"Upper echelons' personality traits and corporate earnings management in Nigeria"

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BUSINESS PERSPECTIVES

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UPPER ECHELONS' PERSONALITY TRAITS AND CORPORATE EARNINGS MANAGEMENT IN NIGERIA

Abstract

Earnings management offers an opportunity to hide frauds, which are often associated with key officials of corporate entities. Chief Executive Officers (CEOs) and Chief Financial Officers (CFOs) have been implicated in fraudulent earnings management. This study aims to investigate the effect of CFOs' personality traits on earnings management in non-listed companies facing a debt crisis in Nigeria. The study explores a survey research method involving the administration of copies of a structured questionnaire on CFOs of the sampled companies. Statistical analysis includes computation of means, linear and multiple regression analyses. The findings reveal a high level of upward corporate earnings management and a strong exhibition of narcissistic trait among the CFOs. It was further observed that CFOs' narcissistic trait is implicated in upward earnings management during the financial crisis. Possible economic implications of these outcomes include misallocation of resources by investors and aggravation of corporate debt crisis. These outcomes have policy implications on the appointment of corporate key officials and the accounting education curriculum. Consequently, the study recommends the personality trait test for individuals to be appointed into upper echelons' positions in corporate organizations, as well as the inclusion of Element of Psychology in the curriculum of accounting education in Nigeria.

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Keywords	Chief Financial Officers, change of accounting methods, Machiavellian trait, narcissistic trait, non-listed companies, psychopathic trait, real earnings management
JEL Classification	M41, M48

INTRODUCTION

Empirical research on earnings management behavior of failing firms developed within the last ten years and remained scanty (Dutsi & Rausch, 2016). However, the knowledge of earnings management behavior in periods before corporate failure could be of use to stakeholders such as analysts and regulators. For instance, the outcome of this kind of studies could provide relevant variables for predicting financial failure, which should be of interest to analysts and regulators. Specifically, Beneish, Press, and Vargus (2012) and Campa and Camacho-Minano (2014) documented that upward earnings management in failing firms could be included as a proxy in the bankruptcy prediction model. Fraudulent earnings management has been ascribed to the key figures such as CEOs and CFOs of the corporate organizations (Hambrick, 1990; Hambrick & Mason, 1984). For instance, CEOs and CFOs were implicated in Enron and WorldCom scandals in the United States. CFOs were implicated in Satyam and Peregrine scandals, while both CEO and CFO were implicated in Cadbury scandal in Nigeria. However, aggressive earnings management could be explored by the upper echelons in corporate entities to hide financial crises. In Nigeria, Assets Management Corporation

of Nigeria (AMCON) was established in 2010 to mop up non-performing loans from the banking sector. Out of the list of one hundred chronic AMCON debt defaulters with a debt of 5 billion nairas and above, ninety-eight were non-listed companies (AMCON, 2016; AMCON, 2018). This group of debtors is described in this study as troubled companies. So, the current wave of bank loan defaulters in the Nigerian banking system afforded a unique opportunity to study earnings management in troubled non-listed companies.

Personality trait of the top management has been copiously treated as a relevant variable in psychology research. It has also been identified as relevant variables in financial reporting research (Plockinger, Aschauer, Hiebl, & Rohatschek, 2016). The typical personality traits in psychology are the Dark Triad traits, namely Machiavellian, narcissistic, and psychopathic. Narcissistic traits studies have been extended to corporate risk research (Chatterjee & Hambrick, 2007) and earnings management studies (Duchon & Drake, 2009; Hales, Hobson, & Resutek, 2012). Research outcomes of these previous studies suggested that higher levels of narcissism in CEOs and CFOs might result in higher earnings management. In other words, narcissistic managers have been linked with upward manipulations of corporate performance for personal or corporate gains. Machiavellian and psychopathic traits are less examined in accounting and finance research (Murphy, 2012). Consequently, the current study examined the effect of these three traits on earnings management in troubled non-listed companies in Nigeria.

1. LITERATURE REVIEW

Narcissism is the first component of the Dark Triad, and it refers to exaggerated feelings of oneself (Jones, 2013). The second component is psychopathy, which is characterized by callousness, fearlessness, and aggressiveness (Furnham, Richards, & Paulhus, 2013). The third component is Machiavellianism, which reflects that an individual is willing to manipulate or exploit others to achieve his or her goals (Miller & Lynam, 2012). These three traits are related to a certain degree and have recently become objects of research in accounting and finance.

Empirical studies on the relationship between personality traits and financial reporting outcomes are relatively scarce. Recently, research on the influence of the "Dark Triad" personality in psychology (psychopathy, narcissism, and Machiavellianism) on financial reporting outcomes is gaining momentum (Alex, Ming, Vito, & Ricardo, 2015; Majors, 2016; Olsen, Dwokis, & Young, 2014; Rijsenbilt & Commandeur, 2013). However, narcissism appears to be the most studied components of the Dark Triad in financial accounting research. Amernic and Craig (2010) argued that extremely narcissistic CEOs tend to make accounting choices that present a good picture of the company's financial sta-

tus. Olsen et al. (2014) investigated the relationship between CEOs' narcissism and market performance. The study found that narcissistic CEOs are more likely to explore real earnings management rather than accrual-based earning management to increase reported earnings per share. Hales et al. (2012) examined the relationship between narcissistic trait and managerial reporting and revealed that narcissism induced participants to inflate reported performance. Ham, Lang, Seybert, and Wang (2014) utilize the size of CFO and CEO signatures as a proxy for narcissism to determine the influence of the executive's personality on financial reporting outcomes. The results revealed that CFO narcissism could predict accruals and real earnings management, while CEO narcissism was not found to be associated with any of these financial reporting outcomes.

Furthermore, Kim (2018) examined the influence of CEO narcissism on organizational performance and earnings management and found that CEO narcissism was strongly associated with firm performance, but was not correlated with earnings management. These results suggest that narcissism is not a sustainable leadership style and that the personal characteristics of managers are important in determining firm performance. In a related study, Alex et al. (2015)

investigated the relationship between CEO narcissism and earnings manipulation. The study provided evidence that firms with more narcissistic CEOs were more likely to engage in the manipulation of accounts to present better financial performance. Empirical evidence has also linked top management narcissism with audit outcomes. An example is an experimental study conducted by Johnson, Kuhn, Apostolou, and Hassell (2013), where it was found that the client's narcissism has a significant positive effect on auditor's fraud risk assessment. Rijsenbilt and Commandeur (2013), in another study, examined the relationship between narcissism and fraud. The research outcome showed that narcissistic CEOs had a higher tendency to engage in fraud.

Some experimental studies have revealed that managers with stronger levels of the Dark Triad of personality engage more in aggressive reporting (Majors, 2016; Zhao, Zhang, & Zhu, 2016). Nevertheless, Murphy (2012) conducted an experimental study on Machiavellianism and rationalization of misreporting. The study observed that the misreported participants displayed negative emotions, but misreported Machiavellians felt significantly less guilty than others. This outcome suggests that Machiavellians tend to be involved in financial misreporting, such as earnings management, without feeling guilty for doing so. However, caution has to be exercised while interpreting these results. As a result of the small sample size that characterized the experimental study, it would be necessary to validate the outcomes by a study that would involve a larger sample size. Consequently, a survey study involving a larger sample size was explored in this paper. It was not only observed that these previous studies are foreign but also noted that psychopathic trait was scarcely explored in financial accounting and reporting research. Hence, in line with the geographical, methodological, and variable exclusion gaps identified in the previous study, the following hypothesis, stated in its null form, was formulated for the study:

H0: *Upper echelons' personality traits have no significant effect on earnings management in troubled non-listed companies in Nigeria.*

2. METHODS

The survey research design was adopted in this study. This research design was adopted because the study explored direct means of measuring personality traits by obtaining responses from targeted participants. By exploring Slovin's (1960) sampling size formula, eighty (80) non-listed companies (Appendix A, Table A5) were sampled from a published list of one hundred (100) chronic AMCON debtors.

Traditionally, the Dark Triad has been assessed with three different tests, each of which had been developed independently. Horton, Bleau, and Drwecki (2006) and Ames, Rose, and Anderson (2006) explored Narcissistic Personality Inventory (NPI) to measure narcissism. Machiavellian has been assessed with the MACH-IV test, while the Self-Report Psychopathy Scale (SRP) has been used for psychopathy. However, Jones and Paulhus (2014) developed 5-point Likert scale called the Short Dark Triad to provide a more uniform assessment and to trim down the total length of measuring items. The test consists of 27 items (9 for each of the components) that must be rated on how much the participants agree with them. The test is Internet-based and should not take most people for more than five minutes. However, the study adopted Jones and Paulhus (2014) research instrument that captured the three traits to measure the CFOs' personality traits.

The survey instrument used to capture change in accounting methods and real earnings management in the studies of King (2015) was adapted to measure earnings management. Age was categorized into: below 36 years "Young CFOs" = "1", 36-49 years "Middle Age CFOs" = "2", and 50 years and above "Matured CFOs" = "3" (Kane, 2010). In relation to gender, "Male" = "2", while "Female" = "1" (Xiong, 2016). Educational level was categorized into two: first degree or equivalent = "1" and post-graduate degree (MBA or equivalents) = "2" (Wang et al., 2017). Lastly, tenure was categorized into: below 5 years 'short tenure' = "1" and 5 years and above 'long tenure' = "2" (Ali & Zhang, 2015).

Subsequently, two hundred and forty (240) copies of the questionnaire (Appendix A, Table A4)

were administered on CFOs and other financial officers in the sampled companies (3 participants per company), two hundred and nineteen (219) copies were recovered. In contrast, two hundred and four (204) copies, representing 85% response rate, were found suitable and were used for data analysis. While one hundred (100) observations are considered good for multiple regression analysis, Loehlin (1992) and Chen (2014) noted that a sample size of two hundred (200) is more acceptable. Consequently, two hundred and four (204) observations used in this study would yield better results.

To test the hypothesis of the study, two models were formulated. The first model (Model 1) depicts the relationship between earnings management and three personality traits (Machiavellian, narcissistic, and psychopathic traits). The second model (Model 2) was explored to examine the relationship between earnings management and personality trait as a combined variable of three traits. These two models are as follows:

Model 1

$$EM_{CAM,REM} = a_0 + a_1 MAC + {} \atop {} + a_2 NAR + a_3 PSY + \varepsilon. \tag{1}$$

Model 2

$$EM_{CAM,REM} = a_0 + a_1 PTRA + \varepsilon, \tag{2}$$

where EM is earnings management, which is a function of two variables: CAM – change of accounting methods and REM – real earnings management; AGE, $GENDER$, EDU and $TENURE$ are age, gender, educational level, and tenure of office of the respondents, respectively, while $PTRA$ is the personality trait of the respondents, which is a vector of three variables, namely NAR – narcissistic trait, PSY – psychopathic trait, and MAC – Machiavellian trait. Each of the traits was measured with 5 items on the questionnaire.

The composite reliability of the specific constructs was ascertained with confirmatory factor analysis. The factor loadings exceed the minimum value criterion of 0.70, composite reliability of each construct also surpasses 0.80, and the construct

average variance extracted estimate (AVE) was above 0.50, the benchmark (Appendix A, Tables A1-A3). Since all three conditions for assessing the convergent validity were met, the degree of fitness of the measurement model is regarded as valid. Moreover, the hypothesis of the study was tested with simple and multiple linear regression analyses using AMOS SPSS software package.

3. RESULTS

The results of the study consist of descriptive statistics and test of hypothesis. Descriptive statistics includes percentages, means, and standard deviations in respect to the variables of the study. The hypothesis of the study was tested with multiple regression analysis and structural equation modeling.

3.1. Descriptive statistics

Descriptive statistics is presented in Table 1. The descriptive statistics reflected fair age group representation and gender sensitivity. It also revealed that financial expertise and tenure effect were given adequate coverage. The mean scores obtained for the personality trait displayed by the respondents suggest an exhibition of moderate Machiavellian trait (Mean = 3.04), strong narcissistic trait (Mean = 3.70), and moderate psychopathic trait (Mean = 2.63), respectively. The descriptive overview of responses on corporate change of accounting methods explored to manage earnings across the demographic variables of the respondents revealed the lowest earnings management among middle-age (Mean = 2.38), female (Mean = 2.10), more educated (Mean = 1.96), and short tenure (Mean = 2.21) CFOs. Similarly, the descriptive overview of responses on real earnings management across the demographic variables of the respondents revealed the lowest real earnings management among middle-age (Mean = 2.30), female (Mean = 2.08), more educated (Mean = 2.14), and short tenure (Mean = 2.37) CFOs. Moreover, changes in accounting methods, real earnings management, and earnings management have mean scores of 3.71, 3.91, and 3.81, respectively. These findings suggest a high level of earnings management in the sampled firms.

Table 1. Descriptive statistics

Indicators	N	%	CAM		REM	
			Mean	SD	Mean	SD
Age						
Young CFOs (below 36 years)	83	40.7	2.8301	.72068	2.7699	.77416
Middle-age CFOs (36-49 years)	44	21.6	2.3818	.68666	2.3000	.66630
Mature CFOs (50 years and above)	77	37.7	3.5805	.80343	3.5247	.92261
Total	204	100.0	–	–	–	–
Gender						
Male	114	55.9	3.7500	.83843	3.7018	.85431
Female	90	44.1	2.0989	.46676	2.0756	.53902
Total	204	100.0	–	–	–	–
Educational level						
CFOs without postgraduate degree	97	47.5	3.6526	.83336	3.7196	.83861
CFOs with postgraduate degree	107	52.5	1.9570	.46264	2.1385	.49961
Total	204	100.0	–	–	–	–
Tenure						
Short-tenure CFOs (below 5 years)	81	39.7	2.2100	.50864	2.3728	.56232
Long-tenure CFOs (5 years and above)	123	62.3	3.5521	.83094	3.5396	.85533
Total	204	100.0	–	–	–	–

Personality traits:
Machiavellian trait: Mean = 3.0449; SD = .93791
narcissistic trait: Mean = 3.6989; SD = .97891
psychopathic trait: Mean = 2.6309; SD = .88170

Corporate change of accounting methods (CAM): Mean = 3.7120; SD = .83767

Corporate real earnings management (REM): Mean = 3.9103; SD = .95906

Earnings management (EM): Mean = 3.8112; SD = .89837

3.2. Test of hypothesis

The results of the multiple regression analysis are contained in Tables 2-4. The model summary depicted in Table 2 shows the level at which the variation in earnings management could be explained by the variation in upper echelons' Machiavellian, narcissistic, and psychopathic traits (Model 2a). These three personality traits had significant positive relationships with earnings management ($R = 0.819$). The R^2 value of 0.671 indicates that 67.1% of the variation in earnings management can be explained by the variation in three personality traits. Model 2b also reflected significant positive relationship between earnings management and personality trait as a combined variable of the three traits ($R = .829$), while 68.7% of the variation in earnings management could be explained by variation in personality trait as a combined variable ($R^2 = .687$). This result implies that a unit increase in upper echelons' personality traits will lead to an increase in earnings management (upward earnings management).

Table 3 shows that, with large F values, Model 2a (F value = 135.975, p-value = .000) and Model 2b (F value = 175.275, p-value = .000) are of good fitness.

Table 4 presents a summary of regression coefficients. To assess the contribution of each of the upper echelons' personality trait, the beta val-

Table 2. Model summary

Model	R	R^2	Adj. R^2	Std. error of the estimate	Change statistics				
					R^2 change	F change	df1	df2	Sig. F change
2a	.819[a]	.671	.666	.17559	.671	135.975	3	200	.000
2b	.829[a]	.687	.679	.07250	.687	175.275	3	200	.000

Note: a. Predictors: (constant), psychopathic, Machiavellian, narcissistic, PTRA, b. Dependent variable: Earnings_Mgt.

Table 3. Model fitness (ANOVA[a])

	Model	Sum of squares	Df	Mean square	F	Sig.
2a	Regression	12.577	3	4.192	135.975	.000[b]
	Residual	6.166	200	.031	–	–
	Total	18.743	203	–	–	–
2b	Regression	14.275	3	8.382	175.275	.000[b]
	Residual	7.134	200	.061	–	–
	Total	21.409	203	–	–	–

Note: a. Dependent variable: Earnings_Mgt, b. Predictors: (constant), psychopathic, Machiavellian, narcissistic, PTRA.

ues were explored. The coefficient table shows that narcissistic trait had positive significant relationship with earnings management (beta = .455, $P < .01$, Sig. 0.000), which was followed by Machiavellian trait (beta = .330, $P < .01$, Sig. 0.000) and psychopathic trait (beta = .275, $P < .01$, Sig. 0.000) in that order (model 2a). Model 2b also revealed that personality trait, as a combined variable, had positive significant relationship with earnings management (beta = .693, $P < .01$, Sig. 0.000). The findings imply that the upper echelons' personality traits significantly contribute to the prediction of earnings management. Based on the foregoing, the null hypothesis ($H0$) was rejected. Therefore, it can be inferred that personality traits have a significant effect on earnings management in troubled non-listed companies in Nigeria.

The models can now be rewritten as:

$$EM_{CAM,REM} = 1.011 + .330MAC + \quad (3)$$
$$+ .455NAR + .275PSY,$$

$$EM_{CAM,REM} = 1.971 + .693PTRA. \quad (4)$$

4. DISCUSSION

This study attempted to find out whether the CFOs exhibit some personality traits that could have a significant effect on earnings management. The outcomes in respect to Machiavellian trait (Mean = 3.0) and psychopathic trait (Mean = 2.6) agreed to a large extent with the norms specified by the study of Jones and Paulhus (2014) for Machiavellian trait (Mean = 3.1) and psychopathic trait (Mean = 2.4) respectively. However, the finding in relation to narcissistic trait (Mean = 3.7) displayed by the CFOs was contrary to the norm specified by Jones and Paulhus (2014) for narcissistic trait (Mean = 2.8). This outcome suggests that the CFOs exhibit strong narcissistic trait, which may have implications for financial reporting outcomes.

The hypothesis sought to investigate the effect of upper echelons' personality traits on earnings management. The alternative hypothesis was supported by the results of the linear and multiple regression analyses. That is, the study posited that upper echelons' personality traits have a signifi-

Table 4. Summary of regression coefficients

	Model	Unstandardized coefficients		Standardized coefficients	T	Sig.
		B	Std. error	Beta		
2a	(Constant)	1.011	.162	–	6.236	.000
	Machiavellian	.248	.033	.330	7.526	.000
	Narcissistic	.284	.030	.455	9.531	.000
	Psychopathic	.220	.038	.275	5.826	.000
2b	(Constant)	1.971	.183	–	8.134	.000
	PTRA	.387	.021	.693	12.527	.000

Note: a. Dependent variable: Earnings_Mgt.

cant effect on earnings management in troubled non-listed companies in Nigeria. This outcome was supported by several previous studies from developed economies (Ham et al., 2014; Hales et al., 2012; Johnson et al., 2014; Majors, 2016; Zhao et al., 2016). Majors (2016) posited that all managers with lower levels of the dark triad traits engaged less in aggressive reporting. By extension, managers with higher levels of any of these traits, as observed in our study, would engage more in aggressive reporting. Zhao et al. (2016) also supported this outcome, having observed that the Dark Triad of personality positively predicts fraudulent intention. Further support was derived from Hales et al.

(2012) who revealed that narcissism induced participants to inflate reported performance. Ham et al. (2014) gave further support to this finding, having posited that CFO narcissism could predict accruals and real earnings management. The result was also supported by the proposition of Amernic and Craig (2010) that extremely narcissistic CEOs tend to make accounting choices that present a good picture of the company's financial status. Hence, the outcome of the study on the relationship between personality traits and earnings management is a contribution from a developing economy to the actual empirical results from developed economies in this research area.

CONCLUSION

This study documented a high possibility of corporate earnings management through the change of accounting methods and real earnings management. It was observed further that personality traits, most especially the narcissistic trait, have a significant positive effect on corporate earnings management in the sampled firms. Hence, it was concluded that the upper echelons' personality traits have a significant effect on corporate accounting choices and real earnings management in troubled non-listed companies in Nigeria.

The study established upward earnings management by individuals with any of three personality traits examined in this study. Economic implications of these outcomes include misallocation of resources by investors and aggravation of corporate debt crisis. Information asymmetry between the management and the investors/creditors could mislead investors and creditors into the provision of capital to these troubled companies. Consequently, it is recommended that during professional selection of individuals into upper echelons' positions in a corporate organization, such individuals should be subjected to personality trait test to recommend the individuals that fall within the norms for the appointment. It is also recommended to include the elements of psychology in the curriculum of accounting education in Nigeria to inculcate acceptable leadership traits in learners. This study included only the CFOs as respondents; Board chairpersons, audit committee chairpersons, and CEOs may be considered in future studies.

AUTHOR CONTRIBUTIONS

Conceptualization: Taleatu Taofiki Akinwumi.
Data curation: Taleatu Taofiki Akinwumi.
Formal analysis: Taleatu Taofiki Akinwumi.
Funding acquisition: Iyoha Francis Odianonsen.
Investigation: Taleatu Taofiki Akinwumi.
Methodology: Taleatu Taofiki Akinwumi.
Project administration: Iyoha Francis Odianonsen.
Software: Adetula Dorcas Titilayo.
Supervision: Adetula Dorcas Titilayo, Iyoha Francis Odianonsen.
Validation: Adetula Dorcas Titilayo.
Writing – original draft: Taleatu Taofiki Akinwumi.
Writing – review & editing: Taleatu Taofiki Akinwumi, Adetula Dorcas Titilayo, Iyoha Francis Odianonsen.

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APPENDIX A

Table A1. Confirmatory factor analysis (upper echelons' personality traits)

Source: Field survey (2019).

Indicators	Loading	Indicator reliability	Error variance	Composite reliability	AVE	Cronbach's alpha	No. of indicators
	> 0.7	–	< 0.5	≥ 0.8	≥ 0.5	≥ 0.7	–
Personality traits of managers (PTM)				–	–	–	–
Machiavellian managers				0.8584	0.7403	0.710	5
PTM1	0.742	0.5506	0.4494	–	–	–	–
PTM2	0.753	0.5670	0.4330	–	–	–	–
PTM3	0.745	0.5550	0.4450	–	–	–	–
PTM4	0.724	0.5242	0.4758	–	–	–	–
PTM5	0.737	0.5432	0.4568	–	–	–	–
Narcissistic managers				0.9090	0.6667	0.782	5
PTM6	0.781	0.6100	0.3900	–	–	–	–
PTM7	0.801	0.6416	0.3584	–	–	–	–
PTM8	0.843	0.7106	0.2894	–	–	–	–
PTM9	0.839	0.7039	0.2961	–	–	–	–
PTM10	0.817	0.6675	0.3325	–	–	–	–
Psychopathic managers				0.9422	0.7653	0.864	5
PTM11	0.867	0.7517	0.2483	–	–	–	–
PTM12	0.869	0.7552	0.2448	–	–	–	–
PTM13	0.871	0.7586	0.2414	–	–	–	–
PTM14	0.886	0.7850	0.2150	–	–	–	–
PTM15	0.881	0.7762	0.2238	–	–	–	–

Table A2. Confirmatory factor analysis (change of accounting methods)

Indicators	Loading	Indicator reliability	Error variance	Composite reliability	AVE	Cronbach's alpha	No. of indicators
	> 0.7	–	< 0.5	≥ 0.8	≥ 0.5	≥ 0.7	–
Change of accounting methods (CAM)				0.9803	0.8327	0.900	10
CAM1	0.914	0.8354	0.1646	–	–	–	–
CAM2	0.892	0.7957	0.2043	–	–	–	–
CAM3	0.888	0.7885	0.2115	–	–	–	–
CAM4	0.887	0.7868	0.2132	–	–	–	–
CAM5	0.921	0.8482	0.1518	–	–	–	–
CAM6	0.956	0.9139	0.0861	–	–	–	–
CAM7	0.916	0.8391	0.1609	–	–	–	–
CAM8	0.878	0.7709	0.2291	–	–	–	–
CAM9	0.977	0.9545	0.0455	–	–	–	–
CAM10	0.891	0.7939	0.2061	–	–	–	–

Table A3. Confirmatory factor analysis (real earnings management)

Indicators	Loading	Indicator reliability	Error variance	Composite reliability	AVE	Cronbach's alpha	No. of indicators
	> 0.7	–	< 0.5	≥ 0.8	≥ 0.5	≥ 0.7	–
Real earnings management (REM)				0.9768	0.8080	0.909	10
REM1	0.909	0.8263	0.1737	–	–	–	–
REM2	0.894	0.7992	0.2008	–	–	–	–
REM3	0.878	0.7709	0.2291	–	–	–	–
REM4	0.889	0.7903	0.2097	–	–	–	–
REM5	0.889	0.7903	0.2097	–	–	–	–
REM6	0.912	0.8317	0.1683	–	–	–	–
REM7	0.897	0.8046	0.1954	–	–	–	–
REM8	0.891	0.7939	0.2061	–	–	–	–
REM9	0.893	0.7974	0.2026	–	–	–	–
REM10	0.936	0.8761	0.1239	–	–	–	–

Table A4. Sample questionnaire

Consent: Do you wish to participate voluntarily in this research work? Yes [ ]   No [ ]
Section A. Upper echelons' demographic profile
Instructions: Please tick (ˇ) the option that correctly depict your choice.

1. Age: below 36 years [1]   36-49 years [2]   50 years and above [3]
2. Gender: male   [1]   female [2]
3. Highest educational qualification: first degree/equivalent [1] postgraduate degree [2]
4. Tenure: below 5 years [1]   5 years and above [2]

Section B. Upper echelons' personality traits
Instructions: Please tick (ˇ) the option that correctly depict your choice.

5. To what extent can you describe your personality with the following statements?

S/N	Item	Very low				Very high
a	I like to use clever manipulation to get my way	1	2	3	4	5
b	Whatever it takes, I must get the important people on my side	1	2	3	4	5
c	It is not wise to tell my secrets to others	1	2	3	4	5
d	I avoid direct conflict with others because they may be useful in the future	1	2	3	4	5
e	I make sure my plans benefit me but not others	1	2	3	4	5
f	I like to be the center of attention	1	2	3	4	5
g	I like having authority over people	1	2	3	4	5
h	I insist upon getting the respect that is due to me	1	2	3	4	5
i	Everybody likes to hear my stories	1	2	3	4	5
j	I am certainly going to be a great person	1	2	3	4	5
k	I like to get revenge on authorities	1	2	3	4	5
l	People often say I'm out of control	1	2	3	4	5
m	It is true that I can be mean to others	1	2	3	4	5
n	People who mess with me always regret it	1	2	3	4	5
o	I will say anything to get what I want	1	2	3	4	5

Section C. Corporate earnings management
Instructions: Please tick (˅) the option that correctly depict your choice.

6. To what extent do you agree that your firm would make the following accounting adjustments/choices to boost reported earnings given that each adjustment is in compliance with financial reporting regulations?

S/N	Item	SA				SD
a	Modify bad debt expense projections	1	2	3	4	5
b	Adjust obsolescence estimates for inventories	1	2	3	4	5
c	Alter assets depreciation policy	1	2	3	4	5
d	Refine impairment measurement policy	1	2	3	4	5
e	Change estimates for deferred tax	1	2	3	4	5
f	Modify valuation of retirement plan liabilities	1	2	3	4	5
g	Change property, plant and equipment valuation model	1	2	3	4	5
h	Change financial assets valuation model	1	2	3	4	5
i	Change goodwill valuation model	1	2	3	4	5
j	Change software cost valuation model	1	2	3	4	5

7. To what extent would your firm carry out the following real operating activities to boost reported earnings, given that each activity is in compliance with financial reporting regulations?

S/n	Item	Very unlikely				very likely
a	Ease payment terms	1	2	3	4	5
b	Offer price discount to attract more sales	1	2	3	4	5
c	Cut maintenance expenditures	1	2	3	4	5
d	Cut research and development expenditures	1	2	3	4	5
e	Cut advertising expenditures	1	2	3	4	5
f	Cut employees training budget	1	2	3	4	5
g	Cut travel and entertainment budget	1	2	3	4	5
h	Postpone new project	1	2	3	4	5
i	Increase production to lower cost of goods produced	1	2	3	4	5
j	Dispose old non-current assets	1	2	3	4	5

Table A5. List of sampled companies

Alminnur Resources Limited	Abasa Nigeria Enterprises Ltd	Brila Energy Limited
Ofada Veetee Rice Ltd	Lawal Obelawo Plastic Ind	Inter. Oilfield Services Ltd
Zarm Poultry and Feedmills	Pokat Nigeria Limited	Grand Petro - Chemical Co
Global Haulage Resources	Tradjek Nigeria Limited	Sarki Surajo Petroleum Ltd
Jag Global Resources	Gateway Portland Cement	Sunshine Oil and Chem. Dev.
Ayokunle Farms & Ind. Ltd	Gramet Group	Crystal Dynamics Energy Ltd
Osigwe Foods & Agro Ind	Dwc Drilling Limited	Nimex Petroleum Limited
Tuns Farms Nig Ltd	Charlesco (WA) Ltd	Nacoil International Limited
Workson Int. Ltd	Street Fleet Inv. Ltd	Capital Oil & Gas Ind. Ltd
Global Formwork Nig. Ltd	Resort International Limited	Tanzila Petroleum Ltd
Hosanna Properties Ltd	Aframan Enterprises Nig. Ltd	Extra Oil Limited
Roygate Properties	Genprogetti Nig. Ltd	Beracah Lubrications Nig. Ltd
Woobs Resources Limited	Eres N V (Nig.) Ltd	Petroleum Brokers Limited
Robo Michael Limited	Integrated Dev. & Inv	Afrijet Airlines Limited
Rangk Ltd	Cinca Nigeria Limited	Mofas Shipping Line, Nig. Ltd
Sharon Properties Ltd	Centage Savings & Loans Ltd	Victoria Continental Inter.
Index Dev. Company Ltd	Reliance Telecom Ltd	Timbuktu Media Limited
Claremount Management Ltd	Avian Specfrontage Comm.	Ajoke Stores Limited
Venus Construction Company	Sammy Beth Interbiz Limited	Somerset Energy Services Ltd
Covenant Apartment Compl.	Cityscape International Ltd	Continental Aviation Services
Kroggar Investments Ltd	VIVA Wireless Ltd	Al-Kahf Motorcycle Company
Ena-Bell Limited	Lorna Global Resources Ltd	Timbuktu Media Limited
Limkers Nigeria Limited	Ziklagsis Network Ltd	Resort International Ltd
Home Trust Savings	Shoreline Power Company	Suru World Wide Ventures
Lexacap Partners	Suffolk Petroleum	Hotel De Island
Anyiam Osigwe Ltd	Seawolf Oilfield Services	Geedee Zulu Investment Co.
Arcturus Merchant Trust Ltd	Goldust Investment Co. Ltd	