



IMPACT OF GENDER DIVERSITY ON TAX COMPLIANCE OF NON-FINANCIAL LISTED COMPANIES IN NIGERIA

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Abstract

This study examines the impact of gender diversity on tax compliance of non-financial listed companies in Nigeria. This study employs explanatory sequential design of mixed method to analyse and interpret the quantitative and qualitative data set. 68 out of 116 non-financial listed companies from 2004 to 2018 were selected as the final sample based on data availability while qualitative data was obtained through semi structured interviews on 17 corporate governance agents (Board of Directors; Key Executive Management; Partners of the big four audit companies; Academic Scholars; Regulators; Tax Consultants; and Shareholders). A Generalised Least Squares Regression and Discourse analysis were used to analyse the quantitative and qualitative data respectively. The combined GLS results (Wald Chi squares) indicates that gender diversity ($\beta=0.0140$; $P<0.05$) has a statistically significant impact on tax compliance. Majority of the respondents subscribed to the idea that having adequate women with knowledge, experience and pedigree will promote the positive tax compliance of listed firms in Nigeria. The study concludes that gender diversity has a significant impact on tax compliance. The study recommends that the FRCN should strengthen the existing code of corporate governance to provide for the appointment of at least, 30% of women of integrity, sufficient knowledge and adequate experience on the board of listed firms in Nigeria in order to achieve tax compliance.

Keywords: Tax Compliance, Gender Diversity, Tax Proxies, Mixed Research Method, Board.

INTRODUCTION

The governments of many developed and developing economies have suffered serious tax revenue loss as a result of tax scandals (Osebe, Kirui & Naibei (2019). However, tax revenue loss in developing countries by incorporated entities is worse-off and proportionally greater than the amount in developed countries due to weak corporate governance, weak administration and the presence of a relatively larger amount of informal transactions in the economy (Obon, Yeye & Isa, 2013).

Tax compliance which is the accurate calculation of tax liability, timely filing and payment of due taxes has been difficult to achieve both in developed and developing economies, because tax payments constitute a substantial reduction in the pre-tax earnings which usually encourage managerial actions towards different strategic tax behaviours and corporate tax aggressiveness (Oyeleke, Erin & Emeni, 2016). However, Desai & Dharmapala (2008) assert that, strong corporate governance can act as a conciliator between managerial opportunism and effective tax



compliance. The board has been singled out as the most important mechanism of the several attributes that create good corporate governance; and at the heart of corporate governance reforms and enhancements is the necessity for an effective board of directors (Salleh & Othman, 2016).

Nevertheless, the failure of the board to discharge its managerial oversight role has been blamed for the global financial crisis of the last three decades at big global businesses such as Enron in 2001; WorldCom, USA in 2001; Parmalat, Barclay Banks, UK in 2008; Cadbury Nigeria Plc., in 1992 and MTN Nigeria Ltd. in 2010 (Monem, 2011, Elghuweel, 2015). This is because the corporate board has the primary responsibility of ensuring compliance with principles/provisions of corporate governance, implement policies and put in place processes and systems that ensure credible financial information for accurate computation and timely payment of tax liability (Oyeleke, Erin & Emeni, 2016). It also ensures minimisation of the inherent tax risk in the firm by ensuring that the firm does not engage in activities that are designed primarily to avoid corporate taxes (Richardson, Taylor & Lanis, 2013).

Sequel to the global financial crisis, the Nigerian Securities and Exchange Commission (SEC) issued the first governance code in 2003, to guide ethical practices in Nigerian listed companies. However, the tax non-compliance behaviour resulting in the loss of a colossal amount of tax revenue in Nigeria, still continues unabated, despite the various tax reforms and series of corporate governance code released by successive administrations in Nigeria (Uniamikogho, Bennie & Adeusi). Although, contribution of tax to GDP is commonly low in most developing countries, (Tanzania 12%, Burkina Faso 11.5%, Ghana 21%, South Africa 25% , Nigeria 6.1% in 2015) and about half of what is obtainable in the developed countries (France 44.6%, Sweden 45.6%, UK 39%, United State of America 27% in 2015), has nose-dived to 5.7% in 2017 (Price Water-House Coopers (PWC), 2014, OECD,2019).

The low level of tax compliance in Nigeria cast doubt on the effectiveness and strength of the board structure currently in vogue in Nigeria. It is therefore imperative to critically examine the adequacy of board features/composition. Studies have been carried out extensively on other corporate governance characteristics and tax management, but gender diversity and tax compliance has been less investigated in literature, in spite of the clarion call for increase in the percentage of women in the international agenda. Most developed countries (France, Norway, Spain, Australia, Italy) and some developing countries (India, China, Tunisia and Jordan) are beginning to legislate for the representation of 40% of women at the board level to achieve good corporate governance practices (Khaoula & Ali, 2012). Women are generally believed to be tax compliant, considerate and interpret situations and tax regulations differently when present on the corporate board (D'Attoma, Volintiru & Steinmo, 2017). Lakhali, Aguir, Lakhali, & Malek (2015) affirm that more women on corporate boards increases the chance of improving compliance, profitability, and the image of the organisation as well as adding to shareholders' value through effective, objective and quality deliberations.



Majority of the studies (Aliani & Zarai, 2012; ZemZem & Ftouihi, 2013; Boussaidi & Hamed, 2015; Osebe, Kirui & Naibe, 2019 on gender diversity and corporate tax compliance examined) were carried out mostly in the United States of America (US), France; Tunisia, Australia and other jurisdictions outside Nigeria. The more similar studies in Nigeria (for instance, Oyeleke, Erin & Emini., 2016; Oyesola & Adelabu, 2017; Bosun-Fakunle, Josiak & Olowoyo, 2019) focus virtually on banks and manufacturing sectors and were limited to quantitative analytical research design. Also, most of these prior studies use effective tax rate (ETR) instead of a more robust tax proxy that does not suffer from the weakness of accrual accounting. The latest corporate governance Code in Nigeria (FRCN, 2018) stipulates that the Board should promote gender diversity in its membership across a variety of attributes relevant for better decision-making and effective governance. However, the percentage of women with the right experience, skill and integrity is not specified. Therefore, to resolve this thorny issue, this study assesses the impact of gender diversity of nonfinancial firms listed on the Nigerian Stock Exchange (NSE) using Cash Effective Tax Rate (CETR).

To solve this research problem, the relevant research question is: what is the extent of the impact of gender diversity on tax compliance of non-financial listed companies in Nigeria?

In order to answer the research question, the main objective of the study is to assess the impact of gender diversity on tax compliance of non-financial listed firms in Nigeria. The specific objective is to assess the extent of the relationship between gender diversity and tax compliance of listed firms in Nigeria. The specific objective is achieved through this hypothesis: H₀₁: There is no significant relationship between gender diversity and tax compliance of listed companies in Nigeria. In section 2 of the study, there is a brief review of the theories and empirical literatures; and in section 3, the methodology is highlighted, while the empirical results and conclusions are presented in sections 4 and 5, respectively.

LITERATURE REVIEW

Tax Compliance and Non-Compliance

Tax compliance is the willingness of tax payers to act within the spirit as well as the letter of the law and administration without enforcement (Sapie1, Kaspillai & Eze, 2014). Tax compliance is the true reporting of the tax base, correct computation of the tax liabilities, timely filing of tax returns, and timely payment of the amount due as tax. It can be voluntary, enforced and creative compliance (Alabede, Ariffin & Idris, 2011). Failure to file accurate returns; underreporting of taxable income; overstating tax claims such as exemptions, expenses etc. and failing to make timely payment of tax liability is tax non-compliance (Sapie1 *et al.*, 2014). Tax noncompliance could be tax management, tax planning, tax sheltering, tax avoidance, tax evasion and tax aggressiveness (Oyeleke *et al.*, 2016).

Varying measures of tax compliance exist in literature. These include, Accounting Effective Tax Rate (total income tax expenses divided by the profit before tax); Current Effective Tax Rate (ETR) (current-year tax expense divided by the profit before tax); Long Run Cash ETR (the sum



of cash paid for income taxes over ten years divided by profit before tax over the same period; cash taxes paid to the operating cash flow of a firm; Book Tax Difference (BTD) (difference between accounting income and taxable income) and Permanent BTD (Total book-tax differences less temporary difference). These proxies have been used extensively in prior studies (Dyreg, Hanlon, & Maydew, 2008; Hanlon & Heitzman, 2010; Minnick & Noga, 2010; Oyeleke *et al.*, 2017). Accounting and current ETRs could only capture the nonconforming type of tax planning and those suffering from the problem of year-to-year volatility. However, long run cash ETR eliminates volatility associated with the year level measures (Hanlon & Heitzman, 2010).

Gender diversity

It denotes the composition of women on the board of companies. Women may be more compliant with legal requirements and specifically interested in tax matters when present on the board (Aliani & Zarai, 2012). Also, it may be suggested that boards having female directors may promote honesty, high ethical values, greater independent reasoning and more informed decisions, that may increase the level of transparency at the board level and higher credibility within the board (Richardson, Lanis & Taylor, 2015). Any increase in the percentage of women on the board enhances the job of control board and affects tax compliance (Zemzem & Ftouhi, 2013). Despite, the benefits of women on boards, currently, very few corporate boards in Nigeria have one or two women, while some do not have any.

In general, women play a key role in ensuring compliance when adequately represented on the board, therefore, inadequate representation of women on the board may be a drawback to achieving tax compliance (Uniamikogbo, Bennee & Adeusi 2019).

Theoretical Framework

The Resource Dependence (RD) theory originated from Jeffrey Pfeffer and Gerald R Salancik (Pfeffer & Salancik, 1978). The theory assumes that: (i) a firm's external environment comprises other companies, each with their own interests and objectives; (ii) companies hold power over a focal company and may constrain its behaviour, if they control resources that are vital to its on-going operation and cannot be acquired elsewhere. The board is the linkage mechanism that provides legitimacy, advice and counsel to the firm (Bear, Rahman & Post, 2010). The Resource Dependence theory supports the appointment of women on the corporate board. The ultimate objective of this theory is to make management take the right decision in the best interest of the stakeholders.

Under this theory, reputation is seen as an intangible economic asset engendering the firm's sustainable competitive advantage. Reputation may facilitate a long-term stakeholder's management, which may boost the competitiveness of a firm (Leonardi, 2011). When applying a resource dependence lens to examine the impact of gender diversity on tax compliance of listed firms in Nigeria, what is borne in mind is that the women on the board of directors monitor and control the activities of the firm to ensure a symbiotic relationship with the other stakeholders in

which the government and its agencies are part. This theory is relevant to this study because of its assumption of the firm as a system interacting with other external systems to maximise the value of the firm, while minimising the potential risks.

The conceptual framework as shown in Figure 1, indicates the hypothesised model of the relationship between the dependent and independent variables, inclusive of the control variables:

Independent Variable Dependent Variables

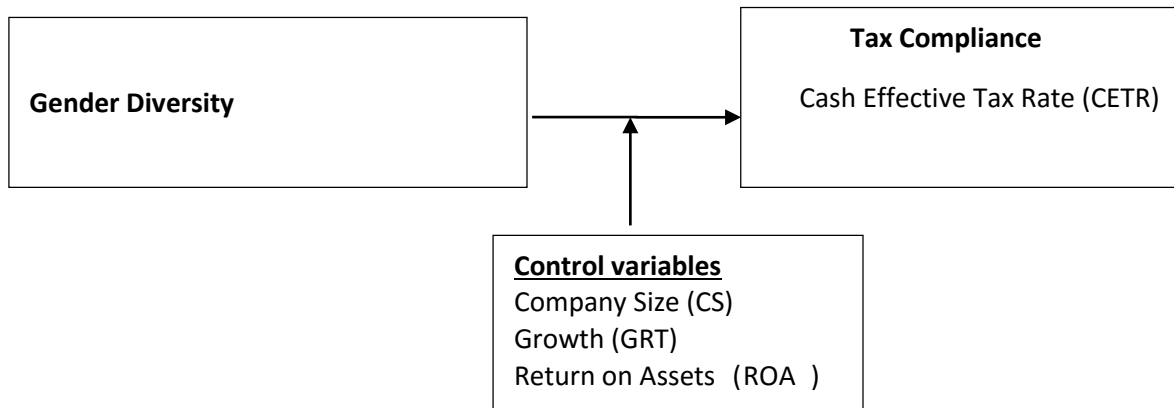


Fig 1: Study Conceptual Model

The conceptual model shows that the independent variable is gender diversity and the dependent variable is tax compliance as proxied by long run cash effective tax rate (CETR). A set of control variables was included in this study to allow the control of other specific effects on tax compliance. This includes company size, corporate performance, financial leverage and growth (Minnick & Noga, 2010). The conceptual framework shows that gender diversity should have a positive impact on cash effective tax rate and if that happens, the tax revenue to the government should increase.

Empirical Review

Aliani, Hamid and Zarai (2011) studied diversity in kind of board of directors and tax management in Tunisia. The regression result finds a negative effect between gender diversity in the board of directors and tax optimisation. They revealed that women on the board hold back tax planning strategy within the company, thereby increasing the effective tax rates. Impliedly, tax planning decreases with the presence of women (especially professionals) on the board of directors. Also, Khaoula and Ali (2012) examined director attributes on tax management based on a sample of 32 firms listed on the Tunisian stock exchange market from 2000 to 2007 and the regression result showed a decrease in tax management with women’s presence on the board of directors, hence, gender diversity is positively related to tax compliance.



In contrast, Aliani and Zarai (2012) examined the effect of the gender diversification of the board of directors on corporate tax planning based on a sample of 300 American companies from 1996 to 2009. The panel regression result showed that gender diversity doesn't have an impact on the tax planning strategy due to the low percentage of women directors. The result showed that women may be more compliant with legal requirements and particularly interested in tax matters when present on the board, while noting the predominance of men in tax planning strategies and experts in minimising tax burdens. However, it was observed that longer time in reaching unanimous decisions and frequent conflicts at meetings are associated with gender diverse boards and can reduce the effectiveness of the board, while increasing the internal dissensions and constraining the capacity to act. Nevertheless, the study concluded that women are more compliant than men and interpret situations and tax regulations differently.

Furthermore, Zemzem and Ftouhi (2013) examined the effects of board of directors' characteristics on tax management based on the analysis of a sample of 73 French firms on the SBF 120 index for the period 2006-2010. The OLS regression and correlation results confirm that board diversity decreases the activity of tax management and any increase in the percentage of women on the board facilitates the job of control board and affects tax compliance. This result was in line with the study of Francis, Hassan and Rego (2014) who examined whether female CFOs are less tax aggressive or not in Finland, based on 1974 firm-year observations with 92 cases of male-to-female transitions, from 1999 to 2007. Using the probability of tax sheltering, the predicted unrecognised tax benefits, and the discretionary permanent book-tax differences to proxy tax management, the multiple regression result confirmed that female CFOs are less tax aggressive than their male counterparts. Moreover, they found that the probability of tax sheltering for firms under the control of female CFOs is about 117.4% lower than that of firms under the control of male CFOs. This implies that women promote positive tax compliance.

Similarly, Pavia, Vahamaa and Vahamaa (2014) examined whether or not female Chief Executive Officer (CEO) and Chairperson of the board are more conservative and risk-averse, based on a large panel of U.S. commercial banks. They documented that banks with female CEOs are more conservative and that gender-based behavioural differences between women and men are exhibited and observed from the decisions made by directors which tend to impact the major strategic and financial decisions taken. Therefore, it is generally held that where sex is a consideration, women are often judged more suitable than men. Boussaidi and Hamed (2015) studied the impact of corporate governance mechanisms on tax management based on a 250 firm-year dataset of 39 Tunisian listed firms over the 2006–2012 period. The regression result showed that diversity in gender on corporate board exhibits a positive association with the effective tax rate.

In agreement with previous studies, Richardson, Lanis and Taylor (2015) investigated the impact of gender diversity on corporate tax management, based on a sample of 418 US firms covering 2006 to 2009 period (1672 firm-year observations). The ordinary least squares regression results showed that there is a negative effect and statistically significant association between female representation on the board and tax management after controlling endogeneity. In conclusion, boards having female directors may promote honesty, high ethical values, tax compliance, greater



independent reasoning and more informed decisions, that may increase the level of transparency at the board level and higher credibility within the board. This outcome was supported by Richardson, Lanis & Taylor (2016) who examined women on the board of directors and corporate tax management in Australia, using multivariate regression analysis and also tested for self-selection bias in the regression model by using the two-stage Heckman procedure and found that relative to there being one female board member, high (i.e. greater than one member) female presence on the board of directors reduced the likelihood of tax management. The results were robust after controlling for self-selection bias and using several alternative measures of tax aggressiveness.

Oyeleke *et al.* (2016) observed the relationship between gender diversity of the board and tax management of banks listed on the Nigerian Stock Exchange (NSE), based on the secondary data collected from 15 listed banks from 2012 to 2014, using cross sectional time-series research design as the blue print for data collection and ETR as a proxy for tax management. The fixed effect panel regression result showed that the women's presence on the board of directors has a negative but insignificant effect on managerial tax management in banks. Impliedly, the presence of women on the board has a positive but insignificant effect on tax compliance in Nigerian banks. The result was consistent with the women risk aversion' theory which stipulates that the different attitude of females to excessive risks can project upon corporate policies and decisions. However, the low representation of women in executive positions and on the board limits how their influence is perceived.

Similarly, Oyesola and Adelabu (2017) investigated the impact of corporate governance on tax management of non-financial listed firms in Nigeria from 2004 to 2014. A sample of fifty firms of 151 non-financial listed firms covering 10 sectors were purposively selected on stratified random sampling basis. The GMM regression results showed a significant negative relationship between board diversity and the tax management of non-financial listed firms in Nigeria. This depicts a positive relationship with tax compliance. D'Attoma, Volintiru and Steinmo (2017) investigated tax compliance and gender diversity by exploiting one of the largest tax compliance experiments conducted in a highly controlled environment of universities in the United States, the United Kingdom, Sweden, and Italy, during 2013/2014 and 2014/2015 academic years. The ordinary least squares regression result revealed that women are significantly more compliant than men in all countries. Furthermore, these patterns are quite consistent across countries. In other words, the difference between men and women's behaviour is virtually the same in more gender-neutral countries than in more traditional societies.

In the same vein, Osebe *et al.* (2019) investigated the impact of corporate governance on effective corporate tax rates among listed firms in Kenya, using a longitudinal research design. Board independence, board gender diversity and corporate ownership structure were used as tax proxies for corporate governance. The study purposively selected a sample of 40 firms of the 67 listed firms in Kenya from 2011 to 2017 sourced data from the published financial statements of the sampled firms were analysed with the aid of STATA software. The result showed that board gender diversity has a positive and significant effect on ETR. In contrast, Uniamikogbo, Benne and Adeusi (2019) examined the effect of corporate governance on tax management in Nigeria



using gender diversity, board size CEO duality and ownership structure to proxy corporate governance and ETR for tax management, respectively. The study adopted a census sample based on the entire population of all oil and gas marketing firms in Nigeria as at 31st December 2017, using the data collected from audited accounts from 2013 to 2017. Descriptive statistics and ordinary least square regression were adopted for data analysis. The result showed a positive and significant relationship between gender diversity, board size and tax management. This implies that gender diversity has negative impact on tax compliance.

Similarly, Bosun-Fakunle, Josiak and Olowoyo. (2019) studied board characteristics and tax management based on the data sourced from 20 manufacturing firms listed on the Nigerian Stock Exchange for 10 years (2006-2016), using regression analysis and correlation model to analyse the data with the aid of SPSS software and it was found that there is no significant relationship among diversity, board size and board independence; and tax management. Onatuyeh and Odu (2019) also examined the relationship between corporate board characteristics and tax management, based on a sample of the audited financial statements of 49 listed manufacturing firms in Nigeria for the period between 2011 and 2016. CETR was used as a proxy for tax management and agency theory was the theoretical framework for the study. The result of fixed effect model of panel regression showed that board gender diversity exerts no significant effects on tax management, due to insufficient women on the board.

Generally, these studies were tainted by mixed outcomes and also were limited to quantitative analytical method, positivist paradigm and lower investigation period. This is unlike this present study that embraced mixed research method framework, longer investigation period, and pragmatism philosophical paradigm. Mostly, ordinary least square (OLS) regression was used and this statistical tool may suffer from inappropriateness due to inadequate diagnostic tests. Most of the studies focus mostly on banks, manufacturing companies and oil and gas sectors and therefore suffer from industrial gap. These shortcomings may affect the robustness of the results.

METHODOLOGY

Survey and correlational research designs were used for this study. The study was based on mixed method research framework and pragmatism philosophical paradigm. The explanatory sequential design suggested by Creswell and Clark (2011) was employed in this study. Consequently, generalised least square regression was first used for the quantitative analysis of secondary data from audited financial statements of non-financial listed companies in Nigeria and subsequently, validated the outcome with the result of interviews conducted on 17 governance agents (Board of Directors; Key Executive Management; Partners of the big four audit companies; Academic Scholars; Regulators; Tax Consultants; Shareholders) using the discourse analysis approach.

The population for this study consists of one hundred and sixteen (116) non-financial listed companies on Nigeria Stock Exchange (NSE) as at 3rd August 2019. Non-financial listed companies were selected because they account for more than 95% of Nigerian GDP and revenue



to the government (Chete, Adeoti, Adeyinka & Ogundele, 2016). A census approach was adopted for this study due to the small size of the population of the listed companies, but, excluded companies with incomplete data to arrive at a final sample of 68 listed companies from ten sectors of the economy (Agriculture, Conglomerate, Construction and Real Estate, Consumer Goods, Health, Car, Information and Communication, Industrial, Natural Resources, Oil and Gas and Services) from 2004 to 2018.

Model Specification and Operationalisation of Variables

Regression model

This study adapted and modified the Panel Least Econometric Model, from the study of Minnick and Noga (2010), controlling for year and industry to test the hypotheses on the impact of gender diversity on tax compliance of Nigerian listed companies. However, unlike the prior studies which used effective interest rate (ETR) as the proxy for tax compliance, this study used CETR as the proxy for tax compliance because it is not affected by accounting accruals.

The CETR model for this study is therefore specified as:

CETRit= α0 + β1GDit+ ρiZit+ εit

The variables are defined as follows: α0 is the model intercept. β1 – β5 are the coefficients of the parameters. Z is the proxy for company characteristics and εit is the error term accounted for i represents companies; t represents the time period. A company is considered tax non-compliant in Nigeria, when its CETR is less than corporate income tax rate (i.e. 30%) in an accounting period. The apriori is such that: β1GD>0. A positive relationship is expected between explanatory variables GD and the dependent variable. The variables for this study are shown in Table 1.

Table 1: Description of Variables

Table with 4 columns: Variable, Abbreviation, Measurement, Source. Rows include Dependent, Tax Compliance, and Independent.



Gender Diversity	GD	% of female directors to total number of directors	Aliani and Zarai (2012); Zemzem and Ftouhi (2013); Pavia <i>et al.</i> (2014); Richardson <i>et al.</i> (2015); Oyeleke <i>et al.</i> (2016); 1D’ Attoma <i>et al.</i> (2017).
Control			
Performance	ROA	Operating income / Total assets	Dyreng <i>et al.</i> (2008); Minnick and Noga (2010); Zemzem and Ftouhi (2013)
Company Size	CS	Natural log of the book value of total assets	Minnick and Noga (2010); Richardson <i>et al.</i> (2013)
Growth	GRT	Book value of equity / Market value of equity	Dyreng <i>et al.</i> (2008); Minnick and Noga (2010); Uniamihogho <i>et al.</i> (2019)

RESULTS AND DISCUSSION OF FINDINGS

Descriptive Statistics

Table 2, shows that mean values of the variables are between the minimum and the maximum values. This implies that the variables do not react outrageously from the equilibrium due to the companies’ performances. The mean of CETR is 22.93%, which means listed companies on the average paid below 30% of company income tax rate in Nigeria. This is in line with the findings of Osebe *et al.* (2019).

Table 2: Descriptive Statistics Results

Variable	N	Mean	Min	Max	CV	Skewness	Kurtosis	Pr(Skewness)	Pr(Kurtosis)	Joint AdjChi2(2)	Joint Pr>Chi2
CETR	1023	0.2293	-46.254	399.747	23.856	30.876	978.415	0.000	0.000		
GD	1023	0.097	0	1	1.205	1.911	10.727	0.000	0.000		0.000
ROA	1020	0.055	-1.307	3.103	4.090	2.704	58.599	0.000	0.000		0.000
CS	1020	15.697	9.831	21.298	0.127	0.005	3.666	0.943	0.012	6.36	0.042
GRT	1020	22.865	-24.071	3665.01	7.129	14.255	221.763	0.000	0.000		

Source: Authors’ compilation



The result shows that CETR, GD, GRT, CS and ROA are positively skewed as they have a long tail to the right. However, the distribution slope of majority of the variables (CETR, GD, GRT, and ROA) are leptokurtic in nature as their values are greater than 3, hence, their peakedness are far from the centre. CS distribution value is less than 3, implying that the distribution is platykurtic in nature. The result shows that only company size (CS) has a normal distribution matching with its skewness and kurtosis of all the variables and a probability value greater than 5% significance level.

Correlation Test

Table 3 provides the result on the degree of correlation between the independent variables. According to Kennedy (2008), the magnitude of the correlation coefficient should be less than 0.8 to eschew multicollinearity’s problems. From table 3, all the correlation coefficients between the explanatory variables are maximum of 0.2. Generally, it can be concluded from the result that the variables included in the model are free of multicollinearity’s problem.

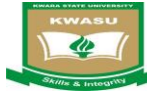
Table 3: Correlation Test Result

	CERT	GD	ROA	CS	GRT
CETR	1				
Prob.					
GD	0.0727*	1			
Prob.	0.0200				
ROA	-0.0032	0.0576	1		
Prob.	0.9196	0.0659			
CS	0.0769*	0.1146*	0.1897*	1	
Prob.	0.0141	0.0002	0.0000		
GRT	0.0068	0.0162	-0.0212	0.0337	1
Prob.	0.8273	0.6056	0.4997	0.2822	

The values in italics are the statistical probability values. * = implies 5% significance level

Variance Inflation Factor (V.I.F) as presented in Table 3 was carried out to further confirm the colinearity problem. There is multicollinearity whenever the VIF is greater or equal to 10. However, if the tolerance level is below 0.1, then there is a problem of multicollinearity among the variables.

Table 4: Multicollinearity Test Results Output



Variable	VIF	Tolerance
Gender Diversity (GD)	1.07	0.935310
Company Size (CS)	1.14	0.875587
Growth Intensity Capital (GRT)	1.03	0.972886
Return on Asset (Performance) (ROA)	1.69	0.592065
Mean VIF	1.23	

The results presented in Table 4 shows that all the VIF fall within the threshold for the study, hence, the conclusion is that there is no problem of multicollinearity among the data set used in this study.

Due to the failure of the data collected to satisfy the classical linear regression model (CLRM) assumption as a result of the violation of some of the assumptions of OLS, cross sectional dependence, presence of heteroscedasticity and co-integration, the OLS model was considered inefficient for drawing conclusions on impact of multiple directorship on tax compliance of nonfinancial listed companies in Nigeria. In view of this, a generalised least square (GLS) model was adopted for this study to correct the violations. The regression results are presented as follows:

GLS Multivariate Model of Gender diversity on Tax Compliance.

The equation generated from the model is as follows:

$$CETR_{it} = \beta_0 + GD_{Sit} + FS_{Sit} + GRT_{Sit} + ROA_{Sit}$$

$$CETR_{it} = -7.310181 + 10.00042GD_{Sit} + .5251792FS_{Sit} + 0.000567GRT_{Sit} - 1.245049 ROA_{Sit}$$

Table 5: Coefficients Table- Generalised Least Squares Multivariate Model for Board Characteristics on Tax Compliance (CETR)

Coefficients: generalised least squares

Panels: homoscedastic

CETR	Coefficient	Std. Error	Z	P>z
GD	10.00042	4.0652114	2.46	0.01415
CS	0.5251792	0.2084044	2.52	0.01202
GRT	0.000567	0.0024652	0.23	0.81701



ROA	-1.245049	0.3355927	-3.71	0.00000
CONSTANT	-7.310181	3.2781081	-2.23	0.02600
Wald Chi2(10)	113.09			
Prob>chi2	0.0087			

Table 5 shows that the Wald Chi-square statistic p-value was found to be 0.0087 for gender diversity which is lower than the alpha value =0.05. This implies that the impact of GD on CETR was statistically significant. The impact of GD on CETR is also positively significant at coefficient of 10.00043 and p-value of 0.014. It means increase in GD by one unit will increase CETR by 10 units. This is supported by Osebe *et al.* (2019), but contrary to the empirical findings of Uniamikogho *et al.* (2019). The relationship between control variables GRT and CETR is insignificant as $p > 0$. However, CS and ROA have significant impact on CETR, as $p < 0$. A percent increase in CS will increase CETR by 0.5 unit, whereas, one unit increase in ROA will decrease CETR by 1.24 units. This is in line with Minnick and Noga (2010); Oyeleke *et al.* (2016), but contrary to the finding of Onatuyeh and Odu (2019).

Qualitative Analysis

Gender Diversity and Tax Compliance

In the semi structure interview conducted with 17 corporate governance agents, the participants unanimously admitted that in spite of the significance of having women representation, there was little or no representation of women on the corporate board. Some of the comments made include: "From my years of experience in this space, I have not seen sufficient women participation"

"I do not think they are adequately represented."

Other respondents (about 75%) vigorously used the expression "Not at all" - i.e. women are not adequately represented. Majority (56%) of the participants submitted that the ideal percentage of women on the board should be between 31% and 49%. Also, 19% proposed that the percentage of women should be at most 30% while another 19% opined that the least proportional representation (for women) should be 30% but it can go higher but not to be equal with the male representation. In contrast, one of the participants opined that there should be no cap to the representation of any gender in as much as they are capable of contributing meaningfully, hence he proposed that there should not be more than 10% of women in the board. This position (though not shared by the majority) implied that it is not gender that determines efficiency or compliance. He claimed that:



You can have a board of all males or all females and all would be well. But in my opinion, women should be given as much importance in decision making as any other male; however, to avoid social loafing, it is best to have a mixed composition of persons with contrasting demographic characteristics.

It was observed that a very significant majority (94%) of the participants, despite admitting the value of having women on the board, still do not support an equal representation of women on the board of directors. Among the several reasons provided are that, “emotion” and “empathy” are associated with the feminine gender. It is widely held that this would significantly impact on their actions and inactions on the board. These characteristics were not used to condemn but to describe the tendencies, strength, weakness, opportunities and threats involved when a woman is part of the governing board of listed companies. In the words of one of the participants:

Women can best be described as vessels; they take things in, incubate, produce and nurture. However, they might be found wanting when required to be ruthless or Machiavellian in business. For me, emotions can only ruin a business. Hence, having a 50-50 might make for a weak board. Women are there as helpmates and that means they get to have a say but not to veto or overrule.

Participants who are members of a board with fewer women representation in the board of directors unanimously averted that having women on the board is good for financial compliance, development and would promote integrity because women are supposedly likely to operate with safety, caution and integrity.

Analysing the perceived effect of having women on the board, participants repeatedly used the words like "Positive", "Promote", "Promote positive tax compliance", and "Engenders improved tax compliance". The responses also show that in spite of the lower representation of women on the board, a significant contribution is still made where their votes count. One of the respondents opined that:

In my decades of experience, I can categorically state that women have the tendency to convince and insist on financial compliance. This happens a lot in my current company where we have about 30% representation. So, for me, I believe their inclusion would promote positive tax compliance.

Another participant also pointed to the role of his companies' chairman (a woman) in ensuring tax compliance. In his words:

On so many occasions, we (mostly males) would suggest and propose strategies to cut down on our tax remittance but she would never follow through.... In my opinion, having higher women representation (especially as chairmen of the board) engenders improved tax compliance... I doubt that a man will do that, not even me.

Having heard from several participants who affirmed that for every board with a woman (as part of board member), there is at least one voice of integrity; it therefore goes without saying that there could be a correlation between percentage of women and tax compliance tendency.



In conclusion, majority of the respondents agreed that having adequate women with knowledge, experience and pedigree will promote positive tax compliance of listed firms in Nigeria.

Arising from both the quantitative and qualitative outcomes, the research findings support that gender diversity has significant impact on tax compliance of non-financial listed companies in Nigeria. This implies that women representation on the corporate board will promote tax compliance in Nigerian listed firms.

CONCLUSION AND RECOMMENDATIONS

This study assessed the impact of gender diversity on tax compliance of listed non-financial listed companies in Nigeria. The study adopted survey and correlational research designs and was based on mixed research method framework coupled with pragmatism philosophical paradigm. Explanatory sequential design was adopted to analyse the research data. The study observed that currently, women are not adequately represented on the board of listed firms in Nigeria, and this serves as a drawback to achieving tax compliance. The empirical result concludes that gender diversity has positive and a significant ($\beta=0.0140$; $P<0.05$) impact on tax. This result was also corroborated by the majority of respondents in the semi-structured interviews conducted.

Therefore, the study concludes that, having women of competence and integrity between 19% and 30% on the board of listed firms is important to promote tax compliance. Arising from the findings of this study, it is obvious that adequate representation of women with cognate experience, relevant knowledge and integrity is important for the achievement of tax compliance of listed firms in Nigeria, the study therefore recommends that the Financial Reporting Council of Nigeria should strengthen the existing code of corporate governance to provide for the appointment of at least, 30% of women of integrity, sufficient knowledge and adequate experience on the board of listed firms in Nigeria to promote tax compliance. Overall, the study provides unique insights into the impact of gender diversity on tax compliance of listed companies in Nigeria exploiting mixed research method.

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