Underlying Dimensions of the Hindrances to the Application of Forensic Accounting Techniques in Nigeria

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Abstract

The study identified the underlying factors that hinder the application of forensic accounting techniques in Nigeria. Data for the study were obtained from questionnaire administered on chief financial officers in Ministries, Departments and Agencies in 9 sampled States and the Federal Capital Territory, Abuja. The application of factor analysis statistical techniques collapsed the 23 measured variables into three factors. The factors were named 'legal factor', 'educational factor' and 'political factor' in that order of importance. It was concluded that these three factors constitute the major hindrances to the application of forensic accounting techniques for fraud prevention and detection in Nigeria. It is recommended that the legal system should be strengthened to be able to effectively handle fraud cases; educational and training institutions should embark on the training of forensic accountant; and the government should have the political will to prosecute offenders and institutionalize policies beyond what are on ground for the effective application of forensic accounting techniques in the country.

Keywords: forensic accounting, fraud prevention, fraud detection, hindrances to forensic accounting application, forensic accounting in Nigeria

1. Introduction

Nigeria as a developing economy is heavily dependent on government. The public sector therefore is the most developed strand of the economy and most fraud that is reported in the country is perpetrated in this sector (see Eddy & Akpan, 2008; Egwemi, 2012). The government coffers have become the 'pocket' for corruption, embezzlement and fraud. Hence, if there is any sector that should begin the use of forensic accounting techniques in fraud prevention and detection, it is the public sector, represented in this study by government ministries and agencies.

Many experts agree that there is an inverse relationship between the economic development and fraud (Domzalki & McGladrey, 2009). In Nigeria for example, the perennial infrastructural decay and general systemic collapse that have often held back the country's development has been linked to fraud and other corrupt practices (Thisday Newspaper, 2009; Mobolaji & Omoteso, 2009). Yet "the commonest actions against fraudsters has been disciplinary hearing and immediate dismissal from employment which has never helped matters" (Hamilton & Gabriel 2012, p. 118).

In a preliminary survey, there seem to be a general consensus on the need for the services of forensic accountants in Nigeria. However, there are factors that are hindering it use. Some respondents have these to say:

The level of awareness (of forensic accounting) is very low. This is due to the fact that it is relatively new in the world over, so you should expect less from here. ... (Respondent 2).

There will definitely be that relationship because the higher the awareness and the use of forensic accounting, the lesser the fraud and fraud incidences. (Respondent 1)

The services are necessary so that as a nation we can improve our infrastructures since the purpose of every money will be well utilized. However, let me cry aloud that there should be one law for the people and not for a few. When there is a need to implement the law, as it was applied for Mr. 'A' let it be the same for Mr. 'B' and not differently (Respondent 3).

...services of forensic accountant are very necessary in Nigeria . But the question which I think that one should ask is that will the government allow for its implementation or will it have to enforced on few people who do not have people to speak for them as we have in our current system of law where the law is only for some selected few to obey? (Respondent 4).

One is in the era of seeing tangible changes where the services of forensic accountants in public service are encouraged and necessary in the country (Respondent 5).

There are not enough forensic accountants in Nigeria. I think it may be lack of fund for the studies, forensic accounting is technology driven which implies that where the technology is still far-fetched, the application is hindered. But I think the main issue here has to do with the institutions which are not teaching FA (Respondent 2)

Although we have serious infrastructural and developmental challenges in Nigeria, abuse of office power, lack of transparency and the issue of general indiscipline, I think the country is ready and I will recommend the use of forensic accounting for any establishment. There cannot be any reasonable development when all we read from the dailies is fraud here and fraud there (Respondent 1).

Nigeria is ready due to the many problems it has and the need for the country to redeem her image when it comes to the issue of corruption. Yes! I will recommend the services of forensic accountant to my establishment and to as many firms which I know need the services of a forensic accountant (Respondent 6).

In view of these, this study therefore adopted the quantitative approach in identifying the underlying factors that hinders forensic accounting practice in Nigeria.

2. Method of Study

A cross section survey design was adopted for the study. Data for this study was obtained from Chief Financial Officers (CFO's) in public offices (ministries, departments and agencies). These officers are in the best position to provide the needed information. This also contributed to enhancing the reliability of the data to be obtained.

The number of government ministries, departments and agencies (MDA's) in the different states selected and the Federal Capital Territory (FCT), Abuja are shown in Table 1. This information was obtained from the Ministry of Information of the different State Governments and the FCT.

Table 1. Number of ministries and agencies in the selected states

State	Number Of Ministries/Agencies	Number Of Samples
Akwa Ibom	54	108
Cross River	48	96
Edo	51	102
Osun	39	78
Kwara	46	92
Lagos	67	134
Plateau	45	90
Rivers	56	112
Fct, Abuja	82	164
Total	**488**	**976**

Table 1 shows that the number of ministries and agencies of government in the various States and the FCT is 488. It has been stated earlier that the Chief Financial Officer and the Head of the internal Audit in each of the agencies and ministries were considered as key players in the use of forensic accounting techniques in fraud prevention and detection in the organisation, hence, these two officers were selected for sampling. This also serves to provide a check on the responses given from each establishment to ensure internal consistency in the data. The total number of samples in each unit was therefore multiplied by 2 resulting to 976 for the entire practitioners.

There were two sections on the survey instrument (questionnaire). Section B which measured demographic attributes of the respondents has 6 variables while section B obtained data on the perceived factors that hinder the use of forensic accounting in Nigeria, with 23 variables. Questions on this section were the Likert-scale type on a 5-point.

Of the 976 questionnaire that was distributed, only 588 were retrieved. The data were analysed using descriptive statistics and factor analysis.

3. Results and Discussion

Table 2 shows the demographic details of practitioners that were the subjects in this study. In terms of gender, the analysis reveals that 336 of the subjects (57.10 per cent) were males while 252 (42.90 percent) were females (Table 2).Hence, there were more male subjects in the population of the study than females.

Table 2. Demographic data of practitioners

	Frequency	Per Cent	Valid Per Cent
Gender			
Male	336	57.1	57.1
Female	252	42.9	42.9
Total	588	100.0	100.0
Age (In Years)			
31-40 Years	16	2.7	2.7
41-50 Years	269	45.7	45.9
51-60 Years	283	48.1	48.3
Above 60 Years	18	3.1	3.1
Total	586	99.7	100.0
System	2	.3	
	588	100.0	
Highest Educational Qualification			
Ssce/Ond	33	5.6	5.6
Bsc/Hnd	444	75.5	75.5
Msc/Mba	111	18.9	18.9
Total	588	100.0	100.0
Professional Qualification			
Acca	24	4.1	4.1
Ican	144	24.5	24.5
Anan	127	21.6	21.6
Others	130	22.1	22.1
None	162	27.6	27.6
Total	587	99.8	100.0
System	1	.2	
	588	100.0	
Years Of Experience			
11-15	38	6.5	6.5
16-20	184	31.3	31.4
21-25	228	38.8	38.9
Above 25	136	23.1	23.2
Total	586	99.7	100.0
System	2	.3	
	588	100.0	
Job Description / Rank			
Auditor	123	20.9	20.9
Chief Accountant	322	54.8	54.8
Director Of Finance/Account	87	14.8	14.8
Others	56	9.5	9.5
Total	588	100.0	100.0

For age, no respondent was in the age category of between 18-30 years. This agrees with the expectation of the researcher since those that were expected to respond to the questions were either chief accountants or chief auditors or directors. Such people are also expected to be older in age as far as the public service is concerned. For the other age brackets, 16 (2.70 percent) of the respondents were within the age bracket of 31-40 years while

269 (45.70 percent) of the total respondents were within the range of 41 and 50 years. Similarly, 283 (48.10 percent) of the respondents were within the age bracket of 51 and 60 years while 18 (3.10 percent) were above 60 years.

However, there were also 2 subjects, accounting for only 0.3 per cent of the total respondents who did not respond to that particular question. This value of 0.3 per cent is so insignificant to have any major effect on the general response rate to the question of age. Hence, most of the subjects for this study were within the ages of 41 and 60 years. Most of the intended subjects for this study were also expected to belong to this category.

In terms of highest educational qualification, Table 2 reveals that 33 (or 5.6 percent) of the respondents had senior school certificate or ordinary National Diploma. It was however surprising to the researcher that people with such educational qualification were able to climb to such a high level in the public service. However, a closer investigation of the questionnaire reveals that such people had acquired other professional qualifications which would have been considered for their promotions to such high position. Again, the total number of such people within the subjects of the study is very insignificant.

Those with BSc/HND as the highest educational qualification were 444 (or 75.5 percent) of the total respondents while 111(or 18.90 percent) had obtained additional certificates in the forms of MSc/MBA. No respondents among the subject of study had a PhD. In all, most of the study subjects have obtained a first degree or its equivalent.

Further, 426 (about 72 per cent) of the subject of the study had professional qualifications in the forms of ACCA, ICAN, ANAN, or others. There was no clear pattern of clustering.

On the other hand, 162 (about 28 percent) of our subjects do not have additional qualifications. Since most of the subject posses professional qualifications, these would have exposed them and make them to have fair knowledge of what the researcher intends to unravel. Such would certainly improve the reliability of the research findings.

Years of experience are important as far as the issue of this research is concern. The analysis of the years of experience of the subjects that were used in this study reveals that they were well experienced on the job. All the subjects had over 10 years of experience on the job. Precisely, 38(about 7 percent) had 11-15 years of experience on the job, 184 (about 31 percent) had 16-20 years of experience, 228 (about 39 percent) had between 21 and 25 years of experience and 136 (about 23 per cent) had over 25 years of experience. In view of this, the subjects were well experienced to give the needed responses to the questions that were asked.

In terms of job description, 123 respondents, representing 20.90 percent were internal auditors 322, representing 54.80 per cent were heads of departments (Accounting and Finance) while 87; representing 14.80 per cent were directors of finance /accounting. 56 respondents representing 9.50 per cent hold other ranks and performed other job descriptions.

In sum, majority of the respondents belonged to the decision making class of their various accounting units and hence can influence decisions and behaviour of such units. This class of people is qualified to make responses on behalf of their units.

The factor analysis was adopted to identify the specific factors that hinder the application of forensic accounting techniques in fraud prevention and detection in Nigeria. An examination of the correlation matrix (Table 3) reveals very high correlation between the twenty three (23) variables. Over 70 per cent of the inter correlations between the variables are significant at the 0.05 confidence level.

Table 3. Correlation matrix of factors that hinder the application of forensic accounting

	LEX	FAE	DAC	LQA	LFP	WLE	WLP	LAW	TDR	WIB	WES	GIN	CTE	AOP	LRL	LCO	LTR	ICO	LTI	WJS	TCP	FIN	IMP
LEX	1	.518**	.650**	.994**	.992**	.657**	.689**	.990**	.732**	.589**	.992**	.650**	.560**	-0.003	.648**	.696**	-0.008	.699**	.980**	.644**	-0.033	.674**	0.02
FAE		1	.382**	.518**	.513**	.371**	.437**	.514**	.752**	.476**	.512**	.407**	.358**	0.046	.375**	.446**	0.06	.438**	.502**	.364**	0.016	.429**	0.071
DAC			1	.650**	.653**	.970**	.884**	.646**	.591**	.475**	.644**	.853**	.697**	-0.004	.986**	.883**	0.001	.875**	.634**	.984**	-0.044	.857**	0.023
LQA				1	.985**	.658**	.690**	.988**	.734**	.593**	.989**	.652**	.561**	0	.648**	.697**	-0.012	.697**	.974**	.644**	-0.034	.675**	0.02
LFP					1	.660**	.692**	.981**	.728**	.590**	.984**	.653**	.558**	0.002	.652**	.699**	-0.006	.698**	.972**	.648**	-0.028	.676**	0.022
WLE						1	.865**	.660**	.590**	.479**	.655**	.838**	.687**	0.002	.976**	.860**	0.005	.851**	.642**	.963**	-0.039	.838**	0.028
WLP							1	.692**	.638**	.536**	.685**	.948**	.753**	0.003	.877**	.991**	0.005	.983**	.672**	.876**	-0.041	.957**	0.034
LAW								1	.731**	.603**	.997**	.653**	.556**	0	.648**	.693**	-0.008	.694**	.970**	.647**	-0.034	.671**	0.021
TDR									1	.741**	.727**	.616**	.503**	0.008	.588**	.644**	0.022	.637**	.716**	.582**	-0.023	.633**	0.028
WIB										1	.598**	.542**	.389**	.102*	.466**	.533**	.110**	.530**	.579**	.480**	0.076	.559**	.128**
WES											1	.646**	.554**	0.002	.643**	.691**	-0.005	.694**	.973**	.643**	-0.028	.669**	0.025
GIN												1	.720**	0.023	.848**	.937**	0.027	.932**	.628**	.851**	-0.02	.968**	0.058

CTE	1	0.009	.688**	.759**	0.019	.751**	.554**	.696**	-0.026	.747**	0.028
AOP		1	0.003	0.006	.963**	0.014	-0.012	0.014	.947**	0.027	.967**
LRL			1	.872**	0.006	.864**	.633**	.976**	-0.039	.847**	0.028
LCO				1	0.006	.991**	.679**	.872**	-0.036	.965**	0.036
LTR						0.007	-0.017	0.018	.938**	0.024	.951**
ICO						1	.681**	.865**	-0.029	.959**	0.04
LTI							1	.629**	-0.042	.660**	0.012
WJS								1	-0.028	.852**	0.039
TCP									1	-0.014	.936**
FIN										1	0.061
IMP											1

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

*. Correlation is significant at the 0.05 level (2-tailed).

Given the percentage of significant inter-correlation between these variables; the hypothesised factor model appears to be appropriate.

The Bartlett's test of sphericity (Table 4) confirms that the correlations matrix has significant correlation among at least some of the variables. It yields a value = 34900.00 and an associated level of significance <0.001 at 253 degrees of freedom. The very high Kaiser-Meyer-Olkin (KMO) index of 0.919 is far greater than the value of 0.6 which is considered as the least for useful factor analysis (Udofia, 2011). Hence, the data set was adequate for factor analysis.

Table 4. KMO and Bartlett's test

PARAMETER	VALUE
Kaiser-Meyer-Olkin Measure Of Sampling Adequacy	0.919
Bartlett's Test Of SphericityApprox.Chi-Square	3.479E4
Df	0.253
Sig	0.000

Table 5 presents the communality of each variable, i.e. the proportion of variance in each variable accounted for by the common factors (Ho, 2006). From Table 5, the proportion of variance accounted for by the common factors is 1 for all the variables.

Table 5. Communalities

Variable	Initial	Extraction
Lack of experience	1.000	.965
FA is expensive	1.000	.401
Delay at court	1.000	.920
Lack of quality Forensic analysis	1.000	.961
Lack of FA professionals	1.000	.954
Weak law enforcement	1.000	.890
Weak litigation support in prosecution process	1.000	.943
Lack of awareness	1.000	.960
It is technology driven	1.000	.694
Weak infrastructural base	1.000	.494
Weak educational system	1.000	.961
General indiscipline	1.000	.895
Corrupting tendencies of experts	1.000	.622
Abuse of office and power	1.000	.974
Lack of rule of law	1.000	.910
Lack of continuity on the part of investigating agencies	1.000	.942
Lack of transparency	1.000	.963
Institutional corruption	1.000	.930
Lack of training institution in Nigeria	1.000	.937
Weak judicial system	1.000	.909
Too much centralisation of authority	1.000	.947

Fiscal indiscipline	1.000	.914
Impunity	1.000	.965

Table 6 is the total variance explained. It shows the number of common factors computed, the eigenvalues associated with these factors, the percentage of total variance accounted for by the factors, the percentage of total variance accounted for and the cumulative percentage of total variance accounted for by the factors. Using the Kaiser (1970) criterion of retaining only function with eigenvalues of 1 or above, the first three factors were retained for rotation. These three factors accounted for 60.53, 16.82 and 9.83 per cent of the total variance respectively. That is, approximately 87 per cent of the total variance is attributable to these three factors. The remaining 20 factors accounted for only about 13 per cent of the total variance. Thus, a model with three factors may be adequate to represent the data set.

Table 6. Total variance explained

Factor	Initial Eigenvalues			Extraction Sums Of Squared Loadings			Rotation Sums Of Squared Loadings		
	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
1	13.922	60.530	60.530	13.922	60.530	60.530	8.731	37.961	37.961
2	3.868	16.816	77.346	3.868	16.816	77.346	7.451	32.397	70.357
3	2.260	9.828	87.174	2.260	9.828	87.174	3.868	16.816	87.174
4	.975	4.237	91.411						
5	.531	2.310	93.721						
6	.522	2.269	95.991						
7	.354	1.539	97.530						
8	.135	.588	98.118						
9	.093	.405	98.523						
10	.067	.290	98.813						
11	.049	.214	99.028						
12	.042	.183	99.211						
13	.038	.167	99.378						
14	.031	.136	99.514						
15	.026	.112	99.626						
16	.024	.103	99.728						
17	.018	.077	99.806						
18	.014	.059	99.865						
19	.013	.055	99.920						
20	.010	.042	99.962						
21	.004	.019	99.981						
22	.003	.013	99.994						
23	.001	.006	1.000e2						

From the scree plot (Figure 1), it again appears that a three- factor model should be sufficient to represent the data set.
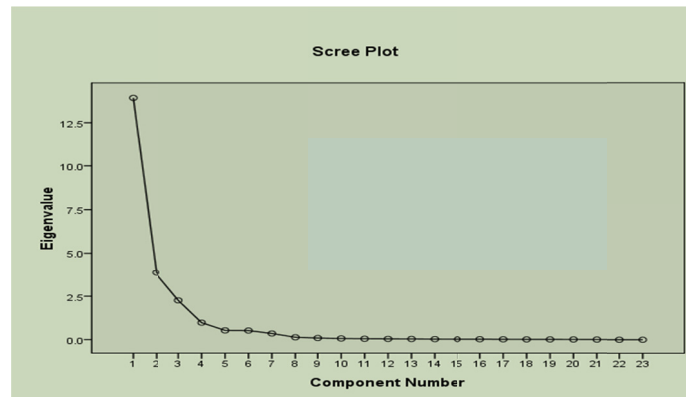
Figure 1. Scree plot

Table 7 is the rotated component matrix which presents the three factors after varimax (orthogonal) rotation. Examination of the factor loadings show that most of the variables loaded highly on the three factors. Fifteen variables cross loaded significantly across factor 1 and factor 2.

Table 7. Rotated component matrix

Variable	Factor		
	1	2	3
Delay At Court	.901	.331	
Weak Judicial System	.896		
Lack Of Rule Of Law	.895	.331	
Weak Litigation Support In Prosecution Process	.887	.395	
Lack Of Continuity On The Part Of Investigating Agencies	.883	.404	
Weak Law Enforcement	.877	.348	
General Indiscipline	.875	.360	
Institutional Corruption	.874	.407	
Fiscal Indiscipline	.873	.388	
Corrupting Tendencies Of Experts	.724		
Lack Of Experience	.379	.906	
Weak Educational System	.374	.906	
Lack Of Awareness	.379	.903	
Lack Of Quality Forensic Analysis	.381	.903	
Lack Of Fa Professionals	.385	.897	
Lack Of Training Institution In Nigeria	.365	.896	
It Is Technology Driven	.394	.734	
Weak Infrastructural Base	.330	.608	
Fa Is Expensive		.592	
Abuse Of Office And Power			.987
Impunity			.981
Lack Of Transparency			.981
Too Much Centralisation Of Authority			.973

From Table 7, the cross-loaded variable of "delay at court" appears to be more conceptually relevant to factor 1. Similarly, the cross-loaded variable of "lack of rule of law", "weak litigation support in prosecution process", "weak law enforcement", "lack of continuity on the part of investigating agencies", "general indiscipline", fiscal indiscipline", "institutional corruption" and "corrupting tendencies of experts" appear to be more conceptually and logically representative of factor 1.

Furthermore, the cross-loaded variable of "lack of experience", "lack of forensic accounting professionals", "lack of training institutions in Nigeria offering FA course", "weak educational system", "lack of quality forensic

analysis", "lack of awareness", "it is technology driven" and weak infrastructural base" are logically representatives of factor 2. There were no variables with cross-loading with factor 3.

Summarily, the factor analysis has identified three factors from the list of twenty three variables that hinder the application of forensic accounting services in Nigeria. In naming the factors, it is observed that the variables 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 loaded positively and significantly on factor 1. A cursory look at the variables indicate that they are mostly associated with legal issues (i.e. "delay at court", "weak judicial system", "lack of rule of law", "weak litigation support in prosecution process", "weak law enforcement", etc.) and are therefore named "Legal Factor".

Associated with factor 2 were nine variables which loaded positively and significantly. These variables include "lack of experience", "lack of forensic accounting professionals", "lack of training institutions in Nigeria", "weak educational system", "lack of good quality forensic analysis" and "lack of awareness". Others are "it is technology driven", "weak infrastructural base", and "forensic accounting is expensive". Because of the dominance of educational variables among the nine variables, the factor was therefore named "Educational Factor"

Four variables (20, 21, 22, and 23.) i.e. "abuse of office power", "impunity", "lack of transparency" and "centralisation of authority" loaded positively and significantly on factor 3. A careful look at the variables reveals that they have something to do with political power. The factor was therefore named "Political Factor".

The relative importance of the factor that affects the application of forensic accounting in Nigeria is shown by their eigenvalues. The observation is that factor 1 with eigenvalue of 13.92 is more important than factor 2 with 3.87, which is more important than factor 3 with 2.26.

From the results, three major factors have been identified as hindrances to the application of forensic accounting techniques in fraud prevention and detection. These factors are 'legal factor', 'educational factor' and 'political factor' (Figure 2). The findings of this research reveals that legal factor constitute the most significant hindrance to the use of forensic accounting technique, followed by educational factor and finally, political factor.
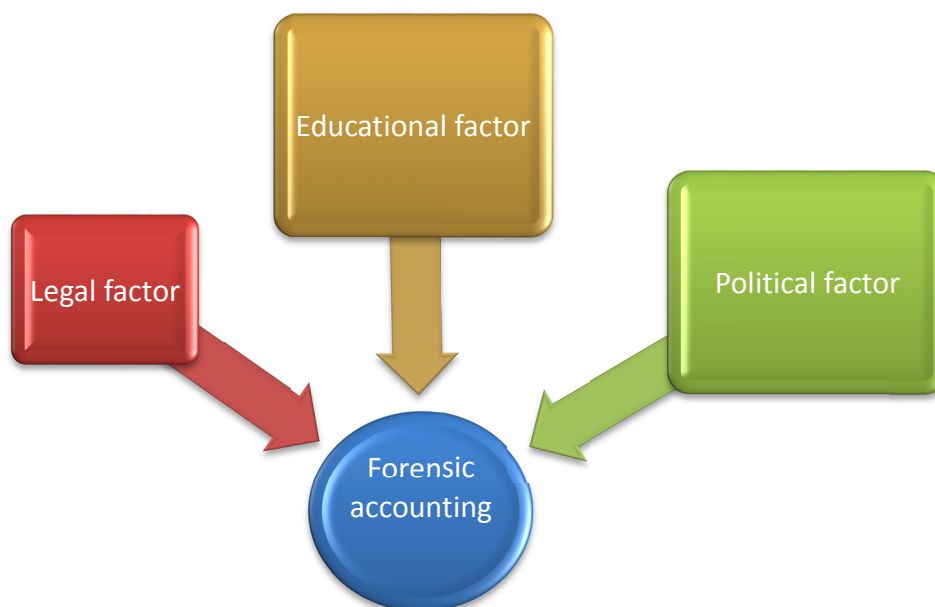

Figure 2. A model of factors that influence the use of forensic accounting in Nigeria

Forensic accounting involves fraud reporting which is tendered as evidence in the law court (Crumbly 2001; Joshi 2003; Mehta and Mathur 2007). For this to be effective, then the legal process must be transparent. Issues like delay in court, weak judicial system, lack of rule of law, weak litigation support in the prosecution process and weak law enforcement are all variables that are involved in the legal process. This finding confirms what successive chairmen of the Economic and Financial Crimes Commission (EFCC) in Nigeria including Ribadu

(2006) have been highlighting, that the legal process needs to be strengthened to enable effective prosecution of fraudsters in fulfilment of the Commission's mandate.

The literature review presented some weaknesses of the legal system in Nigeria, which supports this finding. For example, a Deputy Director was prosecuted for his involvement in the Police Pension fraud and confessed of stealing as much as ₦23 billion. He was then asked by the presiding judge, Justice Mohammed Talba of the FCT High Court, Abuja, to pay a miserable sum of ₦750, 000.00 naira as fine (Austine, 2013). This is a complete mockery of the country's efforts in the fight against fraud from the judiciary. The judiciary is supposed to be the hope of any forensic accounting endeavour as the profession seeks to present useful evidence at the law court.

Again, in the circumstance where no Nigerian university is offering forensic accounting courses, it was therefore not surprising to discover from the findings of this research that, the educational factor is one of those factors that hinder the application of forensic accounting techniques. The educational factor found expressions in variables such as lack of experience on the part of the available fraud examiners, lack of forensic accounting professionals, lack of training institutions, weak educational system, lack of good quality forensic analysis and lack of awareness. It has been shown from the findings of this study that education positively influences awareness. It provides an avenue for dissemination of new ideas, like the forensic accounting. Continuous lack of educational interest in forensic accounting by Nigerian universities will continue to be a major setback in the country's fight against fraud as more hands are needed in this area and educational institutions have a part to play in the provision of these more hands.

The specific variables under political factor as revealed in this study includes, abuse of office and power, impunity, lack of transparency and over-centralisation of power. Practitioners are of the opinion that this also constitutes a major hindrance to the use of forensic accounting and the general fight against fraud and corruption. It goes further to explain why politicians facing charges of fraud will be beaming with smiles, amidst cheers from supporters in court premises (Adefila, Kasum, & Olaniyi, 2005). These attitudes if not addressed will continue to pose serious threats to the application of forensic accounting in the country. Some public office holders are covered by impunity; hence, they can perpetrate fraud without being arraigned before the court as long as they remain in the office.

4. Conclusion

This study has identified the underlying dimensions of the hindrances to the use of forensic accounting techniques in Nigeria. The three factors identified are: legal, educational and political factors. Hence, poor legal system, inadequate forensic accounting education factors and lack of political will are the major factors that hinder the application of forensic accounting techniques in Nigeria. A conceptual model of these factors with forensic accounting has been developed. It is recommended that the legal system should be strengthened to be able to effectively handle fraud cases; educational and training institutions should embark on the training of forensic accountant; and the government should have the political will to prosecute offenders and institutionalize policies beyond what are on ground for the effective application of forensic accounting techniques in the country. The findings of this study have implications on theory and practice of the accounting profession, in general and forensic accounting, in particular.

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