

DIRECTOR'S CHARACTERISTICS AND FRAUDULENT FINANCIAL REPORTING IN NIGERIA

TINA OGHENEKOME ASHAFOKE

Department of Accounting, University of Benin, Nigeria
aishatyna123@yahoo.co.uk

EYESAN LESLIE DABOR

Department of Accounting, University of Benin, Nigeria
dabor_el@yahoo.com

FRANCIS KEHINDE EMENI

Department of Accounting, University of Benin, Nigeria
francis.emeni@uniben.edu

Abstract

This study examined the relationship between directors' characteristics and fraudulent financial reporting for selected listed firms on the Nigerian Stock Exchange. To achieve the objectives, a sample size of 80 listed companies from the Nigerian Stock Exchange was selected. The study adopted an *ex-post-facto* research design. Secondary data were collected from the firms' annual reports on their corporate websites, to determine the relationship between directors' characteristics and fraudulent financial reporting for a period of seven years (2012-2018). The study utilised panel logit regression method to test the hypotheses. The study showed that directors' political connection had a negative and an insignificant relationship with fraudulent financial reporting at p-values of 5% significance level ($0.2640 > 0.05$). The study found that director's overconfidence exhibited a significant positive relationship with fraudulent financial reporting at p-value of 5% significant level ($0.0000 < 0.05$). The study found a negative and an insignificant relationship between directors' financial expertise and fraudulent financial reporting at the p-value of 5% level of significance ($0.4800 > 0.05$). However, directors' compensation revealed a significant negative relationship with fraudulent financial reporting at p-value of 5% significance level ($0.0230 < 0.05$). The study found that directors' ownership exhibited an insignificant negative relationship with fraudulent financial reporting at p-value of 5% significance level ($0.3370 > 0.05$). Based on these findings, the study concludes that directors' characteristics significantly affects fraudulent financial reporting in Nigeria. The study recommended that more politically connected directors should be appointed to the board since a higher percentage of politically connected directors would report a significant negative relationship. In addition, the study also recommended that more directors with financial expertise should be appointed to the board, as it would help to significantly reduce the likelihood of fraudulent financial reporting.

Keywords: Fraudulent Financial Reporting, Directors Characteristics, Directors Political Connections, Directors Overconfidence, Directors Financial Expertise

JEL Classification: G32

1. INTRODUCTION

Stakeholders get useful information about the affairs of an entity mainly through the financial statement. The issuance of a quality financial reporting by company management is essential since stakeholders rely on the financial information to make economic decisions (Besar, Ali, and Ghani, 2017). However, several global financial scandals around the world and fluctuating market prices have negatively affected the confidence of investors. Several publicized accounting scandals such as those of Enron in 2002, WorldCom in 2002, Cadbury Nigeria accounting scandal in 2006, the 2008 financial crisis, and recent corporate failures such as Gupta scandal in 2017, Samsung accounting scandal in 2018, Wells Fargo and Co. in 2018, Nissan in 2018, Tesla corporate scandal in 2018, Steinhoff corporate fraud in 2019 and Wirecard accounting fraud in 2019 brought financial reporting under severe criticisms. Those spates of financial reporting scandals led to an increased demand for quality assurance on financial statements (Ozelik, 2020).

Several accounting reforms have been embarked upon to enhance the quality of accounting information. These include the United State of America Sarbanes-Oxley Act of 2002 and the Nigeria Corporate Governance Code of 2018 which were aimed at curbing fraudulent practices and exploitation by corporations. Despite these reforms, fraudulent financial reporting appears to occur at a growing rate and with an increasing severity that continues to be a big challenge to the confidence of taxpayers, borrowers and stakeholders (Jan, 2018).

Over time, executives have distorted the quality of the accounting records, whether by deception or incompetence, to accomplish their desired goals (Zainudin and Hashim, 2016). The growing trend of fraudulent accounting may affect stakeholders' economic choices as well as impact the reputation of the capital markets and public confidence.

The capital market participants have high hopes concerning the credibility, accountability as well as the reliability of the accounting reports. The quality, accountability and credibility of the accounting process enable stakeholders to make better judgments. Previous research showed that top-level administration was typically tangled with the misrepresentation of the accounting reports and how their activities affect the performance of the company (Rezaee, 2005).

Previous findings showed that falsified financial reporting cases were often accompanied by instilled strict approaches to improper misrepresentation by managers (Leung and Cooper, 2003; Tan, Chapple, and Walsh, 2017). Directors naturally incorporate a set of characteristics, and their decision-making mechanisms represent the design of various features in conjunction with cognitive behavior instead of individual ones (Carpenter, Geletkanycz, and Sanders, 2004).

Price Waterhouse Cooper (2014) conducted a study in 95 countries on cybercrime. The investigation announced an upsurge of more than 40 per cent in financial manipulation since 2001. The fraudulent financial statement remains a significant issue among companies of all sizes, across countries and literally in every industry. Financial statement fraud has been regularly described as a criminal offence, an illegal act which has several different features, risks and economic implications (PwC's, 2014). Adams, Hermalin, and Weisbach (2010) argued that these financial scandals had placed the corporate board in the limelight of governance reforms. These irregularities have generated a renewed focus by academic research on governance structure. Due to recent (Wire card accounting fraud of 2019), financial scandals and the role of corporate boards' involvement in financial fraud, it became critical to review and examine organizational boards more closely and deeply.

Against this background, this study empirically examined directors' characteristics on fraudulent financial reporting of quoted companies in Nigeria. The director's attributes include directors' political connection, directors' overconfidence, directors' financial expertise, directors' compensation and directors' ownership.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Theoretical Review

The framework that underpinned the design of models for this study was the upper echelon and the fraud pentagon theories.

Upper Echelons Theory

The theory of upper echelons lies in the behavioral theory of the firm which shows that management decisions do not necessarily have rational reasons but are primarily impacted by the inherent shortcomings of management as humans (Cyert and March, 1963). Psychological characteristics, such as limited objectivity, numerous and inconsistent goals, varying degrees of desire, etc., are thought to affect strategic decisions made by directors, which in turn dictate a firm's performance. Based on the premise of bounded rationality, the upper echelon theory suggests that people are faced with events which are too challenging for tactical-choice conditions to understand and comprehensively proceed with. Therefore, individuals modify these circumstances by limiting the number and complexity of the information and aspects. One can imagine this simplification of one's belief and the actual-world situation as a prism or a distorted display. It is constructed from the cognitive basis and values of the individual and thus express personal traits and peculiarities in decision-making circumstances (Finkelstein, Cannella, Hambrick, and Cannella, 2009; Hambrick and Mason, 1984).

Quite several researchers such as Nielson (2009); Narayanaswamy (2013); Ngan (2013); Plöckinger, Aschauer, Hiebl, and Rohatschek (2016); Wang, Chen,

Chin, and Zheng (2017) explored the upper echelons theory. These studies showed that directors' characteristics were determinants of results, policy decisions and corporate success levels (Hambrick and Mason, 1984). Therefore, a crucial feature of this principle is that it is possible to use the traits of persons in management or board members to forecast business choices and ultimately the outcomes. Hambrick and Mason (1984) further claimed, that the objective situation affected both the upper echelon attributes as well as the strategic decisions.

Therefore, psychological factors such as political connections could have an impact on an organization's financial reporting. The proximity of misreports and overstatement of financial information is relatively high, and the presence of this influence on most company-specific details is expected to be suppressed so as to conceal expropriation steps from officials and their associates. Also, Bushman, Piotroski, and Smith (2004) asserted that politicians could exploit their authority over regulatory policies, including relaxing the company's regulatory oversight in favor of their associates in anticipation of enticements, favoritism and political support. Therefore, it is presumptuous to infer that firms with the political network will be careless about the quality of information presented, and if there is any anomaly in such reports, the political network immunities will help such firms to escape strict penalties and punishment where necessary.

Fraud Pentagon Theory

The theory of fraud pentagon is the most current theory that complements the theory of fraud triangles and diamond fraud theory. Crowe developed the fraud pentagon theory in 2011. The theory was a revised one that covered the reasons fraud is committed. Crowe (2011) introduced the fraud pentagon theory was an updated version of fraud diamond theory by Wolfe and Hermanson in 2004. Two more aspects of the reasons for fraud were applied to the theory, they include competence and arrogance. The competence mentioned in this principle of the fraud pentagon is of the same nature as capability.

The fraud pentagon is the theory which detects why managers commit fraud. Crowe (2011) in an attempt to explain the reason for fraud, espoused fraud as a function of pressure, opportunity, rationalization, competence and arrogance. When businesses experience increased economic burden and conditions, the motivation for companies or employees to perpetrate fraud is higher (Cressey, 1973; Wedgandt, Kimmel, and Kieso, 2015).

Pressure stems from a substantial financial need/problem and political influence. Prior empirical studies measured pressure by exploring low liquidity, high debt and the financial performance problems. Opportunity is a situation which, because of its inadequate safeguards, would create the possibility for persons to perpetrate fraud. The opportunity could be based on factors such as: the nature of the industry and efficient control used to detect fraud in the financial statements. Rationalization is the presence of ideas which, even though these acts are inaccurate, may make an individual excuse his behavior. These factors can be ownership and compensation. Competence is the potential to perpetrate fraud among workers. Fraud

expertise requires financial ability to circumvent internal controls, establish a total cover policy, and recognize the social circumstances for personal needs to be met. Crowe (2011) confirmed that arrogance was the dominance or right of an individual's claims that organizational policies and control mechanism should not extend to him. Arrogance stem from overconfidence. Furthermore, prior studies showed that fraud risk factors (pressure, opportunity, rationalization, competence and arrogance) have a positive impact on the identification of fraud in the financial statements.

Directors' Characteristics and Fraudulent Financial Reporting

A generic or an identifiable attribute about a member of the board can be traced to the characteristics of directors. Therefore, directors' characteristics can be described as a governance structure that defined as one internal corporate governance mechanism, which expands on the features of the board. Independence, commitment, age, ethnicity, nationality, experience, academic and functional history are some of the attributes of directors (Anderson, Mansi, and Reeb, 2004).

Yang and Buckland (2010) conducted a study on the determinant of fraudulent financial reporting in China listed firms. The study examined time trait and corporate governance as a determinant with a sample size of 82 firms with fraud case identified by the China Securities Regulatory Commission for the period 1996 to 2007. The study revealed that there is no statistical significance between corporate governance mechanism and fraudulent financial reporting. Plöckinger et al. (2016), surveying 60 archival empirical research to determine the impact individual executives have on financial reporting quality, found that indeed, top executives have a great impact on financial reporting decisions ranging from creative accounting to accounting conservatism, and most of all, on the quality of disclosure.

Abri, Arumugam, and Balasingam (2019) investigated the impact of corporate governance on financial statement fraud. The study surveyed 68 respondents from stakeholders of companies in Tanzania. The study used corporate governance variables of audit committee effectiveness, tone of top-level management, independence of the board of directors and audit committee, policy and ethical guidance, and corporate culture. The study revealed that corporate governance significantly affects financial statement fraud.

Wang et al. (2017) examined how managerial ability and political connections influenced fraudulent financial reporting amongst listed firms in China between 2007 and 2012. The findings revealed that there was a positive and an insignificant relationship between directors' political connection and fraudulent financial reporting. They discovered that the increased ability of managers (experience, knowledge, qualifications) resulted in improved financial reporting quality. They also found that managers with a higher ability in non-politically connected firms have a larger input in reducing financial reporting fraud than high ability managers in politically connected firms. They added that firms which had capable managers are subjected to less severe penalties when found guilty of

disobeying regulatory agencies, and even more so, when the managers had political connections than their non-capable manager firm counterparts.

Hasnan, Rahman, and Mahenthiran (2014) in a study of 53 firms in Malaysia between the periods of 1996 to 2007 investigated financial reporting fraud determinants and found that firms' political connections have an insignificant effect on financial reporting fraud. They also found that earning management practices of firms would most likely escalate to financial reporting fraud. In addition, they discovered that firms which had more founders on their board irrespective of their qualifications, educational background and experience were highly likely to practice fraudulent financial reporting. In conclusion, they stated that firms would practice fraudulent financial reporting when the firm is experiencing a high level of financial distress irrespective of whether the directors have adequate knowledge, experience and educational background. The result of the relationship between political connection and financial reporting fraud reported a negative and insignificant.

Schrand and Zechman (2012) considered the relationship between executive overconfidence and the slippery slope to financial misreporting. 49 firms were selected as a sample from the Accounting and Auditing Enforcement Releases (AAERs) for the period 1996 to 2003. The study revealed that overconfident directors are more likely to exhibit intentional misstatements of the financial report. The finding showed that overconfidence has a positive and significant influence on financial statement fraud.

However, Anichebe, Agbomah, and Agbagbara (2019) investigated listed agricultural firms in Nigeria between the periods of 2013 to 2017 and found out what determined the likelihood of financial statement fraud. They discovered that the probability of financial statement fraud was determined by the number of directors with Accounting and or Finance knowledge and experience. The relationship between directors' expertise and financial statement was positive and significant.

Chan, Tsai, and Li (2015) examined why the executive committed fraud and found out that there existed a significant positive relationship between compensation and financial fraud. In the same vein, Feng, Ge, Luo, and Shevlin (2011) conducted a study on why CFOs were involved in material accounting manipulations. The study employed 499 sampled firms which were involved in manipulation. The study revealed a positive and significant relationship between compensation accounting manipulation.

Ujiyantho and Scout (2007) found out that managerial ownership has a significant negative effect on earnings management. Their results were similar to those of Nuryaman (2008) who showed that ownership concentration negatively affects earnings management.

Hypothesis

In furtherance of the above literature, this study assumed that:

H₀₁: Directors' political connection has no significant relationship with fraudulent financial reporting in Nigeria listed firms.

H₀₂: Directors’ overconfidence has no significant relationship with fraudulent financial reporting in Nigeria listed firms.

H₀₃: Directors’ financial expertise has no significant relationship with fraudulent financial reporting in Nigeria listed firms.

H₀₄: Directors’ compensation has no significant relationship with fraudulent financial reporting in Nigeria listed firms.

H₀₅: Directors’ ownership has no significant relationship with fraudulent financial reporting in Nigeria listed firms.

3. METHODOLOGY

3.1 SAMPLE FORMATION

To examine the impact of directors’ characteristics on fraudulent financial reporting, the study engaged the use of *ex-post-facto* research design. The *ex-post-facto* research design helps to establish the causal effect among the variables: dependent and independent variables. Thus, it was most suitable for this study as it permits the examining of expected relationship between directors’ characteristics and fraudulent financial reporting.

The sample size for this study was 80 quoted companies in Nigeria for the period 2012 to 2018. The choice of the sample size relied essentially on the assumption of Roscoe (1975) who proposed that a sample size greater than 30 and less than 500 was acceptable, and that when samples were to be divided into subsamples, a minimum sample size of 40 is deemed very sufficient for each group. The data were extracted for seven years, from 2012 to 2018 of the financial statements of the listed selected firms.

3.2 MODEL SPECIFICATION AND DATA ANALYSIS METHOD

It is expected that directors’ characteristics should affect fraudulent financial reporting in this equation. This study adapted the model of Wang et al. (2017).

Fraudulent financial reporting was posited to be a function of directors’ characteristics.

$$FFR = f(DIRFE, DIROVER, DIRPOL, DIRCOM, DIROWN) \dots Eq. (1)$$

This model was further modified and could be expressed explicitly in equations 2.

$$FFR_{it} = \beta_{0it} + \beta_1 DIRFE_{it} + \beta_2 DIROVER_{it} + \beta_3 DIRPOL_{it} + \beta_4 DIRCOMP_{it} + \beta_5 DIROWN_{it} + \beta_6 FSIZE_{it} + \beta_7 BSIZE + \beta_8 FAGE + \mu_{it} \dots \dots \dots Eq. (2)$$

Where,

FFR = Fraudulent Financial Reporting; DIRFE = Directors’ Financial Expertise; DIROVER = Directors’ Overconfidence; DIRPOL = Directors’ Political Connections; DIRCOMP = Directors’ Compensation; DIROWN = Directors’ Ownership; FSIZE = Firm Size; BSIZE = Board Size; FAGE = Firm Age; β_0 = Intercept of the regression line, regarded as constant

β_{1-6} = Coefficient or slope of the regression line or independent variables

μ = Error term that represents other independent variables that affect the model but not captured. 't' = year or period and i = firm

A priori expectation

$$\beta_1 < 0, \beta_2 > 0, \beta_3 > 0, \beta_4 < 0, \beta_5 < 0, \beta_6 > 0, \beta_7 > 0, \beta_8 > 0$$

Table 1: Operationalization of variables

Variable	Variable Type	Abbreviation	Measurement	Source
Fraudulent Financial Reporting	Dependent	FFR	This variable is dichotomous which will take the value 1 if the company has an M-Score greater than -2.22, which indicates that the company is likely to manipulate its financial statements. Otherwise "0".	
Directors Characteristics				
Directors' Financial Expertise	Independent	DIRFE	Measured as the percentage of members with professional qualification such as ICAN, ACCA, CFA AND CIMA to the total managers on the board.	Matsunaga and Yeung (2008)
Directors' Overconfidence	Independent	DIROVER	Measured using total long-term debt divided by total assets.	Malmendier, Tate, and Yan (2007)
Directors' Political Connections	Independent	DIRPOL	Measured using a set of dummy variables that represent a political connection. Assign 1 if the CEO or member of the board is a current or former officer of the government, the military, a member of any of the political party and 0 if not.	Wang et al. (2017)

Directors' Compensation	Independent	DIRCOMP	Measured by the natural log of compensation of top executives.	Wang et al. (2017)
Directors' Ownership	Independent	DIROWN	Measured as a percentage of directors' shares to the total number of shares issued.	Li (2015)
Firms Size	Control	FSIZE	Measured as the natural log of total asset of the firms.	Khemakhem and Dicko (2013)
Board Size	Control	BSIZE	Total Number of board Members	Wang et al. (2017)
Firm Age	Control	FAGE	Numbers of years of incorporation	Wang et al. (2017)

Source: Researcher's Design (2021)

This study specifically made use of binary logit regression to illustrate the impact of directors' characteristics on fraudulent financial reporting. The application of logistic regression expanded the multiple methods of linear regression to test circumstances where the dependent variable was categorical. The multiple regression analysis was accompanied by some basic statistical analysis like descriptive statistics and correlation analysis and test of normality of regression variables.

4. RESULTS

Table 2: Descriptive Statistics

Variable	Mean	Max	Min	Std. Dev.	Skewness	Kurtosis	J-B(prob.)
<i>FFR</i>	0.16	1	0	0.37	1.86	4.47	370.14(0.00)
<i>DIRCOMP</i>	8.16	9.90	6.18	0.66	-0.08	2.87	0.94(0.63)
<i>DIRFE</i>	0.21	0.67	0	0.15	0.55	3.11	28.22 (0.00)
<i>DIROVER</i>	0.70	4.44	0.001	0.46	4.76	33.36	23325.4(0.00)
<i>DIROWN</i>	0.06	0.70	0	0.12	2.78	11.82	2507.16(0.00)
<i>DIRPOL</i>	0.24	1	0	0.43	1.20	2.45	140.39(0.00)
<i>BSIZE</i>	10.03	23	4	3.16	0.81	3.59	68.52(0.00)
<i>FSIZE</i>	10.70	12.77	8.63	0.92	0.38	2.46	20.19(0.00)
<i>FAGE</i>	41.40	124	1	23.07	0.77	3.90	72.97(0.00)

Source: Researcher's Computation (2021)

Descriptive statistics show the summary of data and other basic characteristics within the series (Adegbeye, Leung, and Wang, 2018). The annualized summary statistics for all the variables in the study were presented for the sampled companies over the 7year period. The average value for the variable FFR was 0.16, with a standard deviation of 0.37. Given that the likelihood fraudulent

financial reporting (FFR) had a maximum value of 1 and a minimum value of 0, the result indicated that 16 percent of the selected companies had engaged in fraudulent financial reporting at any given time. That 16 percent of the sampled firms engaged in fraudulent financial reporting at some point within the 7-year period was a rather worrisome outcome. For the directors' characteristic variables, directors' compensation (DIRCOMP) reported a mean of 8.16 million naira and a standard deviation of 0.33. The relatively low standard deviation indicated that directors' compensation was fairly distributed across the companies over time. Essentially, it appeared that Nigerian companies adopt a relatively similar pattern of directors' compensation.

The measure of directors' overconfidence (DIROVER) had an average value of 0.70, suggesting that 78 percent of the directors engaged were overconfident and therefore, likely to be involved in risky investments during the financial year under study. This is a large proportion among the companies. For directors' financial expertise (DIRFE), the mean of value of 0.209 showed that around 21 percent of directors in the selected firms exhibit adequate expertise in the financial system. The directors' political connection (DIRPOL ranging between 0 and 1) had reports of 0.24 on average. It indicated that, on average, 24 percent of the directors in the companies had some form of political connection. The average value for directors' ownership (DIROWN) was 0.06 which is quite low since it suggests that the board controls about 6 percent of ownership among the companies in the sample. However, a maximum value of 0.70 indicates that some of the companies have director-ownership of up to 70 percent.

Table 3: Correlation Matrix

Variables	DIRCOMP	DIRFE	DIROVER	DIROWN	DIRPOL	BSIZE	FSIZE	FAGE
DIRCOMP	1							

DIRFE	-0.06	1						
	(0.19)	----						
DIROVER	0.06	-0.09	1					
	(0.17)	(0.03)	----					
DIROWN	-0.09	0.03	-0.04	1				
	(0.03)	(0.45)	(0.30)	----				
DIRPOL	0.07	0.00	-0.09	-0.12	1			
	(0.10)	(0.94)	(0.04)	(0.00)	----			
BSIZE	0.38	-0.11	-0.10	0.06	0.00	1		
	(0.00)	(0.01)	(0.03)	(0.16)	(0.98)	----		
FSIZE	0.66	-0.09	0.01	-0.12	0.08	0.58	1	
	(0.00)	(0.03)	(0.85)	(0.01)	(0.07)	(0.00)	----	
FAGE	0.20	0.01	0.00	-0.25	0.05	-0.04	0.06	1
	(0.00)	(0.76)	(0.96)	(0.00)	(0.20)	(0.33)	(0.16)	----

Source: Researcher's Computation (2021)

Given that most of the independent variables in the study are directors' characteristic factors, we provided a correlation analysis to evaluate the pattern of relationships among the main independent variables. The result is presented in Ttable 3. Director compensation only had a significant correlation (negative) with DIROWN among the directors' characteristics variables. This showed that directors' compensation and director ownership moved in opposite directions – compensation may likely decline with more ownership. However, it was seen that DIRCOMP had a strong positive correlation with the other variables of BSIZE, FSIZE and age, indicating that the larger the board, the bigger the size of the company, the larger the directors' compensation. Directors' financial expertise has a significant negative correlation with directors' overconfidence which showed that more financial expertise tends to predispose directors to lesser risk-taking habit of overconfidence. Directors' over confidence was negatively related to directors' political connection and the size of firms. The larger the firm, the less the tendency for the directors to be overconfident. Directors' ownership was also negatively correlated with directors' political expertise.

Empirical Results on the Panel Analysis

Test of accuracy of prediction from the logit model

Table 4: Test of predictive accuracy

	Coefficient	Std. Err.	z-values	P> z
<i>_hat</i>	1.008	.254	3.96	0.000
<i>_hatsq</i>	.0036	.0902	0.04	0.968
<i>_cons</i>	.0011	.2904	0.00	0.997

Source: Researcher's Computation (2021)

From the STATA estimation procedure, the predictive accuracy of the estimated model was tested based on the *linktest* control. If the model is adequately specified, no additional predictors should be available that would add to the robustness of the model that was estimated. In other words, no additional variables in the model should be statistically significant - except by chance. The *linktest* result was presented in Table 4, and it showed that the linear predicted value (*_hat*) from the logit result was significant at the 1 percent level (with p-value = 0.000) indicating that the all the predictors in the model are all statistically significant predictors. This also confirmed that the selected predictors in the model were all meaningful. The coefficient of the linear predicted value squared (*_hatsq*) also had the expected significance level (with p-value = 0.968). The insignificant *_hatsq* value shows that the null hypothesis of the absence of misspecification could not be rejected. Essentially, it indicates that no specification error was contained in the model.

Table 5: Hosmer-Lemeshow Contingency Table and Goodness of Fit Statistics

Group	Prob	Obs_1	Exp_1	Obs_0	Exp_0	Total
1	0.0621	6	2.7	50	53.3	56

2	0.0740	2	3.8	53	51.2	55
3	0.0952	2	4.6	53	50.4	55
4	0.1117	6	5.8	50	50.2	56
5	0.1296	6	6.6	49	48.4	55
6	0.1537	6	7.8	49	47.2	55
7	0.1748	8	9.2	48	46.8	56
8	0.2045	16	10.4	39	44.6	55
9	0.2553	13	12.5	42	42.5	55
10	0.9899	23	24.6	32	30.4	55
number of observations	553					
number of groups	10					
Hosmer-Lemeshow chi2(8)	11.29					
Prob > chi2	0.1857					

Source: Researcher’s computations (2021)

Another test of goodness of fit used in this study was the Hosmer and Lemeshow’s goodness-of-fit test. This test considers the condition that the predicted frequency and observed frequency should match closely to ensure a good fit for the model. The result of the Hosmer-Lemeshow goodness-of-fit statistic (which is based on the Pearson chi-square from a contingency table of observed frequencies and expected frequencies) is shown in Table 5. It is expected that a well fit logit model should exhibit a large p-value (greater than 0.1) for the Hosmer and Lemeshow’s statistic. The p-value for the statistic has 0.1857 which was sufficiently large enough to indicate a high fit of the data used in the study.

Table 6: Estimated Marginal Effects for the Model

Variable	Marginal Effects		Conditional at Means	
	dy/dx	P> z	dy/dx	P> z
DIROVER	0.195*** (0.036)	0.000	0.198*** (0.040)	0.000
DIRCOMP	-0.072** (0.031)	0.023	-0.073** (0.032)	0.021
DIRPOL	-0.041 (0.037)	0.269	-0.041 (0.037)	0.267
DIROWN	-0.146 (0.152)	0.337	-0.148 (0.154)	0.335
BSIZE	0.0004 (0.006)	0.936	0.001 (0.006)	0.936
DIRFE	-0.071 (0.100)	0.480	-0.072 (0.102)	0.480
FSIZE	0.0512** (0.024)	0.033	0.052** (0.24)	0.028

LAGE	-0.0307 (0.019)	0.110	-0.031 (0.019)	0.112
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Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0. Source: authors' computation
Source: Researcher's Computation (2021)

The result also reports the log likelihood chi-square and pseudo-R-square for the model. These measures give a general gauge on how the model fits the data. While the LR statistic indicates the efficiency of the estimates, the Wald test (probability of Chi) evaluated the overall significance of the estimated equations. The probability of the Wald test coefficient was significant at the 1 percent level (prob > 0.01). It showed that the null hypothesis of no significant relationship between all the independent variables combined and the dependent variable was rejected. Thus, the estimated model had an impressive overall significance.

The results of the marginal effects estimates were presented in Table 6. The marginal effects from the logit estimates showed the elasticities or proportional effects of the independent variables on the probability that the required outcome on the dependent variable would occur. In the result, both the direct marginal effects and marginal effects conditional on the means of the independent variables were considered. The results were essentially similar hence we interpreted them conclusively. Only the coefficients of DIROVER, DIRCOMP and FSIZE were significant at the 5 percent level (each of the p-values were less than 0.05). This shows that these are the main factors that influenced the tendency of companies to report fraudulent finances. The other coefficients, including those of DIRPOL, DIROWN and DIRFE failed the significance test at the 5 percent level (p-value greater than 0.05). Thus, directors' political connection, directors' ownership and directors' financial expertise do not directly significantly influence the tendency for a company to engage in fraudulent financial reporting.

From the marginal effect result, it could be seen that high levels of directors' overconfidence increased the likelihood of fraudulent financial reporting in a company. On the other hand, increased directors' compensation tends to reduce the likelihood of fraudulent financial reporting in the company. The size of the firm matters in terms of fraudulent financial reporting. Surprisingly, larger firms were seen to promote FFR since the result showed that a one percent rise in a company's size increases the probability of financial reporting by about 0.05 percentage points. For the directors' characteristics variables, the result shows that as directors' overconfidence increases, the tendency of fraudulent financial reporting rises with the companies. With every one percent rise in overconfidence by the directors, the chance of fraudulent financial reporting increases by about 0.195 percentage points. On the other hand, with every one percent increase in directors' compensation, fraudulent financial reporting decreases by 0.075 percent. The result, therefore, indicates that increasing compensation for directors limits the capacity of FFR but overconfidence increases that capacity. Essentially, the result gives a strong dichotomous system of directors' characteristics in relation to fraudulent financial reporting, namely, that remuneration or compensation served as a strong incentivization mechanism for the pattern of fraudulent financial systems within an

organization. Apparently, directors' characteristics provided both positive and negative sources of motivation for the involvement of companies in FFR.

The first objective of the study was to examine if directors' political connection affects fraudulent financial reporting. The outcome of this study suggested that directors' political connection does not effectively determine the probability that a company would engage in fraudulent financial reporting. From the marginal effects estimates based on the logit results, the coefficient of the directors' political connection is -0.041 ($p\text{-value} = 0.269 > 0.05$) which shows that an increase in directors' political connection has a likelihood of reducing fraudulent financial reporting. Since the relationship between directors' political connection and fraudulent financial reporting is negative even though the relationship was not statistically significant since the probability value of 0.269 is greater than 0.05 critical value. The findings were consistent with the studies by Hasnan, et al. (2014); Mohammed, Mohd, Sanusi, and Harjito (2016) and Ngan (2013) which revealed that politically connected firms had a negative and an insignificant association with fraudulent financial reporting. However, the empirical evidence on directors' political connection in this work contradicts the study by Hope, Yue, and Zhong (2017) and Ngo and Susnjara (2017) which found that politically connected firms had a positive and significant influence on fraudulent financial reporting.

Directors' overconfidence was one of the two directors' characteristics that exerted significant impacts on fraudulent financial reporting. The effect was shown to be positive, with a one percent rise in overconfidence significantly increasing the probability that a firm would engage in fraudulent financial reporting by as much as 0.195 ($p\text{-value} = 0.000 < 0.05$). The result showed that an increase in director's overconfidence has the likelihood of increasing fraudulent financial reporting even though the relationship is statistically significant at 5 percent level. Empirical studies suggested that managers' overconfidence would change the income and cost of enterprise cash flow which led to a distortion of investment behavior (Lai and Tai, 2019; Nguyen, Dang, Pham, and Do, 2020). This result was consistent with the studies by Yi and Xiugang (2019), Nguyen et al., (2020) which revealed that directors' overconfidence has a significant relationship with fraudulent financial reporting. However, the empirical evidence on directors' overconfidence in this work contradicts the study of Campbell, Johnson, Rutherford, and Stanley (2009) and Schrand and Zechman (2012) which found that directors' overconfidence has a positive and an insignificant influence on fraudulent financial reporting.

Directors' financial expertise can be a strong channel through which fraudulent financial reporting can occur. Our study however, showed that this was not the case for Nigerian firms. It was found that directors' financial expertise does not significantly influence the pattern of fraudulent financial reporting among firms in Nigeria. The results in Table 4.5 also showed the coefficient of the DIRFE variable which was negative at -0.07 ($p\text{-value} = 0.480 > 0.05$). The result showed that an increase in directors' financial expertise has the likelihood of reducing fraudulent financial reporting which means with an increased number of professionals with financial expertise in the organization, fraudulent financial reporting would reduce.

However, the empirical evidence on directors' financial expertise in this work contradicted the study of Anichebe, et al., (2019); Besar et al. (2017); Brochet and Welch (2011); Troy, Smith, and Domino (2011) which found that directors' financial expertise has a positive and significant influence on fraudulent financial reporting. While García-Meca and García-Sánchez (2018) and Schrand and Zechman (2012) found that directors' financial expertise had a positive and an insignificant influence on fraudulent financial reporting.

The result in the study shows that directors' compensation has a significant negative relationship with fraudulent financial reporting. From the result, the coefficient of the variable was -0.072 ($p\text{-value} = 0.023 < 0.05$). The implication of the result, was that if more directors were well compensated, there is the likelihood of reducing fraudulent financial reporting. Since the p -value associated with the z -statistic of the coefficient of DIRCOMP is greater than 0.05, then it is established that the coefficient passed the significance test at the 5 percent level. However, the empirical evidence on director's compensation in this work contradicted the study of Chan, Tsai, and Li (2015); Erickson, Hanlon, and Maydew (2004); Feng et al., (2011); Johnson, Ryan, and Tian (2003); Johnson, Ryan, and Tian (2009) and Kim, Roden, and Cox (2013) which found that directors' compensation has a positive and a significant influence on fraudulent financial reporting. While the study by O'Connor, Priem, Coombs, and Gilley (2006), Wang et al., (2017) found that directors' compensation had a negative and an insignificant influence on fraudulent financial reporting.

the impact of directors' ownership was shown to be insignificant in relation to fraudulent financial reporting among Nigerian companies. Apparently, more ownership dimensions may not necessarily reduce fraudulent financial reporting by management. From the logit regression result in Table 6, it was observed that the coefficient of the DIROWN variable is -0.146 ($p\text{-value} = 0.337 > 0.05$). The implication of the result is that where share ownership is concentrated on the directors, that is, where there is an increase director's ownership, the likelihood of fraudulent financial reporting is reduced. The reason was not far-fetched since more directors' ownership concentration would increase the tendency of monitoring and quality reporting. This result is however in line with previous literature like Chen, Firth, Gao, and Rui, (2006) which confirmed that directors' ownership had a negative and an insignificant relationship with fraudulent financial reporting in firms. However, the empirical evidence on directors' ownership in this work contradicted the study by Moses (2019); Ujiyantho and Scout (2007) which found that directors' ownership has a negative and significant effect on fraudulent financial reporting.

5. CONCLUSION AND RECOMMENDATIONS

In this study, the relationships between various measures of directors' characteristics and fraudulent financial reporting in Nigeria has been established. The objective of the study was to evaluate how five directors' characteristics (directors' overconfidence, directors' compensation, directors' political connection,

directors' ownership and directors' financial expertise) could explain the practice of fraudulent financial reporting among the 80 selected companies in Nigeria.

There is evidence from the study that directors' overconfidence and directors' compensation had the strongest capacity of influencing fraudulent financial reporting in Nigeria. While directors' overconfidence appears to be virulent in propagating financial fraud among companies, compensation for directors actually limits the occurrences. These characteristics, therefore, act as effective tools for controlling graft and other fraud-related activities in the companies. In general, directors' financial expertise, ownership and political connections play no effective roles in this regard. There is, however, evidence that non-linear relationships exist between FFR and either directors' political connections or their form of firm ownership. Thus, political connection and ownership can agitate other factors that may disproportionately influence fraudulent financial reporting among Nigerian companies. The study recommends that conservative and more risk-adverse directors should be appointed to the board so as to reduce the tendency of fraudulent financial reporting. Also, director's compensation should be improved upon to sustain the existing significant negative relationship.

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