOVA	Coefficients	Standard Error	t Stat	P-value
Intercept	2.4868	0.2661	9.3447	0.0000
Forensic Accounting's Financial Reporting	0.3980	0.0696	5.7183	0.0000

Predictor: FF predictor - Significance Level 5%

The results of the second regression model in the table (10) indicated that the model was statistically significant and that there was a positive and statistically significant impact of Forensic Accounting's internal control on detecting and preventing the financial fraud in all its forms with an explanatory power of about 34%.

Table (10) Model (4) Forensic Accounting's internal control

Multiple R	0.5833			
R Square	0.3402			
Adjusted R Square	0.3341			
Standard Error	0.7368			
F	56.1999			
Significance F	0.0000			
ANOVA	Coefficients	Standard Error	t Stat	P-value
Intercept	2.1676	0.2473	8.7644	0.0000
Forensic Accounting's internal control	0.4838	0.0645	7.4967	0.0000

Predictor: FF predictor - Significance Level 5%

It was clear from the results of the statistical analysis that forensic accounting tools positively contributed to the detection and prevention of financial fraud, and thus the acceptance of the alternative hypothesis.

4. Conclusions

This study aimed to study the role of the forensic accountant in preventing and detecting fraud in the Kingdom of Saudi Arabia. The study used the survey tool to collect the primary data necessary to achieve the objective of the study and to test the study hypothesis. The study used descriptive statistics and the least square regression model to analyze the data and interpret the results.

The researcher divided the questionnaire into three sections, where the first section included the information of the respondents and their opinions about the concept of forensic accounting and the extent to which organizations in the Kingdom of Saudi Arabia need for forensic accounting services, while the second section includes questions that measure the concept of fraud and its types as a dependent variable. The third section included questions to measure the effectiveness of forensic accounting tools in the area of preventing and detecting fraud compared to tools of the traditional external auditor. In addition, tools of forensic accounting in revealing creative accounting practices to improve the quality of financial reports, and finally tools of forensic accounting in the field of analysis and design of internal control systems. The results of the study indicated that the forensic accounting tools were effective in preventing fraud detection early.

Appendix: Survey Questionnaire

The Questionnaire Will Be Divided Into Three Sections Namely:

- a) Demographic Information
- b) Forensic accounting, internal controls, and financial frauds in Saudi Arabia.
- c) Fraud Detection By Forensic Accounting

Section (A) Demographics Information

Q1. What was your gender?

Answer).

- a) Male
- b) Female

Q2. What was your department?

Answer

- a) Accounting & Finance
- b) Marketing
- c) Human Resources
- d) Operations
- e) Information Technology
- f) Administration
- g) Other (please specify)

Q3. What was your work experience?

Answer

- a) 0 – 5 years of experience
- b) 6 – 10 years of experience
- c) 11 - 15 years of experience
- d) 16 - 20 years of experience
- e) More than 20 years of experience

Q4. What was the industry to which your organization belongs?

Answer

- a) Oil & Gas
- b) Healthcare
- c) Retail
- d) Media & Entertainment
- e) Information & Communications Technology
- f) Manufacturing & Commodities
- g) Others (please specify)

Q5. Do you understand the concept of forensic accounting?

Answer

- a) Yes
- b) No

Q6. Does the organization at which you work need the services of a forensic accountant?

Answer

- a) Yes
- b) No

Section (B) Dependent Variables

Q1. Forensic accounting helps in reducing all forms of misappropriation of assets.

Answer

- a) Strongly Agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly Disagree

Q2. Forensic accounting helps in identifying perpetrators of financial fraud.

- a. A Strongly Agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly Disagree

Answer

Q3. Forensic accounting helps in the early detection of financial fraud.

Answer

- a. Strongly Agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly Disagree

Q4. Forensic accounting helps in detecting creative accounting practices.

- a. Strongly Agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly Disagree

Section (C) Forensic Accounting - independent Variables

Q1. Forensic accounting' tools and techniques were more effective than the external auditor's tools and techniques in detecting and preventing financial fraud.

Answer

- a. Strongly Agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly Disagree

Q2. The use of forensic accounting tools improves the quality of financial reporting by detecting and preventing practices that were inconsistent with generally accepted accounting principles.

Answer

- a. Strongly Agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly Disagree

Q3. The use of forensic accounting tools improves the design of the internal control system to prevent and detect financial fraud.

Answer

- a. Strongly Agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly Disagree

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