



**The Effect of Forensic Accounting on Fraud  
Prevention: Internal Control Effectiveness as a  
Moderator**

by

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## LIST OF ABBREVIATIONS

FA	Forensic Accounting
FAC	Forensic Accounting Competence
FAT	Forensic Accounting Technic
PFA	Proactive Fraud Audit
INE	Internal Control Effectiveness
EIC	Effective Internal Control
ICC	Internal Control Challenge
CEO	Chief Executive Officers
CFO	Chief Financial Officers
IA	Internal Auditors
CAC	Chairman Audit Committees
ISX	Iraq Stock Exchange
ACFE	The Association of Certified Fraud Examiners
HD	High Resolution
MENA	Middle East and North Africa
CAAT	Computer Assisted Audit Tools
ISACA	Information Systems Audit and Control Association
IIA	Association of Certified Fraud Examiners

## **Kesan Perakaunan Forensik Terhadap Pencegahan Fraud: Peranan Penyederhanaan Keberkesanan Kawalan Dalaman**

### **ABSTRAK**

Terdapat dua matlamat untuk kajian ini. Pertama adalah untuk mengkaji kesan perakaunan forensik terhadap pencegahan fraud di Iraq, dan yang kedua adalah untuk mengkaji hubungan peranan penyederhana kawalan dalaman yang berkesan terhadap hubungan antara perakaunan forensik dan pencegahan fraud di Iraq. Pelaporan Fraud Kewangan digunakan sebagai proksi untuk mengukur pencegahan fraud. Seterusnya, kecekapan perakaunan forensik, teknik perakaunan forensik, dan pengauditan fraud proaktif pula digunakan sebagai proksi terhadap perakaunan forensik. Selain itu, kawalan dalaman yang berkesan dan cabaran terhadap kawalan dalaman digunakan sebagai proksi untuk menghasilkan kawalan dalaman yang berkesan. Kajian ini menggunakan kaedah soal selidik untuk mengumpul data daripada syarikat yang disenaraikan di Bursa Saham Iraq dengan mengedarkan soal selidik kepada CEO, CFO, CAC, dan IA sebagai wakil syarikat. Sebanyak 440 borang soal selidik telah diedarkan, tetapi hanya 238 jawapan yang dapat dikumpul dan 216 daripada jumlah soal selidik itu telah dianalisis sebagai data akhir untuk kajian ini. Data telah dianalisis dengan menggunakan model persamaan struktur dan menggunakan perisian SMART-PLS dan SPSS versi 26. Kajian ini menggunakan Iraq sebagai kajian kes kerana ia memberikan pandangan baharu terhadap kesusasteraan perakaunan dan kewangan dalam konteks ekonomi pasaran yang sedang pesat membangun, mewakili salah satu negara di bawah negara-negara MENA serta berlatarbelakangkan ekonomi yang masih tidak stabil khususnya di Iraq. Hasil kajian ini mendedahkan kesan ketara dan langsung terhadap perakaunan forensik pada pencegahan fraud dalam syarikat tersenarai di Iraq. Secara khususnya, kecekapan perakaunan forensik dan pengauditan fraud proaktif mempengaruhi pencegahan fraud secara positif. Walau bagaimanapun, teknik perakaunan forensik menunjukkan hasil yang tidak ketara dalam pencegahan fraud. Berdasarkan objektif kedua, kajian ini membuktikan bahawa keberkesanan kawalan dalaman menyederhanakan hubungan antara perakaunan forensik dan pencegahan fraud. Namun begitu, cabaran kawalan dalaman tidak memberikan sebarang hasil yang ketara. Oleh itu, sebahagian peranan penyederhanaan kawalan dalaman yang berkesan diterima. Kesimpulannya, kajian ini mengesyorkan kepentingan bagi sektor swasta menggunakan perakaunan forensik untuk menghalang fraud dalam semua sektor perniagaan dan memperkasakan keberkesanan kawalan dalaman sebagai fungsi penting demi meningkatkan lagi keberkesanan perakaunan forensik terhadap pencegahan fraud.

## **The Effect of Forensic Accounting on Fraud Prevention: Internal Control Effectiveness as a Moderator**

### **ABSTRACT**

The aims of this study are two-fold. The first is to examine the effect of forensic accounting on fraud prevention in Iraq and the second is to find the impact of the moderating role of internal control effectiveness on the relationship between forensic accounting and fraud prevention in Iraq. Fraudulent financial reporting is used as a proxy to measure fraud prevention. Meanwhile, forensic accounting competence, forensic accounting techniques, and proactive fraud audit are used as proxies for forensic accounting. In addition, effective internal control and internal control challenges are used as proxies for effective internal control. This study utilizes the survey method to gather data from companies listed on the Iraqi Stock Exchange by distributing a questionnaire to CEO, CFO, CAC, and IA as the companies' representatives. Four hundred and forty surveys were distributed, but only 238 answers were collected, and 216 surveys were analysed as final data for this study. The data was analysed by using a structural equation model and utilising SMART-PLS and SPSS (version 26) software. This study used Iraq as a case study since it provides a new insight into the accounting and financial literature in the context of an emerging market economy, representing one of the MENA countries and with the backdrop of an Iraq-specific unstable economic situation. The results of this study revealed that there are significant and direct effects of forensic accounting on fraud prevention in the Iraq's listed companies. In particular, forensic accounting competence and proactive fraud audit positively influence fraud prevention. However, forensic accounting techniques indicated insignificant results in fraud prevention. Based on the second objective, this study proved that internal control effectiveness moderates the relationship between forensic accounting and fraud prevention. However, internal control challenges did not provide any significant results. Thus, the moderating role of effective internal control is partially accepted. In conclusion, the study recommends that it is essential for the private sector to use forensic accounting to deter fraud in all sectors of business and spotlight internal control effectiveness as an important function to increase the effectiveness of forensic accounting on fraud prevention.

## CHAPTER 1 : INTRODUCTION

### 1.1 Background of study

Fraud is not a contemporary thing, as some well-publicised financial fraud cases have demonstrated over the last two decades. Instead, this could be linked back to ancient of our world's humanity, when men used wiles, deviation, and defraud to obtain wealth, property, commodities, all with the goal of benefit (Petraşcu & Tîeanu, 2014: Kizil & Kaşbaşı: 2018).

Shashkova (2018) defines corruption and fraud as a severe global phenomenon in managing a government or politics, which is explained in the intentional utilize by responsible of their formal status to acquire property and non-property benefits illicitly in whatever way. Corruption contains phrases such as fraud in the administration, unlawful business practices, and business malpractice.

Therefore, fraud can design as “an intentional act by an individual to deceive another individual to take possession of their financial or non-financial belongings for their benefit (Joseph et al., 2016). Additionally, Zainudin and Hashim (2016) opine, fraud is the act or practice of deceiving or deliberate abuse of corporate assets. Furthermore, fraud is an intentional criminal act for a specific reason (manipulation or sending other parties false reports), committed for benefit by persons inside or outside the enterprise (ACFE, 2016b). Furthermore, fraud is part and parcel of a cancerous threat that negatively affects the growth and development of any nation, which shouldn't be underestimated globally.

For this reason, financial scandals and manipulation have become a worldwide issue since the mid-1970s (Toms, 2019; Xin et al., 2018). It is considered a severe and damaging phenomenon, particularly to the corporate sector. It frequently leads to substantial financial losses and corporate failures, such as WorldCom and Enron in the United States (U.S) (Jofre & Gerlach, 2018). Such events have led investors and the public to demand better mechanisms to curb fraudulent activities to avoid huge losses of shareholders' money (Bao et al., 2020). They have been important milestones in the capital market, protecting investors and reducing fraud, even in the Iraqi capital market.

On the other hand, despite the fact that some countries have reduced the depravity plane for a much longer period of time, many countries in the Middle East and North Africa Zone have suffered significant damage. Therefore, the Middle East and North African countries are among the most corrupt countries in the world (Alazzabi et al., 2020). Additionally, as reported in Transparency International Reports, Iraq has been ranked as the most corrupted country from the Iraqi business perspective. The Corruption Perceptions Index (CPI) has reported that Iraq has been ranked 162 out of 180 countries (Gollob and O'Hanlon, 2020; Ali, 2019).

Thus, it is important to note that capital market regulators and government bodies all over the world have made a lot of efforts to stop fraud. A massive reform was put in place to set up fraud prevention mechanisms. The same reforms happened in Iraq as well. Government bodies have established several anti-corruption agencies such as the Board of Supreme Audit, Inspector General, Anti-Corruption Committee, and many more (Sadhan, 2020; AlKafaji & Mahmood, 2019; Abdullah, 2019; Chen et al., 2019).

As a consequence, fraud prevention is typically regarded as one of the fraud mechanisms that promote confidence in the process of attaining the organisational goal and maximising shareholders' value other than illegally committing or manipulating the earnings. The aim of having fraud prevention in the organisation is to improve the financial report's integrity, reliability, and reliance and to adhere to the laws and regulations.

Nonetheless, prior research has shown several procedures for preventing fraud (Murdock, 2018; Rahman et al., 2019; Ali et al., 2020) across countries. Those processes include anti-fraud organizations, the Association of Certified Fraud Examiners (ACFE), and COSO. For example, according to the ACFE, frauds that disseminate inside a business organisation may be perpetrated by staff members such as administrators, the business's owner, officers, and the executive board. Furthermore, fraudsters are repeatedly committed by employees with inside knowledge of the company. Accordingly, a business might formulate and implement proactive fraud-mitigation initiatives to counteract fraud, like fraud prevention and diagnosis. Additionally, from the standpoint of the corporate governance structure, the external auditor may be considered one of the most effective fraud prevention methods, especially in financial reporting fraud (Murdock, 2018; Marwa, 2021).

Hence, previous studies have shown that administrative and financial corruption exploitation is now the major issue faced by most (public and private) departments within the Iraqi government (Talab et al., 2019). Fraud is so prevalent in Iraq that attempts are being made to limit it by utilising anti-corruption bodies to prevent offenders from being prosecuted for private purposes (Abdullah, 2017; and Al-Ghanmi

& Al-Khazraji. 2017). This form of violence surfaced in Iraq after 2003 when posts in government cabinets were allocated based on tribal associations (quota system). Corruption is common in certain groups that work to stop it, like the Committees on Integrity (Abdullah, 2017).

Therefore, forensic accounting has become a predominant mechanism to combat financial malpractice (Fraser, 2020). Furthermore, the implementation of forensic accounting indicates the immediate prohibition of fraudulent activities, which positively impacts the efficiency of the corporate sector and creates a desirable ethical business environment (Gligorić et al., 2017).

Accordingly, forensic accounting could detect and prevent possible fraud and identify the causes and weaknesses in the system that encouraged the fraud (Abdulrahman, 2019; Bassey, 2018; Ejoh, 2017; Emmanuel et al., 2018). Therefore, the need for forensic accounting arises when corruption and fraud exist in a firm and also when there is a failure to achieve company goals (Alabdullah et al., 2014; Hadi et al., 2018; Jassem, 2019). Nevertheless, it should be pointed out that there is still a deficiency in competency in forensic accounting (Bartulovic & Filipovic, 2017).

As an aspect of proactive inspection for fraud cues, it is vital to comprehend the structure of fraud. Therefore, Fraud auditing is now proactive rather than reactive due to developments. Proactive fraud audits start by identifying potential fraud schemes. Then, a fraud investigator can use rigorous monitoring after deciding what kind of fraud to look for (Davia, 2000; Aghili, 2022; Peret, 2022). Besides, the Proactive Fraud Audit also contributes to a comprehensive audit process in which auditors actively gather

evidence and evaluate the information collected to uncover potential fraud activities. Therefore, one reason for fraud is the absence of audit attempts as a preventive mechanism to prevent fraud. An audit that can track an entity's record in controlling current funds can reveal whether there is a hazard of fraud as early as possible (Suastawan, Sujana, & Sulindawati, 2017). Therefore, proactive fraud audits prioritise oversight of the fund-use process and anti-corruption reporting (Anantawikrama, Komang, & Daniel, 2019).

This study aims to add to the previous research evidence concerning forensic accounting. It is noted that forensic accounting has flaws that hinder companies' professionals from performing fraud prevention effectively. It could be because of a shortage of competency, powerful forensic accounting techniques, and proactive fraud audits. Furthermore, it intends to provide new insights into the existing forensic accounting literature by focusing on forensic accounting and internal control's effectiveness in preventing fraud and financial corruption, particularly from the Iraqi context. Because there are many companies listed in the blacklist according to the Ministry of Planning, for example (Al Majd Group Contracting Company, Al Aswa Contracting Company, and Al-Akhal Contracting Company), and the result is that forensic accounting should have several basic requirements that qualify a forensic accountant to perform a task and enable a forensic accountant to provide an opinion that reinforces judicial rulings and includes scientific and practical rehabilitation, skills, and personal and behavioural qualities. The studies that were referred to talked about forensic accounting in general, especially in Iraq, but didn't talk much about forensic accounting skills, forensic accounting techniques, or the Proactive Fraud Audit.

An active internal control process serves as the cornerstone for proper management and, eventually, excellent business outcomes (Al-Waeli et al., 2020; Rashid, 2022; Ogwiji and Lasisi, 2022; Al-Mamun et al., 2022). Therefore, Significant shifts in the corporate environment have resulted in the formation of multiple issues confronting many companies, particularly in the aftermath of the recent financial collapse and the demise of several big corporations in Iraq (e.g. Al Majd Group Contracting Company, Al Aswa Contracting Company, and Al-Akhal Contracting Company) and in the world (for instance: Enron, WorldCom, Tyco, Qwest, and Global Crossings) due to deficient internal control processes (Mascarenhas, 2018; Goel, 2022; Abdullah and Gray, 2022).

In addition, previous studies have found that internal control effectiveness can play an essential role in preventing fraudulent behaviour (Suh et al., 2019; Nawawi & Salin, 2018; and Yuniarti & Ariandi, 2017). Nevertheless, an ineffective internal control practise implementation would invite powerless corporate control and open the door for offenders to indulge in fraudulent activities detrimental to the organization. The presence of adequate internal controls will significantly reduce the occurrence of financial fraud and mitigate fraudulent financial reporting attempts.

Also, previous studies on internal control effectiveness have shown a significant relationship between fraudulent activity and the methods for curbing it (Masanja, 2018; Rahim et al., 2017). It is also noted that forensic accounting plays a vital role in providing specialised financial advice to individuals, regulatory, investigative, and forensic authorities in the fields of fraud, corruption, economic, and commercial

disputes (Bassey, 2018; Ejoh, 2017; Hadi et al., 2018; Chen et al., 2020; Suh and Trafford, 2019).

Given the above discussion on fraud occurrences and their worrying practices, worldwide regulatory bodies have established mechanisms to reduce the cases. With adequate internal control, fraud prevention mechanisms are believed to best combat fraud occurrences. Accordingly, this study strives to provide an in-depth evaluation of how internal control effectiveness modifies the impact of FA on the FP of enterprises in Iraq as a moderating role. Because the effectiveness of internal control has rarely been relied upon as a moderating role in Iraq studies, for this reason, this study chose this moderate variable as supervision between the independent and dependent variables. Furthermore, this study explicitly evaluates earlier empirical studies on FA to set the groundwork for upcoming empirical research. Finally, it identifies the gap in research about the link between FA and FP.

## **1.2 Problem statement**

There are many sorts of corporate and employee fraud that influences all sizes and types. The fraud and pilfering can come in many forms – actual embezzlement of cash, property, or other assets; procurement or contractual fraud; payroll theft; and distortion of financial statements are just a few hundred percent immune to having a circumstance occur in their business (Peters & Maniam, 2016). On the other hand, this fraud is due to the development and rapid expansion of technology, leading to multiple fraud methods (Ozili, 2020). The affected are often entities or social parties regarding crime, including internet spam, cybercrimes, and Ponzi spam. On the other hand,

companies that hire crooks or criminals suffer from job fraud (ACFE, 2016: ACFE, 2018).

On the other hand, as a result of the financial crisis, fraud has become a worldwide phenomenon. Although certain countries' levels of depravity have decreased over time, many countries in the Middle East and North Africa (MENA) region have suffered significant losses. As a result, this zone is regarded as the world's most corrupt and poor country (Gupta & Kumar, 2020: Nigrini, 2020: Alazzabi et al., 2020). Against this background, fraud is one of the business world's more severe matters (Refahi et al., 2020). In line with this, Yulistyawati and Suardikha (2020) noted that scam instances could trigger quite many financial losses, such as in the case of Global Fraud. According to Eryigit (2019) and Choi & Gipper (2021), they highlight the importance of practise in fraudulent activities conducted by management to provide shareholders with false clues that they function correctly, citing several instances of fraudulent activities, including Enron, WorldCom, Tyco, etc. In response to these financial crises, many anti-fraud agencies have been established, for example as (the Information Systems Audit and Control Association (ISACA), the Institute of Internal Auditors (IIA), and the Association of Certified Fraud Examiners (ACFE)) (Othman, 2015: Nigrini, 2020).

The PricewaterhouseCoopers (PwC) 2020 Global Economic Crime and Fraud Survey indicates that financial corruption and fraud are still challenging problems for contemporary businesses and society. This is because, over the previous 24 months, a score of six fraud events per organization occurred, and over fifty percent of the

participants had experienced at least one scam. Alarming, it was claimed that firm fraud incidents cost almost \$42 billion in US dollars (Li and McMurray, 2022).

Therefore, regularly released financial statements (F.S.s) by businesses are the information source for any recipient of reports who usually utilise the same to make decisions based on the information given by such statements. The information offered by firms typically encourages investors to invest in corporations with the vision of maximising value and profit. Firms have often used F.S.s to supply false reports to portray a greener image throughout the utilizers' thinking to gain from the same (Uwuigbe et al 2019; Omar et al., 2017; Gupta & Kumar, 2020; Sallal et al., 2021). In the past and nowadays, because of manipulated F.S.s, communities are still having problems. Frauds such as, Al Majd Group Contracting Company, Al Aswa Contracting Company, Al-Akhal Contracting Company, Enron in 2001, World Com, Party of the Sahara in 2002, P.N.B., Madoff Investment in 2008, Volkswagen Emission Gate in 2015 and several more are arising in which abused F.S.s have brought financial crimes of vast scope and raised unrest in the world of business (Narayanaswamy, 2022; Gupta and Kumar, 2020; Abdulla, 2017).

In this regard, several anti-corruption agencies were set up in Iraq (the Commission of Integrity (COI); the Inspectors General (IG); and the Integrity Committee in the Iraqi parliament), but this does not seem to be able to address the issue of fraud as cases of fraud continue to increase in both private and public sectors (Jassim, 2017, and Abdulla, 2017). Moreover, it appears to be a challenge for the anti-corruption agencies to successfully prosecute a large part of the alleged fraud cases that involve billions of IQD (Iraqi dinar) by government officials, contractors, politicians,

and also individuals and organisations (Talab et al., 2019; Gupta and Kumar, 2020). Due to this, the Iraqi Commission of Integrity (COI) revealed that after the formation of the new Iraqi government from 2004 to 2014, thousands of fraud cases were revealed, - and a vast number of fraud cases were reported in 2014 in Iraq, and the amount reached to more than one billions US dollars (Messick, Mulukutla, & Hoppe, 2015).

Despite the anti-fraud agencies, Iraq is still suffering from corruption and fraud due to companies manipulating their financial statements. Per declarations from the Ministry of Planning in the Iraqi government, more than forty considerable companies are still on the blacklist until 2022. These companies were contracting with the government sector in various fields, which led to the loss of huge sums estimated at millions of American dollars (Al-Abedi, 2022; Alqaysi and Zahari, 2022). The conviction is strengthened by Transparency International's constant observation of the emergence of wrongdoing and fraud in Iraq. According to data from the Iraqi Office of Integrity, there have been more than 13,000 incidences of misconduct and fraud in Iraq (2018). In addition, the Gross Losses as a Consequence of firms' Crime in Illicit financial activity in Iraq in 2018 and 2019, respectively, totalling 21.522 and 20.439 million USD. And also an increase in the contraction of more than 11% in 2020 in the Iraqi economy (Jassim, 2022; Khudair, 2022). Therefore, Iraq experiences financial difficulties and is counted among nations where corruption and fraud are rife due to the continuation of financial fraud and businesses' manipulation of statistics in financial statements.

According to Abbas and Ismail (2017), "corruption (fraud) is a big impediment to Iraq's rise, progress, and social stability." Streets, education, and healthcare are all in