Fighting Economic and Financial Crimes in Nigeria Using Forensic Accounting: The Moderating Effect of Technology

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Abstract

Increase in technology has been helping all sectors of the economy in Nigeria. Yet, there is no gainsaying the fact that technology has both the positive and the negative sides of it. While economic and financial crimes perpetrators manipulate the negative part, forensic accounting uses it as a tool to unearth perpetrators. Crimes classified as economic and financial remain major problem facing the Nigeria’s economy and the citizenry and many believe that forensic accounting is the only panacea in Nigeria. We used the survey method for the purpose of this study. Four hypotheses (null hypotheses) were tested using the Pearson product moment correlation coefficient (PPMC) statistical tool. We find that forensic accounting has a significant but negative relationship with economic and financial crimes; technology has significant and positive relationship with both forensic accounting and economic and financial crimes; and that technology moderates the relationship that exists between forensic accounting and economic and financial crimes. We then made some recommendations such as mandatory forensic accounting department ought to be established in publicly and privately owned institutions and offices through regulatory authorities and not on voluntary basis; recruit forensic accountants/investigators/auditors in both the private and public sectors and regularly train and retrain them on current technologies; the Nigerian government should amend existing laws to meet the requirements of present day technological advancement. We then concluded that forensic accounting as afIELD has all it takes to fight economic and financial crimes in Nigeria and that technology moderates the relationship, though negative, between forensic accounting and economic and financial crimes hence the need for technological advancement in forensic accounting in order to fight against economic and financial crimes.

Keywords: Forensic accounting; Economic and financial crimes; Nigeria and technology.

1. Introduction

Technology has to do with the application of science in solving problems. Changes in technology have always played a great duty in making forensic accounting jobs easier. Increase in the knowledge of technology increases efficiency and effectiveness of forensic accounting and likewise increases the speed and ease for criminals to commit economic and financial crimes. That is, if technology is applied in the right direction, it can be very beneficial and profitable to individuals and corporate institutions but if wrongly applied can result to a great harm and disservice to individuals and corporate institutions. While some areas of our lives profits from technology, other areas that are susceptible are harmfully affected. So fraudsters and criminals manipulate the weak areas to carry out their criminal acts such as fraud, money laundering, cybercrimes, and advanced fee fraud among others while professionals use it to investigate and track down those criminals and their fraudulent activities.

The manifestation of economic and financial crime can be comfortably described as wild and endemic. It is committed in the public and private sectors. Economic and financial crime can be understood to be a crime that does not involve violence but equivalent to normal economy disruption resulting in financial loss or earning that is deliberately earned by a person or in group of persons in an organization in a way that legislative enactment that governs the economic activities are violated.

Economic and Financial crime in Nigeria today is deeply rooted in almost all the aspects and levels of the economy which has impacted negatively on the Nigerian economy and the society as a whole.

The setting up of the anti-corruption agencies to counter “Economic and Financial Crimes” in Nigeria has not shown much significant improvement and the government can be seen as paying lips service and making noise instead of confronting the ugly menace of economic and financial crimes. Present and preceding governments in Nigeria have enacted several laws with the aim of combating economic and financial crime, yet it has not made any significant improvement neither has the impact felt among the citizenry.

There were many arrests made as it regards financial crimes in Nigeria and in many of these cases nothing or little is heard after the suspect meets the condition(s) for bail. In some cases it lingers in the law court for years without conclusion for wanton and dearth of evidences that are convincing and convicting.

While Ojaide (2000) and Izedonmi and Mgbame (2011) believe that there is the need for the services of forensic accounting due to the worrying rate of increase in fraudulent cases and activities in Nigeria, Modugu and Anyaduba (2013) and Enofe et al. (2015) believes opined there exist a common anticipation that forensic accounting may probably curtail the surge of financial malfeasance seen in the greater part of the economy of Nigerian.

This study attempts to find out if forensic accounting can be used as the needed tool to battle economic and financial crime trend in Nigeria; the impact of technology on forensic accounting and economic and financial crimes;
and also examine whether technology moderates the association between forensic accounting and economic and financial crimes.

2. Research Questions and Statement of Hypotheses

The following research questions are posed for the study:

RQ1: Can forensic accounting be used as an effective tool to fight economic and financial crimes in Nigeria?
RQ2: Is there any significant relationship between technology and forensic accounting?
RQ3: Is there any significant relationship between technology and economic and financial crimes?
RQ4: Does technology moderate the relationship between forensic accounting and economic and financial crimes?

The answers to the questions above were used in testing the following null hypotheses:

Ho1: Forensic accounting can be used as an effective tool in fighting economic and financial crimes in Nigeria.
Ho2: There is no significant relationship between technology and forensic accounting.
Ho3: There is no significant relationship between technology and economic and financial crimes
Ho4: Technology does not significantly moderate the relationship between forensic accounting and economic and financial crimes?

3. Literature Review and Hypotheses Formulation

Here, the researchers reviewed literatures relevant to the study in order to develop a thorough understanding on the variables. The variables in this study are forensic accounting (the predator variable), economic and financial crimes (the criterion variable) and technology (the moderating or mediating variable). References are made to the work done by other authors or researchers. Hypotheses are formulated based on the literatures reviewed.

3.1. The Concept of Forensic Accounting

The American Institute of Certified Public Accountants (2000) asserted that forensic accounting has to do with applying principles of accounting, theories of accounting and discipline of accounting to facts and hypothesis at issues as it concerns legal dispute and comprises all branch of knowledge in accounting. Ijeoma (2015) defined it as an aspect of accounting growing rapidly and explains the engagement resulting from real or expected dispute or litigations. It involves reporting of fraud which is produced as facts in the courtroom (Crumbley, 2001; Joshi, 2003; Mehta and Mathur, 2007; Rezaee et al., 2006), sees it as concerning with using accounting profession to help establish issues that are facts in the business of litigation. Daminola and Olofinso (2007) asserted that forensic accounting means applying methods of criminalities and incorporation of the accounting investigation activities and the procedures of law for the detection and investigation of financial crimes and associated economic misdeeds. Crumbley et al. (2009) explains forensic accounting to mean a process that identifies, records, sets, extracts, sorts, reports and verifies earlier period financial records or other activities concerning accounting to settle legal disputes currently and in the future or use the past financial data to project potential financial data in settling legal dispute. Jafaru (2011) sees forensic accounting as applying financial skills and mindset investigation to conduct as contained by the framework of the rules of evidence for resolving issues that are not resoloved. Krell (2002) sees it as frequently involving in comprehensive detailed effort to penetrate tactics of concealment. Forensic accounting involve the use of accounting, investigating and auditing knowledge, tactics and techniques in producing evidence of financial malpractices that meets the criteria to be used in the law court in the prosecution of an individual, group or organization. The evidence can be used for or against the suspect in the court of law.

One of the challenges facing Nigeria as it concerns the application of forensic accounting according to Ribaud (2006) is insufficient professionals that are competent in handling corruption cases. He also listed slow pace of cases witness in the judiciary that have resulted in delayed process of prosecution. Crumbley (2001), and Grippo and Ibex (2003) listed gathering of admissible information in the courtroom, the acceptability of proof in accordance with laws of evidence and inter-jurisdiction problem. Also, the laws in Nigeria are not always current when compared with latest advancement in technology (Degboro and Olofinso, 2007).

3.2. The Concept of Economic and Financial Crimes

The term “Economic and financial crimes” comprise a broad array of activities ranging from fraud to actively manipulating stock market or proceeds from crime laundering (Australian Crime Commission, 2011). It includes a range of activities that are not legal for example money laundering and evasion of tax (International Monetary Fund, 2001). According to United Nations (UN) Office of Drug and Crimes (2005), it includes wide collection of activities that are not legal such as, evasion of tax, laundering of money and fraud. The wide ranges of crimes under the economic and financial crimes are seen in the definition of the term in the EFCC Act 2004 in Section 46. “etc.” used by the EFCC suggests that there are other crimes not mentioned but are still seen and classified as economic and financial crime. The term is a vague one and this may have prompted Emeh and Obi (2013) to suggest that it is better that the term is not defined to avoid certain situations where people will find ways to commit crimes outside the definition.

It ranges from smuggling, money laundry, fraud, advance fee fraud, tax evasion, counterfeiting, identity theft, embezzlement, , looting, terrorist financing, cybercrime, theft, forgery, bribery, nepotism, electronic crime and market abuse, insider dealing and all forms of corruption and illegal activities. Though different authors have defined economic and financial crimes; the facts remains that the list cannot be exhausted.
Economic and financial crimes are carried out by individuals, corporate institutions as well as organized crime groups in order to acquire criminal prosperity and the victims are always individuals, government, institutions and the general economy. Generally economic and financial crimes are global problem and it affects the economy of any country and the society at large. It is a menace that must be uncovered and also prevented. It has eaten deep into the economy of many nations including Nigeria. And except frantic efforts and steps are taken, it will keep increasing.

3.3. Forensic Accounting and Economic and Financial Crimes

A survey of crime shows that 37% of those that responded in fifty countries, reported economic crimes having USD2, 199,930 average loss per company (Price Water House Cooper, 2003). They further posited that dealing with suspicion of economic crimes, such as fraud or corruption issues, requires much more than simple know-how. Adamu (2012) suggested an aggressive study in forensic education to students, academicians and practitioners with an opinion to address the horrible occurrence of fraud characterised by the considerable changes that business posed due to globalisation, advancement in technology and soared financial scandals profile.

Ribadu (2004) opined that cases that involve economic and financial crimes are often intricate and involves papers and subjects that are technical and also requires an investigator that is well-schooled to unearth it. Adegbie and Fakile (2012) asserted that forensic accounting is a financial (monetary) move towards controlling and resolving crimes (economic and financial) in the economy of Nigeria. To them, in the financial statements forensic accounting provides investigative accounting. Stanbury and Paley-Menzies (2010) sees it as a science that is used in information assembling and presenting in a way that is acceptable by a court having jurisprudence that is not in favour of economic and financial crimes perpetrators. Howard and Sheetz (2006) asserted that the emergence of forensic accounting in recent times was in response to the development of the rising occurrence of frauds and malpractices in corporate management.

While Ojaide (2000) and Izedonmi and Mgbame (2011) believe that there is the need for the services of forensic accounting due to the disturbing pace at which fraudulent cases and its activities are increasing in Nigeria, Modugu and Anyaduba (2013) and Enofe et al. (2015) are of the opinion that there is common anticipation that forensic accounting will probably have the ability to limit the surge of financial malfeasance experienced in the larger part of the economy of Nigerian. Enofe et al. (2015) posited that, concerning the banking sector, forensic accounting is an instrument for taking care of financial crimes. Dada et al. (2013) believes that reduction in fraud is considerably related to fraud investigation and uncovering through forensic accounting.

There seems to be a universal view that forensic accounting is probably the effective tool to curtail the ever increasing rate of economic and financial crimes today in Nigeria hence the statement of the first hypothesis. Ho₁, Forensic accounting can be used as an effective tool in fighting economic and financial crimes in Nigeria.

3.4. Technology and Forensic Accounting

The accounting profession is witnessing a major change in technology. Present day’s accountants must thus posses a sound knowledge and must be skillful in using technology. The skills and sound knowledge of technology will assist accountants in analyzing various critical problems.

Technology plays different roles in aiding forensic accounting in its investigation as it allows the forensic investigator analyse large volume of transactions, identify trends, documents spotting for further review and gaining of preliminary understanding. It assist forensic accounting in electronically reconstructing of shredded documents, determining how fraud was committed, recovering of fields that are deleted, detecting steganography, cracking of encryption/codes and data extraction and sorting. Pearson and Singleton (2008) are of the opinion that the need of obtaining, managing and analysis of evidence that are digital is vital for potential accounting profession’s success. Forensic accounting uses much technology based investigative tools while investigating in this modern present internet era such as software for data mining and analysis and at times the tools that the hackers used are use in forensic accounting to track down the hackers.

Increase in the knowledge of technology increases efficiency and effectiveness of forensic accounting. Technology was acknowledged to be imperative to organization as well as accountants by the American Institute of Certified Public Accountants.

This leads us to the statement of hypothesis 2. Ho₂. There is no significant relationship between technology and forensic accounting.

3.5. Technology and Economic and Financial Crimes

The present globalised economy and modern technologies creates opportunities that are new for crimes that are organised to exploit weak areas for gain (Australian Crime Commission, 2011). Rapid technological advancements offer opportunities that are for such crimes (United Nations (UN) Office of Drug and Crimes, 2005). Increase in the knowledge of technology increases the speed and ease for criminals to commit economic and financial crimes. They wrongly apply their knowledge on modern technology hence resulting in economic and financial losses to individuals and corporate institutions. They manipulate the susceptible areas of the technology to execute their criminal acts that ranges from fraud, money laundering, cybercrimes, advanced fee fraud, tax evasion, kick backs etc.

The literature on technology and economic and financial crimes has led us to the 3rd statement of hypothesis. Ho₃. There is no significant relationship between technology and economic and financial crimes.
3.6. Technology, Forensic Accounting and Economic and Financial Crimes

Today the world is globalised and individuals and corporate institutions depend on technology for most of their activities hence an increase in the need for technology. While numerous aspects of our lives profits much from technology, several areas are weak and are having effect that are negative and several perpetrators use these digital equipments as tools for committing fraud (Maskokilima in Sekolah Tax, 2010). Increase in the knowledge of technology increases efficiency and effectiveness of forensic accounting and likewise increases the speed and ease for criminals to commit financial crimes. Smith (2005) posited that, majority of all fraud (financial) involves digital equipments and computer usage. But Maskokilima in Sekolah Tax (2010) concluded that, the gains of technology, for instance, computer and other forms of digital equipments are more than the negative side. Technologies offer new opportunities to both the forensic accounting investigator and the economic and financial crimes perpetrators. The question now is that does technology moderate the relationship that exist between forensic accounting and economic and financial crimes?

Ho₄: Technology does not significantly moderate the relationship between forensic accounting and economic and financial crimes.

4. Methodology

The study employed the survey method because the primary data for the study were assembled using questionnaire. The study relied heavily on primary data collected through the distribution and retrieval of questionnaires. It was through simple random sampling distributed to the 110 respondents that was randomly selected from the targeted population. The respondents were given five options using the likert scale to choose from. The scale was presented as follows;
1 = disagree
2 = strongly disagree
3 = undecided
4 = agree
5 = strongly agree

The primary data retrieved were analysed. Secondary data were also relied upon when the concepts were reviewed and in the literature that led to the formulation of all the hypotheses.

The population of the study were purely Accountants that possess HND, B.Sc, M.Sc, MBA, PhD and Chartered Accountants and are knowledgeable on the researched topic. The data collected, using the five-scale questionnaire were analysed using the Pearson product moment correlation coefficient (PPMC) statistical tool was employed in analysing the primary data collected with the aid of the SPSS.

5. Data Presentation and Analysis

<table>
<thead>
<tr>
<th>Questionnaire copies</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administered</td>
<td>110</td>
<td>100</td>
</tr>
<tr>
<td>Retrieved</td>
<td>98</td>
<td>89.09</td>
</tr>
<tr>
<td>Unusable copies</td>
<td>12</td>
<td>12.24</td>
</tr>
<tr>
<td>Usable copies</td>
<td>86</td>
<td>87.76</td>
</tr>
</tbody>
</table>

A one hundred and ten (110) questionnaire copies were distributed randomly among the targeted population. Ninety eight (98) were retrieved representing 89.09%. Among the 98 copies retrieved 12 (12.24%) were unusable while 86, representing 87.76% of the copies retrieved, were usable. The usable copies were used for the analysis.

5.1. Correlation Analysis and Results of Hypotheses

In analysing the collected primary data, we used the Pearson product moment correlation coefficient (PPMC) statistical tool.
The decision rule used for testing the null hypotheses is as follows
If p<0.05, RNH.
If p>0.05, ANH
Where;
RNH = Reject Null Hypothesis
ANH = Accept Null Hypothesis
Test of Hypothesis 1

Table 2. Correlation Analysis on the Relationship between Forensic Accounting and Economic and Financial Crimes in Nigeria

<table>
<thead>
<tr>
<th></th>
<th>Forensic Accounting</th>
<th>Economic and Financial Crimes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forensic Accounting</td>
<td>Pearson Correlation 1</td>
<td>-.666*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>86</td>
</tr>
<tr>
<td>Economic and Financial Crimes</td>
<td>Pearson Correlation -.666*</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>86</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed)

In examining the relationship between forensic accounting and economic and financial crimes in Nigeria, the result of the analysis reveals the existence of significant relationship between both (forensic accounting and economic and financial crimes) at $r = -0.666^{*}$ and $P = 0.000$. The result implies a negative correlation, meaning that increase in Forensic accounting will lead to a decrease in economic and financial crimes. The -0.666** correlation coefficient suggests a high but negative relationship.

Result of Hypothesis 1

Basing our decision on the decision rule for rejecting or accepting the null, we reject the null hypothesis and restate that forensic accounting can be used as an effective tool in fighting economic and financial crimes in Nigeria.

Test of Hypothesis 2

Table 3. Correlation Analysis on the Relationship between Technology and Forensic Accounting

<table>
<thead>
<tr>
<th></th>
<th>Technology</th>
<th>Forensic Accounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Pearson Correlation 1</td>
<td>.718**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>86</td>
</tr>
<tr>
<td>Forensic Accounting</td>
<td>Pearson Correlation .718**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>86</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed)

In examining the relationship between technology and forensic accounting the result of the analysis reveals the existence of significant relationship between technology and forensic accounting ($r = 0.718^{**}$ and $P = 0.000$). The result implies a positive correlation, meaning that increase in technology will increase the effectiveness of forensic accounting. The result also revealed a strong relationship between technology and forensic accounting because $r = 0.718^{**}$

Result of Hypothesis 2

At $p = 0.000$ from Table 3, we reject the null hypothesis and restate that, there is a significant relationship between technology and forensic accounting.

Test of Hypothesis 3

Table 4. Correlation Analysis on the Relationship between Technology and Economic and Financial crimes

<table>
<thead>
<tr>
<th></th>
<th>Technology</th>
<th>Economic and Financial Crimes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Pearson Correlation 1</td>
<td>.602**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>86</td>
</tr>
<tr>
<td>Economic and financial Crimes</td>
<td>Pearson Correlation .602**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>86</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

In examining the relationship between technology and economic and financial crimes, the result of the analysis reveals an existence of significant relationship between technology and economic and financial crimes ($r = 0.602^{**}$ and $P = 0.000$). The result implies a positive correlation, meaning that increase in technology will lead to increase in economic and financial crimes. At $r = 0.602^{**}$, the result shows a strong relationship between technology and economic and financial crimes.
Result of Hypothesis 3

At $p = 0.000$, $p$ is less than 0.05, we therefore reject the null hypothesis and restate that, there is a significant relationship between technology and economic and financial crimes.

Test of Hypothesis 5

Table 5. Test on the Moderating Effect of Technology on the Relationship between Forensic Accounting and Economic and Financial Crimes?

<table>
<thead>
<tr>
<th>Control Variables</th>
<th>Forensic Accounting</th>
<th>Financial Crime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Correlation</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Significance (2-tailed)</td>
<td>.</td>
</tr>
<tr>
<td>Df</td>
<td>0</td>
<td>86</td>
</tr>
<tr>
<td>Economic and Financial Crimes</td>
<td>Correlation</td>
<td>.384</td>
</tr>
<tr>
<td></td>
<td>Significance (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>Df</td>
<td>86</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5 shows the moderating effect of technology on the relationship existing between forensic accounting and economic and financial crimes. From the result of the correlation matrix, technology moderates significantly the relationship between forensic accounting and economic financial crimes. This is shown by the probability level of 0.000 which is less than the 0.05. We therefore reject the null hypotheses as and accept the alternate hypothesis. We then restate the null hypothesis that technology significantly moderates the relationship between forensic accounting, the independent variable, and economic and financial crimes, the dependent variable.

6. Conclusion and Recommendations

The study has shown that the independent variable (forensic accounting) can be used as a tool to fight economic and financial crimes (the dependent variable) in Nigeria though there are many challenges facing forensic accounting application. The study also discovered that technology has significant relationship with both forensic accounting and economic and financial crimes. And finally, it was discovered that technology significantly moderates the relationship between forensic accounting and economic and financial crimes.

The following recommendations are based on our findings:

Mandatory forensic accounting department should be established in institutions and offices (public and private) through regulatory authorities and not on voluntary basis since forensic accounting, from our findings, is a tool needed in fighting the ugly problem called economic and financial crimes in Nigeria.

In both private and public sectors, forensic accounting department should be created and regular training and retraining of forensic accountants on current technologies including software used in investigating economic and financial crimes in this internet era.

The Nigerian government should amend existing laws to meet the requirements of present day technological advancement.

Forensic accounting should be taught in all tertiary institutions in Nigeria and all accounting professional bodies in Nigeria should make it a paper to write and pass before professional certificate is awarded.

Forensic Accounting should be made a profession in Nigeria and those that qualify should be given license to practice and any one that compromises, such a person’s license should be revoked.

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