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# The types, costs, prevention and detection of occupational fraud: The ACFE perspective

Ibrahim Umar<sup>\*a</sup>, Rose Shamsiah Samsudin<sup>b</sup>, Mudzamir Mohamed<sup>b</sup>

<sup>a</sup>*Department of Accountancy, Yobe State University, Nigeria*

<sup>b</sup>*School of Accountancy, UUM College of Business, Universiti Utara Malaysia*

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## Abstract

Occupational fraud and abuse are an enormous problem, imposing adverse effects and practically affecting every organization and all sectors of the economy. The estimated global cost of fraud according to ACFE accounted for \$2.9, \$3.5 and \$3.7 trillion in 2010, 2012 and 2014 respectively. Three types of schemes have been identified by the Association of Certified Fraud Examiners (ACFE) in their various reports to the nation. The aim of this review is to depict the type, cost, and fraud control mechanisms. Occupational fraud schemes are very hard to detected. However, they are more likely to be detected by a tip than internal audits, internal controls or external audits. Thus, prevention of occupation fraud is better achieved through the use of hotlines, whistleblowing, effective internal control system and the use of forensic accounting in fraud detection is recommended for further studies.

**Keywords:** Occupational fraud, asset misappropriation, corruption, fraudulent statements

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## 1. INTRODUCTION

Incidences of fraud globally have attracted the attention of professionals, policy makers, and the academic communities. The growth in concern over occupational fraud has been attributed to the magnitude, schemes and the perpetrators of these acts. The world known cases of financial and corporate scandals of WorldCom, Waste Management, Enron, American Insurance Group and Lehman Brothers depict the distasteful nature of this form of fraud. For instance, the corporate scandals of WorldCom, Enron, and Lehman Brother accounted for \$180 million, \$74 million and \$50 million respectively. At a global scene, the Association of Certified Fraud Examiners (ACFE) has estimated that occupational fraud and abuses caused a loss in revenue of about \$3.7 trillion in 2014. According to ACFE (2014) reports to the nation, frauds are carried out through assets misappropriation, corruption, and financial statement frauds.

Accordingly, Cressey (1950) observed that these acts are committed by individuals who have non-sharable financial pressures, having the opportunity to violate trust and able to rationalize their acts. These collectively form what is now known as the Fraud Triangle (Dorminey, Scott Fleming, Kranacher, & Riley, 2012). Studies have suggested the use of multiple methods of investigating, detecting and preventing financial fraud by examining the Fraud Triangle (Prabowo, 2013; Tommie, Aaron, Jack, & Robert, 2006). In addition, Albrecht, Albrecht, Albrecht, and Zimelman (2012) and Lee and Fargher (2013) posit that auditing, management review,

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<sup>\*</sup>Corresponding author. Tel.: +60-146-494392  
E-mail: [ibrahimgaba@gmail.com](mailto:ibrahimgaba@gmail.com)

and whistleblowing are some of the effective tools used in fraud detection and prevention. This is consistent with the findings of ACFE (2012).

However, despite the number of fraud detection and prevention techniques, incidence of occupational fraud and abuses have been on the increase. Thus, requiring an understanding as to why frauds are on the increase. Therefore, this study intends to review the literature on types, costs and methods of fraud prevention and detection.

## **2. THE CONCEPT OF OCCUPATIONAL FRAUD**

Traditional accounting fraud is the intentional misrepresentation of financial statements in order to obtain an advantage wrongfully, retain a benefit, or avoid a detriment (Soltani, 2014 p259). While, ACFE (1996) defined occupational fraud as the “use of one's occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization's resources or assets”. The Association classified this act into asset misappropriation, corruption, and fraudulent financial statement. In addition, the reports try to identify the cost, victims, and perpetrators.

The ways in which employees misuse organization's resources for personal economic benefits has been studied by researchers and professional bodies (ACFE, 2014; Holtfreter & Holtfreter, 2004; Mike, 2012). They come in different schemes including the Ponzi Scheme, assets misappropriation and corruption (Albrecht et al., 2012; Dellaportas, 2013; Efiang, 2012; Rezaee, 2005; Rothlin & Haghirin, 2013). Accordingly, ACFE (2014) and PriceWaterhouseCoopers (2014) classified occupational fraud into three broad groups. These are asset misappropriation, corruption, and financial statement fraud. Although, there may be overlapping cases involving two or more form of occupational fraud in an actual case of fraud.

### **2.1 Asset misappropriation**

The ACFE (1996) and ACFE (2002) described asset misappropriation as the misuse of employee's organization property including theft and payroll fraud. This type of fraud accounted for 80% of all the cases reported in the first edition of the ACFE report (ACFE, 1996) and 85% in the recent report (ACFE, 2014). Specifically, theft of cash, inventory and supplies are a common forms of assets misappropriation (ACFE, 1996, 2012). It is observed that asset misappropriation involving theft, fraudulent disbursement are the most frequent scheme type represented in the frauds reports (ACFE, 2012). Similarly, Price Waterhouse Coopers (PWC)'s Global Economic Crime Survey indicates that assets misappropriation accounted for 72% of the global crimes committed (PriceWaterhouseCoopers, 2014). However, it is observed that it has the least median cost when compared to other fraud schemes (ACFE, 2010, 2012). Having the highest frequency and lowest median cost, asset misappropriation is followed by corruption.

### **2.2 Corruption**

Another occupational fraud scheme that attracted the attention of stakeholders is corruption. It is described by ACFE (2010) as the use of influence in a transaction in violation of duty for personal benefits. While the World Bank see it as the abuse of public office for personal gain (World Bank, 1997). It includes bribery, extortion and conflicts of interest (ACFE, 2012). Studies have linked corruption, especially in public sector, to economic development and social issues (Doig & McIvor, 1999; Gupta, Davoodi, & Alonso-Terme, 2002; Mauro, 1995; Tanzi, 1998). This form of fraudulent scheme has been a major concern for policy makers and international organization (United Nations, 2004) and also subject of annual reports (Transparency International, 2014).

In the ACFE annual reports to the nations, corruption accounted for 10% in 1996, 32% in 2004 and 36% in 2014, indicating a growing trends (ACFE, 1996, 2004, 2014). In addition, it is estimated that bribery alone accounts for over \$ 1 trillion annually (Graycar & Sidebottom, 2012; Heineman & Heimann, 2006; Judge, McNatt, & Xu, 2011). While PWC found that corruption represented 27% of crimes in the 2011 crime survey (PriceWaterhouseCoopers, 2014). However, fraudulent statement has maintained the lead in corporate financial scandals (Soltani, 2014).

### **2.3 Fraudulent Statement**

One of the current global challenges of the corporate world has been the issue of financial statement fraud (Rezaee, 2005). It is estimated to have caused investors more than \$500 billion (Rezaee, 2005). A form of occupational fraud described as the falsification of an organization's financial statements and a deliberate

attempt to deceive or mislead investors and creditors by materially misstated financial statements (ACFE, 2014; Rezaee, 2005). Specifically, involving overstating revenues and understating expense. The trend in fraudulent statement according to the ACFE annual reports indicates that it accounted for 5% in 2002 and with the median loss of \$4,250,000 in 2002 (ACFE, 2002, 2004, 2012, 2014). The report has consistently found fraudulent statement to account for the least cases but having the highest median loss to organizations.

### **3. COST OF OCCUPATIONAL FRAUD**

The estimated cost of occupational has been on increased largely due to the increase in number of fraudulent cases and the amount involved. In 1996, the average cost of fraud estimated by ACFE (1996) was \$9 per day per employee costing 6% of organization's annual revenue representing \$400 billion per year in the US. In a similar report by ACFE (2002), it was found that fraud caused the US about \$ 600 annually and increased of \$200 billion over the 1996 report. While the average organizational loss was put at \$100,000. Further analysis of the report revealed that asset misappropriation has the highest incidences but with lower total cost of \$800,000. While, fraudulent financial statement had the lowest incidence with the highest cost of \$4,250,000. In between was the corruption scheme having an average cost of \$530,000 per the report.

Similarly, in 2006 and 2008 reports to the nation, the Association estimated the cost of fraud to the US as \$652 and \$994 billion respectively indicating an increase of \$342 billion which is little below the \$400 billion reported in the 1996 survey. Furthermore, the report of 2010 to 2014 estimated the global cost of fraud to account \$2.9, \$3.5 and \$3.7 trillion respectively (ACFE, 2010, 2012, 2014). This indicates a persistent increase in the costs of fraud in the world. Furthermore, analysis of the world celebrated corporate financial scandal of Waste Management, Enron, WorldCom and AIG have caused investors and employee an estimated sum of over \$464 billion (Rezaee, 2005).

### **4. DETECTION OF OCCUPATIONAL FRAUD**

Fraud detection is one of the most effective tools for reducing the incidence of loss of revenue in an organization. However, initial detection of fraud had been consistently achieved through tip and internal control (ACFE, 2012). The Association identified 16 medium through which initial fraud detection is made in an organization. Tip, internal and external audit were among the tools used to initially detect frauds. Specifically, whistleblowing (Lee & Fargher, 2013) and management review (Rezaee, 2005) have been effective in fraud detection. Similarly, Caplan (1999) and Albrecht et al. (2012) mentioned the relevance of internal audit in fraud detection while Bierstaker, Brody, and Pacini (2006) found the effectiveness of forensic accounting in fraud detection process.

### **5. FRAUD PREVENTION TECHNIQUES**

Considering the loss caused by occupational fraud and the frequency of asset misappropriation, prevention of occupational fraud ought to be a central item in organization's strategy. This is because most fraud cases go undetected mostly due to involvement of top management and highly educated perpetrators (ACFE, 2010). Therefore, having fraud prevention instituted in an organization minimizes the cost of fraud in an organization. ACFE (2002) identified eight fraud prevention mechanisms in relation to the cost of fraud in the absence of such mechanisms. These include internal control, employee background check, training and workplace surveillance, anonymous reporting mechanisms such hotlines and whistleblowing, regular fraud audit and policies as well as willingness to prosecute perpetrators (ACFE, 2004).

Traditionally, fraud prevention has been the responsibility of management through oversight function of board and audit committee. In addition, roles of both internal and external auditors on fraud prevention have been researched as some of the tools used by companies. Never-the-less, regulatory institutions have also played their roles in fraud prevention.

However, studies have cases of fraud occurring despite the presence of these control mechanisms. According to Rezaee (2005) raises the questions as to the integrity of the control mechanism especially internal and external auditing. For instance, Arthur Anderson was found guilty in the cases of Waste Management, Enron and the World Com financial scandals. These, therefore, call for more regulatory oversight through effective fraud investigation prevention techniques.

## 6. CONCLUSION

The adverse effect of occupational fraud is enormous. It includes economic and non-economic loss (PriceWaterhouseCoopers, 2014). The economic loss runs in trillions while the non-economic losses includes employee morale, corporate reputation, and business relations. The effects cut across, industry and all sectors of the economy. The Association of Certified Fraud Examiners has produced eight reports on occupational. In a similar view, PriceWaterhouseCoopers, (2014) and Kroll (2014) have produced reports on fraud and economic crimes. The analysis of these reports provides insight into how frauds are committed, detected and how to minimize their occurrence. These reports have drawn attention to the costs, types, and fraud control mechanism. They attributed the costs of fraud to asset misappropriation, corruption, and fraudulent statement. Majority of the fraud were initially detected by tip, internal control and audit. These serve as the major fraud prevention mechanisms and organizations can adopt them for the deterrence and detection of frauds.

However, despite the measures put by organizations, cases of fraud have been on the increase both in number and values. This undermines the efforts of audit committees, internal and external auditors as well as regulatory organizations. Hence, this study recommends further studies to investigate the relevance and organizational use of forensic accounting in fraud detection process.

## REFERENCES

- ACFE. (1996). *Report to the Nation on Occupation Fraud and Abuse*. Retrieved from <http://www.acfe.com/rtn-report-archives.aspx>
- ACFE. (2002). *Report to the Nation on Occupation Fraud and Abuse*. Retrieved from <http://www.acfe.com/rtn-report-archives.aspx>
- ACFE. (2004). *Report to the Nation on Occupational Fraud and Abuse*. Retrieved from <http://www.acfe.com/rtn-report-archives.aspx>
- ACFE. (2010). *Report To the Nations on Occupational Fraud and Abuse*. Retrieved from <http://www.acfe.com/rtn-report-archives.aspx>
- ACFE. (2012). *Report to the Nation on Occupation Fraud and Abuse*. Retrieved from <http://www.acfe.com/rtn-report-archives.aspx>
- ACFE. (2014). *Report to the nation on occupational fraud and abuses*. Retrieved from <http://www.acfe.com/rtn-report-archives.aspx>
- Albrecht, W. S., Albrecht, C. O., Albrecht, C. C., & Zimbleman, M. F. (2012). *Fraud Examination* (fourth). South-Western.: Cengage Learning.
- Bierstaker, J. L., Brody, R., & Pacini, C. (2006). Accountants' perceptions regarding fraud detection and prevention methods. *Managerial Auditing Journal*, 21(5), 520–535. doi:10.1108/02686900610667283
- Caplan, D. (1999). Internal Controls and the Detection of Management Fraud. *Journal of Accounting Research*, 37(1), 101–117. doi:10.2307/2491398
- Cressey, D. R. (1950). The Criminal Violation of Financial Trust. *American Sociological Review*. doi:10.2307/2086606
- Dellaportas, S. (2013). Conversations with inmate accountants: Motivation, opportunity and the fraud triangle. *Accounting Forum*, 37(1), 29–39. doi:10.1016/j.accfor.2012.09.003
- Doig, A., & McIvor, S. (1999). Corruption and Its Control in the Developmental Context: An Analysis and Selective Review of the Literature. *Third World Quarterly*, 20(3), 657–676. doi:10.2307/3993327
- Dorminey, J., Scott Fleming, A., Kranacher, M. J., & Riley, R. A. (2012). The evolution of fraud theory. *Issues in Accounting Education*, 27(2), 555–579. doi:10.2308/iace-50131
- Efiong, E. J. (2012). Forensic accounting education: An exploration of level of awareness in developing economies-Nigeria as a case study. *International Journal of Business and Management*, 7(4), 26.
- Graycar, A., & Sidebottom, A. (2012). Corruption and control: a corruption reduction approach. *Journal of Financial Crime*, 19(4), 384–399. doi:10.1108/13590791211266377
- Gupta, S., Davoodi, H. R., & Alonso-Terme, R. (2002). Does Corruption Affect Income Inequality and Poverty? *Economics of Governance*, 3, 23–45. doi:10.1007/s101010100039
- Heineman, B. W. J., & Heimann, F. (2006). The long war against corruption. *Foreign Affairs*, 85(3), 75. doi:10.2307/20031968
- Holtfreter, K., & Holtfreter, K. (2004). Fraud in US organisations: an examination of control mechanisms. *Journal of Financial Crime*, 12, 88–95. doi:10.1108/13590790510625070
- Judge, W. Q., McNatt, D. B., & Xu, W. (2011). The antecedents and effects of national corruption: A meta-analysis. *Journal of World Business*, 46(1), 93–103. doi:10.1016/j.jwb.2010.05.021
- Kroll. (2014). *2013/2014 Global Fraud Report: Who's Got Something to Hide?* Retrieved from <http://fraud.kroll.com/report-archive/>
- Lee, G., & Fargher, N. (2013). Companies' Use of Whistle-Blowing to Detect Fraud: An Examination of Corporate Whistle-Blowing Policies. *Journal of Business Ethics*, 114, 283–295. doi:10.1007/s10551-012-1348-9
- Matsumura, E., & Tucker, R. (1992). Fraud detection: A theoretical foundation. *Accounting Review*, 67(4), 753–782. Retrieved from <http://www.jstor.org/stable/248323>
- Mauro, P. (1995). Corruption and growth. *The Quarterly Journal of Economics*, 110(3), 681–712. Retrieved from <http://www.jstor.org/stable/2946696>
- Mike, S. (2012). Tools and Techniques for Internal Auditors to More Effectively Look at Fraud. In *23rd Annual ACFE Farud Conference*. Orlando, Florida.
- Prabowo, H. Y. (2013). Better, faster, smarter: developing a blueprint for creating forensic accountants. *Journal of Money Laundering Control*, 16(4), 353–378. doi:10.1108/JMLC-05-2013-0017
- PriceWaterhouseCoopers. (2014). *PWC's 2014 Global economic crime survey: 4th South African edition*.
- Rezaee, Z. (2005). Causes, consequences, and deterrence of financial statement fraud. *Critical Perspectives on Accounting*, 16, 277–298. doi:10.1016/S1045-2354(03)00072-8
- Rothlin, S., & Haghirin, P. (2013). *Dimensions of Teaching Business Ethics in Asia*. doi:10.1007/978-3-642-36022-0
- Soltani, B. (2014). The Anatomy of Corporate Fraud: A Comparative Analysis of High Profile American and European Corporate Scandals. *Journal of Business Ethics*, 120(2), 251–274. doi:10.1007/s10551-013-1660-z
- Tanzi, V. (1998). Corruption Around the World causes, consequences, scope and cures. *IMF Staff Papers*, 45(4), 559–594. Retrieved from <http://www.jstor.org/stable/3867585>

- Tommie, W. S., Aaron J., S., Jack, B., & Robert, L. (2006). *Fraud auditing and forensic accounting* (Third). New Jersey: John Wiley & Sons, Inc.
- Transparency International. (2014). *Corruption Perceptions Index*. Germany. Retrieved from <http://www.transparency.org/cpi2013>
- United Nations. (2004). United Nations convention against corruption. doi:10.1007/s10551-007-9524-z
- World Bank. (1997). Helping Countries Combat Corruption: The role of the World Bank. *Poverty Reduction and Economic Management*. The World Bank. Retrieved from <http://www.worldbank.org/html/extdr/corruptn/cor02.htm>