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Forensic Audit Skills and Fraud Detection

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ABSTRACT

This study examined the forensic audit skills and fraud detection. A survey research design was applied in this study and data used were sourced through questionnaire. The study applied the PLS-SEM method of data analysis. The result found that Forensic audit was found to have a positive and significant effect on fraud detection, forensic analytical skill has a substantial negative effect on fraud detection and Forensic audit investigative skill has a significant positive effect on fraud detection. Thus, the study recommended that**:** every forensic auditor must continuously engage in skill development especially, in the analytical skills which has a negative effect on fraud detection.

Keywords: Forensic Audit Skills, Fraud Detection, investigative, analytical

INTRODUCTION

The fraudulent acts especially financial fraud is organized, with internal coordination, shared knowledge and share of benefits linking principals and agents and shares reward among the stakeholders. The system on its own grows practitioners at every level, from school to graduation, from childhood to adulthood, from micro to macro levels; thus, there is sustained supply of individuals which ensure that fraud is maintained or persisted. People actually expecting leaders to be corrupt, with anything short of that as being too good to be true, as such persons are considered fools. Thus, good forensic auditing skills are indispensable for detect fraud. For instance, communication skills (Smith, 2005), which are needed to deal with audit objects, fraudsters and victims. Investigative skills are needed to ensure that fraud is actually taking place. Auditors investigate documents as evidence of fraud (Salleh & Aziz, 2014), with analytical skills or expertise necessary to analyze the legal risks of a case (Huang et al., 2008). Stanik, (2013) suggested that analytical skills help in the identification of patterns of abuse.

Forensic auditing involves the critical assessment throughout the audit of all evidential matters and maintaining a high degree of professional skepticism that, for

example, fraud or financial irregularity may have occurred, is occurring or will occur in the future. Kabir (2016) opined that forensic thinking is a mind shift where the auditor believes that the possibility of fraud or financial irregularity may exist and the control may be overridden to accomplish that possibility.

Consequently, most studies like Asaolu et al (2020), Al-Sharairi (2018), Khersiat (2018), Popoola et al (2015) and several other scholars have dwelt on forensic accounting skill on fraud detection and prevention. There is dearth of literature on forensic audit skills on fraud detection. Thus, the motivation for this study.

RESEARCH QUESTIONS

1. What is the effect of forensic audit communication skill on fraud detection?
2. What effect does forensic audit analytical skill have on fraud detection?
3. To what extent does forensic audit investigative skill influence fraud detection?

OBJECTIVES OF THE STUDY

1. To determine the effect of forensic audit communication skill on fraud detection.
2. To examine the effect of forensic audit analytical skill on fraud detection.
3. To investigate the effect of forensic audit investigative skill on fraud detection.

Hypotheses

H_{01}: Forensic audit communication skill has no significant effect on fraud detection.

H_{02}: Forensic audit analytical skill has no significant effect on fraud detection.

H_{03}: Forensic audit investigative skill has no significant effect on fraud detection.

CONCEPTUAL REVIEW

Concept of Fraud

Fraud is a menace whose potential impact is devastating to any business, social and economic well-being of a nation. Fraud encompasses a wide range of irregularities and illegal acts characterized by intentional deception or misrepresentation. The Institute of Internal Auditors (2014) defined fraud as any illegal act characterized by deceit, concealment or violation of trust. Fraud is perpetuated by parties and organizations to obtain money, property or service; to avoid payment or loss of services; or to secure personal or business advantage. According to the American Institute of Certified Public Accountants (2016), fraud is any intentional act or omission designed to deceive others, resulting in the victim suffering a loss and the perpetuator achieving a gain.

Economic and Financial Crimes Commission in Ehioghiren and Atu (2016) defined fraud as the non-violent criminal and illicit activity committed with the objective of earning wealth illegally either individually, in a group or an organized manner thereby violating existing legislation governing the economic activities of a country

Concept of Forensic Audit

Forensic auditing is a type of special investigation often employed when a fraud is suspected to have been committed in a business organization. Forensic audit is the application of auditing skills to situations that have legal consequences (Bhagwan, 2013). In 2015, Weaver stated that "forensic auditing" covers a broad spectrum of activities with the terminology not strictly defined in regulatory guidance. Crumbley (2010) saw forensic audit as the process of gathering, analyzing and relying on data, for the purpose of finding facts for evidence in the context of financial and legal disputes, in order to give preventive advice in this area.

THEORETICAL REVIEW

This study adopted the *free cash flow theory*. Free cash flow theory was postulated by Jensen (1986). The theory stated that managers have a tendency to invest more than what is optimal for the firm for personal gain at the expense of shareholders when monitoring mechanisms are weak. Tax savings are often substantial and represent potential resources that can facilitate empire building. Secondly, the free cash flow hypothesis which is clearly related to the agency problems, argues that managers may waste tax saving in the presence of weak monitoring environments. Thus, when fraud is not checked and curtailed, it will result to poor management and inefficiency in most organizations. The connection between forensic audit and free cash flow theory is that forensic audit can help detect financial irregularities, mis-statement or manipulations. Forensic auditors can easily identify red flags in unusual transactions or unexplained changes in cash flow.

EMPIRICAL REVIEW

Dominic et al (2024) examined forensic accountants' relevant characteristics and financial fraud control and investigated the extent to which traits, characteristics, core skills, and enhanced skills of forensic accountants are effective in fraud control. A total of 250 copies of the questionnaire were distributed to these respondents, while 214 copies were successfully retrieved. The successfully retrieved questionnaire was also subjected to a pre-test using Cronbach-Alpha test. The collected data were tested and analyzed using ordinary least squares (OLS) regression, correlation matrix, descriptive statistics, and tables. Based on the outcome of the test and analysis, the traits, core, and enhanced skills of forensic accountants have a significant positive effect on financial fraud control. These traits and core and enhanced skills include

analytical proficiency, detail orientation, deductive analysis, strategic thinking, analyzing and interpreting financial statement information, interviewing skills.

Enyeribe et al (2023) investigated the effect of forensic accounting skills on auditing and investigation activities of corporate organizations in Nigeria. Three research objectives and three hypotheses were stated and formulated to guide the study. The study adopted purposive sampling technique to select 10 external auditors of corporate firms and 40 registered ANAN members in Owerri metropolis. Instrument for data collection was a four point Likert scale questionnaire structured into very high extent (VHE), high extent (HE) low extent (LE) and very low extent (VLE). Data analysis was carried out with mean procedure and ordinary least square regression. Findings showed that mean ratings of respondents were above 2.5 expected mean which showed that the respondents accepted that forensic accounting skills highly impacted on auditing and investigation activities. Test of hypotheses with reference to regression result revealed that financial skills, non-financial skills and basic knowledge of law significantly impacted on performance audit.

Madzivire et al (2020) investigated the effectiveness of forensic audit as a tool for the detection and prevention of fraudulent activities using a Chartered Accountancy Company in Zimbabwe as a case study. The research utilized a mixed approach whereby quantitative data was gathered from closed ended questions quantified using the Likert scale. Qualitative data was gathered from open ended questions and 3 interviews were also conducted. A total of 20 questionnaires were distributed using random sampling, 19 were returned and one lost in the process. The Data was analyzed using the multiple regression method. The research revealed that there is a positive relationship between training, level of education and ability to detect and prevent fraud. It was also found that litigation support service has a huge role to play in the effectiveness of forensic auditing in detecting and preventing fraud. Recommendations were made towards increase in training sessions as well as engaging in training and development programs to fully equip auditors with knowledge.

Fadilah et al (2019) studied the influence of forensic accounting skills, consisting of the auditing skills; investigative knowledge and skills; legal knowledge; communication skills; psychological, criminological and victimological skills; accounting skills; and ICT-related skills of external auditors, on their ability to detect fraud. Data was collected through questionnaires, in-depth interviews and documents from the accounting offices. A multiple regression analysis was applied and the results show that some forensic accounting skills, namely auditing skills; communication skills; psychological, criminological and victimological skills; and ICT-related skills are influential in fraud detection, while other skills, that is investigative skills, legal skills, and accounting skills do not have an influence. It is proven that some of the skills provide more benefit after the fraud has been detected.

Ogutu and Ngahu (2016) investigated the application of forensic accounting skills in the mitigation of fraud with particular reference to the accounting firms in Nakuru County, Kenya. Descriptive survey research design was adopted for the study. The target population consist of 25 respondents from 25 accounting firms. Questionnaires were used as instruments of data collection. Quantitative data was analyzed using frequency counts, means and percentages while qualitative data was analyzed by tallying the numbers of similar responses. The results of data analysis were presented using frequency distribution tables, bar graphs and pie charts. The study recommends training and adoption of scientific forensic accounting skills by accounting firms as well as internal auditors in order to ensure efficient mitigation against fraud. The study found that areas that needed forensic accounting included fraud prevention and detection at 97%, bankruptcy, insolvency and reorganization at 79.4%, financial statement misrepresentation at 76%, economic damage calculations (57.6%) and family disputes at 53%. Critical traits a forensic accountant includes analytical traits (85%), ethical trait (84%), confidence (82%), 61% inquisitive and 49 % skepticism. The study also found that forensic accountants are required to have auditing skills (89%), investigative skills (81%) fraud skills (79.8%) as well legal skills at 58%.

METHODOLOGY

A survey research design was applied in this study and data used were sourced through questionnaire which was collected online via https://ee.kobotoolbox.org/x/6gjASsNI. The questionnaire used for this study was a five-point Likert-scale, ranging from "strongly agree" to "strongly disagree" (5 = 'Strongly Agree', 4 = 'Agree', 3 = 'Undecided', 2 = 'Disagree' and 1 = 'Strongly Disagree'). A total of 54 copies of questionnaires from a population of over hundred (100) members on whatsapp platform, were collected and analysed.

Method of Data Analysis

Data analysis was conducted using partial least square (PLS) software version 4.1.1.2, an approach to structural equation modeling and presented as required. The PLS-SEM in study tested for the measurement model and the structural model (Ringle et al., 2024).

Measurement model

The measurement model assesses the constructs involved in the study, which is to determine whether the indicators such as, Composite reliability (CR), convergent validity, average variance extracted (AVE) and discriminant validity, as described by Hair et al. (2011), Hair et al (2012) and Henseler et al (2009) met their required threshold.

Table 1: Convergent Validity

Construct	Items	Loadings	CA	CR	AVE
Analytical Skills	**ANS1**	0.881	0.814	0.876	0.703
	ANS3	0.888			
	ANS5	0.739			
Communication Skills	**COS2**	0.879	0.867	0.897	0.746
	COS4	0.953			
	COS5	0.747			
Fraud Detection	**FRD3**	0.913	0.818	0.916	0.846
	FRD4	0.926			
Investigative Skills	**INS3**	0.908	0.835	0.899	0.749
	INS4	0.892			
	INS5	0.793			

The result in Table 1 shows the convergent validity for the constructs under study. The results thus demonstrated a high level of convergent validity of the latent construct and used in the model. An AVE value of at least 0.5 indicates sufficient convergent validity, meaning that a latent variable can explain at least half of the variance of its indicators on average. The composite reliability (CR) and Cronbach Alpha (CA) values indicated a strong reliability of instrument given that the values are above 0.7.

Table 2: Cross-loadings Discriminant Validity

	ANS	COS	FRD	INS
ANS1	**0.881**	0.55	0.324	0.527
ANS3	**0.888**	0.568	0.345	0.465
ANS5	**0.739**	0.39	0.076	0.356
COS2	0.41	**0.879**	0.276	0.005
COS4	0.684	**0.953**	0.445	0.337
COS5	0.571	**0.747**	-0.019	0.087
FRD3	0.363	0.324	**0.913**	0.767
FRD4	0.292	0.445	**0.926**	0.723
INS3	0.525	0.303	0.83	**0.908**
INS4	0.434	0.029	0.7	**0.892**
INS5	0.482	0.267	0.519	**0.793**

Table 2 show the discriminant validity result. The cross-loading analysis suggested that the loadings of indicators should be greater than the loadings of other constructs, indicating discriminant validity (Fornell & Larcker, 1981). The results

demonstrated excellent discriminant validity, as the indicators of the constructs are higher than that of other constructs. This indicated that the constructs have adequate discriminant validity.

The structural model

Structural model fitness is examined after measurement model assessment has been met and fitness is shown to be acceptable. The structural or inner model consists of the factors and the arrows that connect one factor to another. The loadings of the direct paths connecting factors are standardized regression coefficients. To ensure that the final estimated result from the PLS is true, it is important to determine the fitness of the model.

The fitness of the model can be assessed in the following ways; testing for collinearity of the structural model, assessing the significance and relevance of the structural model relationships, the level of the R^2 values, and the f^2 effect size (Tenenhaus, Vinzi, Chatelin & Lauro 2005). Höck & Ringle, (2006) described results above the cutoffs 0.67, 0.33 and 0.19 to be "substantial", "moderate" and "weak" respectively. The R-square here would be considered to be of moderate strength or effect. To assess multicollinearity in the structural model, tolerance or VIF criteria may be applied, discussed and illustrated. The VIF benchmark should be less than 4.

The f-square effect size measure is another name for the R-square change effect. The f-square coefficient can be constructed equal to (R^2original – R^2omitted)/(1-R^2original). The denominator in this equation is "Unexplained". The f-square equation expresses how large a proportion of unexplained variance is accounted for by R^2 change (Hair et al., 2014). Following Cohen (1988), .02 represents a "small" f^2 effect size, .15 represents a "medium" effect, and .35 represents a "high" effect size.

Table 3: Structural Fitness Indices

Construct	**Items**	**VIF**	R^2	f^2	Q^2	SRMR
Analytical Skills	**ANS1**	1.886		0.603		
	ANS3	1.676				
	ANS5	1.871				
Communication Skills	**COS2**	1.952		0.859		
	COS4	3.15				
	COS5	2.51				
Fraud Detection	**FRD3**	1.916	0.821		0.345	0.067
	FRD4	1.916				
Investigative Skills	**INS3**	2.158		3.521		
	INS4	2.232				
	INS5	1.685				

Table 3 presents the VIF result, indicating not multicollinearity given the VIF values are below 4. The overall effect size measure for the structural models, indicated that 82.1% change in Fraud detection is due to change in analytical skills, communication skills and investigative Skills. The f-squared showed that the analytical skills, communication skills and investigative Skills have substantial effect on fraud detection. Based on the result of the SRMR the model is a good fit model since SRMR is below the threshold of 0.067. The Q^2 was estimated by the blindfolding method. The values of the Q^2 are 0.345 indicated that since they are greater than zero, they have predictive relevance for this study.

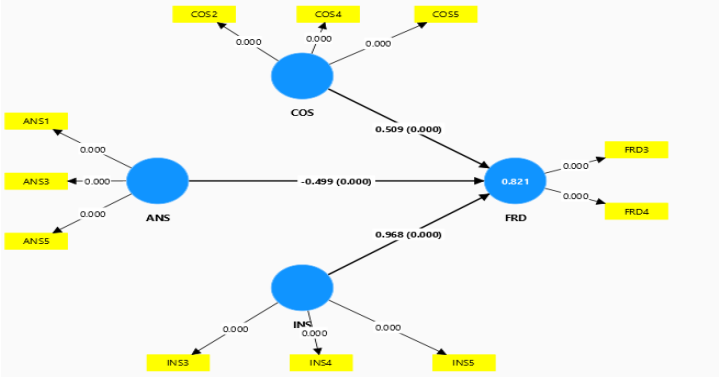


Figure 1: PLS-SEM structural model

Table 4: PLS-SEM Result

Variables		Coeff. B	Std err	t-test	P-value	Decision
COS -> FRD		0.509	0.122	4.19	0.0000	Significant
ANS -> FRD		-0.499	0.126	3.949	0.0000	Significant
INS -> FRD		0.968	0.081	11.903	0.0000	Significant

RESULTS AND DISCUSSION OF FINDINGS

The outcome showed that Forensic audit communication skill was found to have a positive and significant effect on fraud detection at 5% level of significance, with values of ($\beta = 0.509$, $t = 4.19$, $p = 0.000$). This implied that increase in Forensic audit communication skill will bring about increase in fraud detection. This finding does agree with the study of Fadilah et al (2019) studied the influence of forensic accounting skills, consisting of the auditing skills; investigative knowledge and skills; legal knowledge; communication skills; psychological, criminological and victimological skills; accounting skills; and ICT-related skills of external auditors, on their ability to detect fraud. They found that forensic communication skill was found to significantly influence fraud detection.

Second, it was found that forensic analytical skill has a substantial negative effect on fraud detection with ($\beta = -0.499$, $t = 3.949$, $p = 0.000$). This implies that most forensic auditors do not strong analytical skills thus, they do not bring about effective fraud detection. This conclusion was not in line with Dominic et al (2024) who found that traits, core (traits and core and enhanced skills include analytical proficiency, detail orientation, deductive analysis, strategic thinking, analyzing and interpreting financial statement information, interviewing skills).

Third, it was found that Forensic audit investigative skill has a significant positive effect on fraud detection with ($\beta = 0.968$, $t = 11.903$, $p = 0.000$). This conclusion was not in line with Fadilah et al (2019). Their findings revealed that investigative skills do not have an influence. However, there was consistency with study of Madzivire et al (2020) who revealed that there is a positive relationship between training, level of education and ability to detect and prevent fraud. It was also found that litigation support service has a huge role to play in the effectiveness of forensic auditing in detecting and preventing fraud.

CONCLUSION AND RECOMMENDATIONS

This study examined the forensic audit skills and fraud detection. The study applied the PLS-SEM method of data analysis. The result found that Forensic audit communication skill was found to have a positive and significant effect on fraud detection, forensic analytical skill has a substantial negative effect on fraud detection and Forensic audit investigative skill has a significant positive effect on fraud detection. Thus, the study recommended that: every forensic auditor must continuously engage in skill development especially, in the analytical skills which has a negative effect on fraud detection.

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