

## EFFECT OF BANK GROWTH ON OCCUPATIONAL FRAUD RISK IN COMMERCIAL BANKS IN KENYA

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**CITATION:** Kiragu, D. N., Wanjau, K. L., Gekara, M., & Kanali, C. (2013). Effects of bank growth on occupational fraud risks in commercial banks in Kenya. *International Journal of Social Sciences and Entrepreneurship*, 1 (3), 469-480.

### ABSTRACT

Globally statistics indicate that the banking industry has the highest occupational fraud incidence and that a typical organization loses at least 5% of its annual revenues to fraud. Applying this statistic to the Kenyan's consolidated commercial banks revenue for the year 2011, the loss translates to approximately Kshs 13 Billion. Further statistics report that occupational fraud incidence is growing fastest in Africa as a continent and that Kenya has the highest fraud incidence in Africa. Commercial banks in Kenya have experienced a phenomenal growth in the last ten years. The study set to find if commercial banks growth has had an effect on occupational fraud in the commercial banks. A representative sample of 30 banks out of the 43 commercial banks licensed by Central Bank of Kenya by June 30, 2012 was used in this study. Bivariate linear regression was used to test the null hypothesis; there is no relationship between bank growth and occupational fraud risk in commercial banks in Kenya. The findings from this study are the negative and not significant effect of bank growth on occupational fraud risk in commercial banks in Kenya. These results provide important insights on to management on the overall effect of customer base expansion and occupational fraud risk and further provide a pointer to the regulatory authorities as to what their efforts should be in deterring occupational frauds in Kenya.

**Key Words:** *Bank growth, Occupational Fraud Risk, Bivariate Regression*

### Introduction

Occupational fraud risk is a global problem and its frequency is highest in banks than any other industry globally (ACFE, 2010). Global fraud study report to the Nations, a publication of the Association of Certified Fraud Examiners (ACFE, 2010) on occupational fraud and abuse indicate that a typical organisation loses 5% of its annual revenue to Fraud. Applied to the consolidated Commercial Banks revenue for the year 2011, (CBK, 2011) the loss translates to

KShs 13 Billion loss to fraud. Occupational Fraud loss is not unique to Kenya and is in the rise globally (Kroll, 2011). Occupational fraud prevalence remains high with the estimated prevalence levels as; North America (23%), Canada (16%), Europe (16%), Mexico (23%), Latin America (18%), Middle East (19%), India (23%), China (20%), South East Asia (24%) and Africa 33%. Further statistics show that Africa has not only the highest fraud prevalence (33%), but also the fastest growing exposure levels of 84% (2011) up from 70% (2010). Globally, occupational fraud is highest in Africa compared to other regions globally. The vice continue to threaten the expansion of businesses globally.

### **Occupational Fraud in Kenya**

While the global ranking of fraud in commercial banks ranks number 15 out of 25 risks in order of perceived severity, fraud is unique to East Africa in that it ranks number 2 out of 25 risks when ranked in order of severity (PWC 2011). Kenyan banking sector is the most affected by the vice compared to Uganda, Tanzania, Rwanda and Zambia (PWC, 2011). Government of Kenya statistics report an alarming 45% annual average increase in number of economic crimes (GOK, 2011). Banks in Kenya lost a staggering Kshs 1.7bn in the three months August to October 2010. Commercial banks lost Kshs 761 Million in the first six months of 2010 through fraud, according to the Central Bank of Kenya (PwC, 2011). The Government of Kenya earmarked the banking sector as one of the key pillars to the achievement of vision 2030. Within the Medium Term Plan (2008-2012) under vision 2030, some of the target areas include development of a safe and reliable payments system that will ensure smooth transfer and settlement of funds between customers and banks as well as between banks. Towards this end, the use of mobile phone networks, internet and payment cards, operational resilience and security will be pursued in order to increase trust, integrity and confidence in the ICT based payment systems (GOK, 2008).

### **Statement of the Problem**

Kenya has the highest incidences of fraud in the world, based on a global ranking of 78 Countries surveyed (PwC, 2011). Fraud statistics are nearly double the global average of 34 per cent and significantly higher than the fraud incidence average in Africa of 57 per cent. Banks occupy a unique position within the Kenyan economy because of their special role in financial intermediation (CBK, 2011). The banking sector maintain over 14.25 million deposits accounts with gross Kshs 1.19 trillion and over 1.99 million loan accounts worth over Kshs 914.9 billion (CBK, 2010). Commercial banks in Kenya are more susceptible to fraud than commercial banks

in her neighbouring countries in Eastern Africa (PWC, 2010). Commercial banks adopted have continually adopted risk management guidelines issued by the Central Bank of Kenya (CBK) for over five years. Despite the significant 84% (36) of commercial banks in Kenya complying with risk management guidelines issued by CBK, 95% of commercial banks are concerned with fraud risk (CBK, 2010). The concern is principally due to the rising losses from fraud to their employees and customers. Rising rate of the vice can erode investor and consumer confidence and pose a great threat to potential investors in Kenya (PWC, 2011). Empirical studies; Duffield & Grabosky, 2001; Zahra, Priem & Rasheed, 2005; Mustafa & Youssef, 2010 concentrated on the causes and motivations to defrauding by staff. Other scholars, Alleyne and Howard, 2005; Bakre, 2007 & Lange (2008), studied the role of external auditors in fraud, detection and prevention and they produced conflicting findings. Some of the fraud risk studies that incorporated technology and its role in fraud risk management include; (Graziolo & Jarvempaa, 2003; Haugen & Selin, 1999; MacInnes, Musgrave & Laska, 2005; Nikitkor & Bay, 2008). From the reviewed empirical literature, it is evident that there is hardly a comprehensive empirical study on the effect of bank characteristics on occupational fraud risk (OFR) in commercial banks in Kenya. The study aim was to find out the effect of bank growth on occupational fraud risk in commercial banks in Kenya.

## Literature Review

### Concept of fraud

According to the Association of Certified Fraud Examiner (ACFE, 2010), occupational fraud is the use of one's occupation for personal enrichment through the deliberate misuse of or misapplication of the employing organizations resources or assets. Irrespective of the sector, a wide category of crimes, swindles and employee trust violations fall under the category of fraud (ACFE, 2010; (Duffield and Grabosky, 2001 & Levi, 2008).

### Theoretical Literature Review

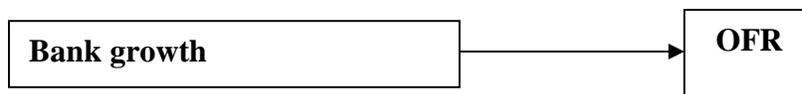
Many theories have been put forward in an attempt to explain the concept of fraud. Among the most popular in fraud studies include Cressey's Fraud Triangle Theory which describe a triangular relationship between opportunity, pressure, and rationalization (Wilson, 2004). Wilson (2004) explains "opportunity" as the ability override fraud controls. Similarly, Wilson *ibid* describes "pressure" the motivation to commit the fraudulent act, and "rationalization" as

referring to the moral and ethical argument used to justify the act. In his work, Wesley (2004) developed the “Wesley’s Fraud Management Lifecycle Theory” made up interrelated and interconnected eight stages; deterrence, prevention, detection, mitigation, analysis, policy, investigation and prosecution. Unlike the fraud triangle theory, Wesley (2004), view that fraud management activities do not necessarily, occur in a sequential or linear flow. Fraud literature indicate that there seems to be a concurrence among scholars; (Bagnoli & Watts, 2010;, Gillett and Uddin, 2005 and Carpenter and Reimers, 2005) that occupational frauds are not random occurrences. On the other hand, (ACFE, 2010; Langenderfer & Shimp, 2001;, Zahra, 2005 & Bakre 2007) strongly hold that various factors contribute to the likelihood of their occurrence, and the form of the occurrence. From this, it appears that fraud occurrence still remains a empirical question among scholars but it is generally agreed that it is not random. Given the high levels of reported occupational frauds and the sustained growing banking sector in Kenya, the following is hypothesized;

$H_0$ : *There is no relationship between bank growth and occupational fraud risk in commercial banks in Kenya.*

### Conceptual Framework

The conceptual framework is based on bank growth as the regresses and OFR (amount of fraud, number of frauds and frequency of frauds) as the regressed.



**Regresses**

**Regressed**

**Figure 1:** Conceptual Framework for the effect of bank growth on OFR in commercial banks in Kenya.

### Empirical Literature Review

When a bank experiences growth, its size increases. Organizational characteristics for example organizational size, may affect its susceptibility to occupational fraud and the monetary sizes, frequency and even number of a typical fraud (Clinard & Yaegar, 1980, Owusu-Ansah, Moyes, Oyelere, & Hay 2002). There are various reasons given as to why an organizational growth in size may influence the probability of occupational fraud. First, personal and managerial occupational fraud controls likely to change over size. Secondly, the opportunities and necessity for formalized managerial controls may increase with organizational growth and the

communication processes may be different in a growing organization than in small organizations and those that are static in growth. When an organization grows, tendency for breaks of controls or even laxity of enforcement of controls may increase organizational susceptibility to occupational frauds (Turner & Stephenson, 1993). Further, when an organization grows, the opportunities for perpetrating occupational frauds and the motivations thereof may change.

The relationship between changing organizational size and the susceptibility to occupational fraud is dependent upon both how the incidence of fraud and the size of average dollar losses change with organizational change in size. It is expected that fraud incidence to increase with size as organizations with a greater number of employees and a greater number of transactions present more opportunities for fraudsters. On the other hand, larger organizations are likely to implement a greater level of control than their smaller counterparts. This is for two reasons. First, economies of scale make implementation of controls relatively cheap. For instance, there will be separation of duties (or if not, there will be scope for it). This may be much more difficult (or even impossible) for smaller organizations, without the employment of additional staff. Second, if the average fraud is greater for large organizations, the marginal benefit (in terms of size of fraud prevented) of implementing the *n*th control is likely to be greater. The actual relationship between organizational growth and the incidence of occupational fraud is an empirical question but is likely to be dependent on which of these competing forces is the stronger (Barnes & Webb, 2005).

There is no reason why the size of an average dollar loss should stay constant across organizational growth. In fact, it is likely to increase due to the greater availability of funds in larger organizations. If average dollar losses arising from occupational fraud and the incidence of occupational fraud both increase with organizational size, then susceptibility to fraud will disproportionately increase with organizational size (Akerlof and Romer, 1993). From this discussion we construct the following hypotheses is therefore proposed;

Literature reviewed indicates that scholars have conducted studies on various themes of fraud and white collar crimes. For example, Dunn & Albrecht (2001), Erickson & Maydew (2006), Ball (2009), Hochberg, Sapienza & Jorgensen (2009), Miller (2006) studied antecedents of fraud. On the other hand, Knapp and Knapp (2001), Cullinan and Sutton (2002), Ramos (2003) Alleyne and Howard (2005), Bakre (2007) Lange (2008), Hoffman and Zimbelman (2009), Mustafa and Youssef (2010) studied the role of internal audit in fraud risk management. Other studies such as those by Baker (2002), Chua and Wareham (2004), Vasiu and Vasiu (2004), Gregg and Scott (2006) concentrated on the role on information technology in fraud risk management. In a more recent survey, Idowu (2010) conducted fraud assessment in commercial Banks. From the reviewed empirical literature on fraud and organizational characteristics, it is evident that research on the influence of bank growth on OFR in Kenya not been done. This aim of the study was to provide insight on the effect of bank growth on OFR in commercial banks in Kenya and provide important recommendations based on the empirical findings.

### Research Methodology

The study assessed the bivariate relationship between bank growth and OFR in commercial banks in Kenya. The target population was all the 43 Commercial banks operating in Kenya 30<sup>th</sup> June 2012. These banks are classified by the Central Bank of Kenya (CBK) using Market Share Index (MSI); 6 large banks operating in 546 branches, 15 medium banks operating in 310

branches and 22 small banks with 199 branches. A stratified sample 257 respondents from 30 commercial banks was selected.

CBK annual reports were used to determine the number of customer deposit accounts for the 10 years period (2002-2011). For the selected thirty commercial banks, increase in number of customer deposit accounts (CDA) was determined for a ten year period by subtracting the number of customer deposit accounts as at December 31, 2011 ( $nCDA_{2011}$ ) from the number of customer deposit accounts as at December 31, 2002 ( $nCDA_{2002}$ ).  $\log(Ncda_{2011} - nCDA_{2002})$  was used to measure bank growth. Self administered questionnaires were used to obtain primary data on OFR (number frauds, amount of frauds and frequency of occupational frauds experienced in commercial banks for the last five years (2006 – 2011). Over 79% of the commercial banks in Kenya have centralized risk management model (CBK, 2010) and each is head quartered in Nairobi (the capital city). It was considered appropriate to focus on the head offices of each bank because branches will generally reflect centralized risk management (CBK, 2010). Questionnaires' reliability of 0.97 was achieved using Cronbach alpha. This measure was considered adequate for the study (Cooper & Schindler, 2011). Two independent professionals, from the Certified Fraud Examiners, Kenya Chapter reviewed the wording and content of the questionnaire to enhance content validity. OFR measures (Amount, number and frequency) in the questionnaire were Likert-type scale that ranged from 1 to 5 with the following equivalences, "1": "strongly disagree"; "2": "disagree"; "3": "neutral"; "4": "agree"; and "5": "strongly agree". Likert scale is a useful in measuring attitudes and perception (Chimi & Russel, 2009).

## Results

### Response Rate

Two hundred and thirty six questionnaires were returned filled giving a response rate of approximately 89%. Majority of the Banks 25 (83%) had over 80% response rate. The response rate in this study was higher than that achieved by Idolor (2010) who reported a response rate of 70% in their study on determinants of corporate crime in Nigeria. Response distribution of the 236 respondents in terms of age was categorized between the age of 21 – 30 (28%), 31- 40 years (40%), 41-50 years (32%), over 50 years (2%). This is a pointer that the respondents had reasonably sufficient knowledge on the subject of the study within the banking sector in Kenya. A significant 206 (87%) of the respondents had banking sector experience between 1 and 10 years and therefore likely to have reasonable exposure to the subject of this study; OFR in commercial banks in Kenya. The high response rate was attributed to anonymity as potential respondents were not required to disclose their traceable identifiers on the filled questionnaires.

### Test of Assumptions

Durbin –Watson  $d$  statistic test of univariate independence for bank growth resulted a coefficient of  $d=2.080$ , well within the range of 1.5 and 2.5 for independent observations (Garson, 2012), (Porter & Gujarat, 2009). Normality test statistics computed for bank growth in both assessed using Q-Q plots indicated normality of distribution of bank growth.

### Statistical Model

The scores of bank growth were regressed on weighted scores of OFR. Results of curve estimation using SPSS Version 17.0 indicated that a linear mathematical model was adequate for the testing of hypothesis. Linear relationship between determinants of fraud and fraud risk is

expected based on the results of above tests of assumptions (Shevlin & Miles, 2010). The mathematical relationship between the variables was hypothesized as;

$$\text{OFR} = \alpha + B_g$$

Where:

OFR=occupational fraud risk (stimulus)

$B_g$ = bank growth (response)

**Table 2: Model Summary of OFR/ Technology Adoption**

| Model Summary <sup>b</sup> |                   |          |                            |               |  |
|----------------------------|-------------------|----------|----------------------------|---------------|--|
| Model                      | R                 | R Square | Std. Error of the Estimate | Durbin-Watson |  |
| 1                          | .342 <sup>a</sup> | .116     | .2477954                   | 2.080         |  |

**a. Predictors: (Constant), bank growth**

**b. Dependent Variable: OFR**

The linear regression analysis shows that there is a moderate relationship,  $R = .342$  and  $R\text{-Square} = .116$  which means that 11.6% of the corresponding variation in OFR is explained by a unit change in bank growth measures. **Table 3** shows significance of the model predictor in the hypothesized model. Barnes and Webb (2005) found that size of the organization increases its overall susceptibility to occupational fraud among companies in UK. Similarly Akerlof & Romer (1993) found that there was a positive relationship between organizational growth and fraud incidence among financial institutions

**Table 3: Regression Model Significance**

| ANOVA <sup>b</sup> |            |                |    |             |       |                   |
|--------------------|------------|----------------|----|-------------|-------|-------------------|
| Model              |            | Sum of Squares | df | Mean Square | F     | Sig.              |
| 1                  | Regression | .225           | 1  | .225        | 3.661 | .066 <sup>a</sup> |
|                    | Residual   | 1.719          | 28 | .061        |       |                   |
|                    | Total      | 1.944          | 29 |             |       |                   |

**a. Predictors: (Constant), bank growth**

**b. Predictand: Occupational Fraud Risk**

Regression analysis is table 4; shows that the Linear relationship between OFR and bank growth has an F value  $F=3.661$  which is not significant with p value  $p=.066 > p=.05$  meaning that, tested at 95% degree of confidence, the overall model is not significant in the prediction of occupational fraud risk in commercial banks in Kenya. We therefore fail to reject the null hypothesis that there is no effect of bank growth on occupational fraud risk in commercial banks in Kenya.

**Table 4: Model Coefficients**

| Coefficients <sup>a</sup> |             | Unstandardized Coefficients |            | Standardized Coefficients |        |      |
|---------------------------|-------------|-----------------------------|------------|---------------------------|--------|------|
| Model                     |             | B                           | Std. Error | Beta                      | t      | Sig. |
| 1                         | (Constant)  | 1.215                       | .076       |                           | 16.003 | .000 |
|                           | Bank growth | -.079                       | .041       | -.340                     | -1.913 | .066 |

**a. Dependent Variable: Occupational Fraud Risk**

Table 4 shows; test on the beta coefficient of the resulting model, the constant  $\alpha = 1.215$  is significant with p value  $p = 0.000 < p = 0.05$ . The coefficient  $\beta = -.079$ , has a p value of 0.066 which is marginally greater than  $p = 0.05$ . This means, bank growth is marginally significant in the regression model at 95% degree of confidence.

**Conclusions, Recommendations and Limitations**

The relationship between bank growth and occupational fraud risk in commercial banks in Kenya is negative and not significant. This is explained by the beta value of -0.079 and the p value of 0.066 presented in the model coefficients (Table 4). This study confirms that occupational fraud exposures experienced in commercial banks in Kenya is not necessarily as a result of the bank growth. The results show that occupational fraud risk is more of a constant which was found to be statistically very significant. These findings point that occupational fraud risk exposure levels marginally decline with growth but the same is not statistically significant. The banks that experienced phenomenal growth and those which marginally grew in terms of customer deposits more or less experienced the same level of exposure of occupational frauds. This means that commercial banks need to address the issue of occupational fraud risk from the staff perspective and structural perspective (bank growth). However, it is important to note that bank growth cannot be ignored as commercial banks that did not grow had higher OFR compared to those that did not. Moreover, banks should also continue to enforce, practice and maintain high ethical standards in performance of the duties as well as ensure that fraud governance is tight. In the context of fraud triangle theory, bank growth therefore does not necessarily in overall increase the “opportunity” for staff to perpetrate fraud. However management should conduct intensive integrity checks on staff to reduce the exposure level to occupational frauds. These measures are necessary to bank resources and reduce of occupational frauds in the bank at tolerable levels if not eliminate them. A number of limitations were noted. In the determination of the composite measure of OFR, this study used Likert scaled measure of perception of the bank players’ perception on the trends in number, amount and frequency of occupational fraud within their banks. This study measured growth in terms of increase in customer base over a period of ten years. Other measures such as increase in number of employees, increase in number of branches, increase in number of products offered to customers, increase in net assets, and increase in market share could be used to assess their effect on OFR. Better work could be achieved in future by using information from other industries in order to generalize the occupational fraud phenomena in the Kenyan context. Further this study is limited to commercial banks in Kenya and excludes other financial intermediation players such as the Forex Bureaus, mortgage banks, micro finance institutions and pension funds.

## References

- Akerlof, G. A. & Romer P. (1993). Looting: the economic underworld of bankruptcy for profit. *Brookings Papers on Economic Activity*.
- Alleyne, P., Howard, M. (2005). An exploratory study of auditors responsibility for fraud detection in Barbado., *Managerial Auditing Journal*, 20(3), 284-303.
- Association of Certified Fraud Examiners (ACFE). (2010). Report to the Nation on Occupational Fraud, Retrieved November 26, 2011, from <https://acfe.com/documents/2010RttN.pdf>
- Association of Certified Fraud Examiners ACFE. (2008). ACFE report to the nation on occupational fraud and abuse, *Association of Certified Fraud Examiners: Technical report; 2008*.
- Bagnoli, M., Watts, S. (2010). Oligopoly, disclosure, and earnings management. *The Accounting Review*, 85(4), 191-1214.
- Baker, C. (2002). Crime, fraud and deceit on the internet: is there hyper-reality in cyberspace? *Critical Perspectives on Accounting*, 13(1), 1-15.
- Bakre, O. (2007). The unethical practices of accountants and auditors and the compromising stance of professional bodies in the corporate world: evidence from corporate Nigeria. *Accounting Forum*, 31, 277-303.
- Ball, R. (2009). Market and political/regulatory perspectives on the recent accounting scandals. *Journal of Accounting Research*, 47(2), 277-323.
- Barnes P. & Webb J. (2005). *Reducing an organizations susceptibility to occupational fraud: Factors affecting its likelihood and size*. Business Risk and Security Management, London, UK.
- Carpenter, T., Reimers, J. (2005). Unethical and fraudulent financial reporting: Applying the theory of planned behavior. *Journal of Business Ethics*, 60(2), 115-129.
- Central Bank of Kenya (2011). Central Bank of Kenya, Quarterly report on Development in the Kenyan banking Sector for the period ended 30th June 2011. *retrieved on 8th August 2011* [www.centralbank.go.ke/downloads](http://www.centralbank.go.ke/downloads)
- Central Bank of Kenya, CBK (2010). Directory of Commercial banks and Mortgage Finance Companies, Kenya. *Retrieved on Friday, 26th August, 2011 from the website: <http://www.centralbank.go.ke/downloads/bsd/Commercial%20Banks%20Directrory%20-%2031%20December%202010.pdf>*
- Central Bank of Kenya, (CBK) (2010). Bank Supervision report; Kenyan banking Sector for the period ended December 2010. *Retrieved on 8th August 2011* [www.centralbank.go.ke/downloads](http://www.centralbank.go.ke/downloads).
- Chimi, C.J & Russel, D. L. (2009). "The Likert Scale. A proposal for Improvement Using Quasi-Continuous Variables", *Proc INSECON*, 26, pp. 1 -10.
- Clinard M. & Yaeger P. (1980). *Corporate Crime*. New York, Press.
- Cooper, R .D., & Schindler,P.S. (2011). *Business Research Methods*. (11th Edn.) McGraw-Hill Publications. New York, United States.
- Cullinan, C., Sutton, S. (2002). Defrauding the public interest: a critical examination of reengineered audit processes and the likelihood of detecting fraud. *Critical Perspectives on Accounting*, 13, 297-310.
- Duffield, G., Grabosky, P. (2001). The psychology of fraud. Trends and issues in crime and criminal justice 200. *Australian Institute of Criminology*, Canberra.
- Erickson, M., Hanlon, M., Maydew, E. (2006). Is there a link between executive equity incentives and accounting fraud. *Journal of Accounting Research*, 44(1), 113-143.

- Gillett, P., Uddin, N. (2005). CFO intentions of fraudulent financial reporting. *Auditing: A Journal of practice and Theory*, 24 (1), 55-75.
- Government of Kenya (2008). *A globally competitive and prosperous Kenya*. First Medium Term Plan 2008-2012.
- Government of Kenya.(2010). *Kenya National Bureau of Statistics. Economic Survey 2010*. Nairobi. Government Printer.
- Gregg, D., Scott, J. (2006). The role of reputation systems in reducing on-line auction fraud. *International Journal of Electronic Commerce*, 10(3), 95-120.
- Haugen, S., & Selin, J. (1999). Identifying and controlling computer crime and employee fraud. *Industrial Management and Data Systems*, 99(8), 340-344.
- Hochberg, Y., Sapienza, P., Jorgensen, A. (2009). A lobbying approach to evaluating the Sarbanes-Oxley Act of 2002. *Journal of Accounting Research*, 47(2), 519-583.
- Hoffman, V., Zimbelman, M. (2009). Do strategic reasoning and brainstorming help auditors change their standard audit procedures in response to fraud risk. *The Accounting Review*, 84(3), 811-837.
- Idolor, J. (2010). Bank Frauds in Nigeria: Underlying causes, effects and possible remedies; *African Journal of Accounting, Economics, Finance and Banking Research*, 6(6):62-79
- Idowu, A. (2010) An Assessment of Fraud and its Management in Nigeria Commercial banks. *European Journal of Social Sciences – Volume 10, Number 4 Department of Management Science, Faculty of Engineering and Technology Ladake Akintola University of Technology, Ogbomoso*.
- Knapp, C., Knapp, M. (2001). The effects of experience and explicit fraud risk assessment in detecting fraud with analytical procedures. *Accounting, Organizations and Society*, 26, 25-37.
- Langenderfer, J., Shimp, T. (2001). Consumer vulnerability to scams, swindles and fraud: a new theory of visceral influences on persuasion. *Psychology & Marketing*, July, 763-769.
- Kroll (2011). "Global Fraud Report". Economist Intelligence Unit Survey Results, Tom Hartley Publication.
- Lange, D. (2008). A Multidimensional Conceptualization of Organizational Corruption Control. *Academy of Management Review*. 33(3).
- Levi, M. (2008). Organized frauds and organizing frauds: unpacking the research on networks and organization. *Journal of Criminology and Criminal Justice*, (7), 389-419.
- MacInnes, I., Musgrave, D., Laska, J. (2005). Electronic commerce fraud: towards an understanding of the phenomenon. *Proceedings from the Hawaii International Conference on System Sciences*.
- Mustafa, S., Youssef, N. (2010). Audit committee financial expertise and misappropriation of assets. *Managerial Auditing Journal*, 25(3).
- Owusu-Ansah, S., Moyes, G., Oyelere, P., & Hay, D. (2002). An empirical analysis of the likelihood of detecting fraud in New Zealand. *Managerial Auditing Journal*, 17(4), 192-204.
- Porter, C., Gujarati D. (2009). *Basic Econometrics*. 5<sup>th</sup> ed. New York, The McGraw- Hill Companies, Inc.
- Ramos, M. (2003). Auditor's responsibility for fraud detection. *Journal of Accountancy*, 195(1).
- Shevlin M., Miles J. (2010). *Applying Regression & Correlation*. A guide for students and researchers. London, Sage Publications.

- Turner, D. & Stephenson R. (1993). The Role of White-Collar Crim. *Journal of Security Management*, 37 (2).
- Vasiu, L., and Vasiu, I. (2004). Dissecting computer fraud: from definitional issues to a taxonomy. *Proceedings of the Proceedings of the 37th Annual Hawaii International Conference on System Sciences*.
- Wesley K.(2004).Fraud Management Lifecycle Theory. A holistic Approach to Fraud Management. *Journal of Economic Crime Management*. (2), (2).
- Wilson, R. A. (2004). Employee dishonesty: National survey of risk managers on crime. *Journal of Economic Crime Management*, 2(1) 1-25.Zahra, S. Priem, R. Rasheed, A. (2005). The antecedents and consequences of top management fraud. *Journal of Management*, 31(6), 803-828.