Corporate Governance Mechanism and Tax Compliance: The Nigerian Experience

Yinka M. Salaudeen and Saliu S. Abdulwahab

ABSTRACT

This study examines the effect of good corporate governance attributes on the tax compliance behavior of listed firms in Nigeria from 2012-2016. 79 selected listed firms met the conditions for the inclusion in the sample. Data for corporate governance attributes were extracted from the annual reports of the sample firms and those of the tax compliance indices were extracted from their files with the tax office. Based on the result of the Hausman test, the fixed-effect model was used as a basis for the discussion of findings. Findings suggest that managerial ownership and non-executive director have significant positive relationship with tax compliance. Board size has a negative relationship while the effects of gender diversity, auditor profile, ownership concentration, and institutional ownership are not significant. It is therefore recommended that firm should seek an optimal mix of managerial and non-managerial ownership to guarantee compliance.

Keywords: Corporate Governance Mechanism, Fixed Effect Model, Hausman Test, Publicly Traded Companies, Taxation, Tax Compliance.

I. INTRODUCTION

Cases of corporate failure, bribery, misappropriation, bankruptcy and indebtedness, asset loss, and bad results have all been linked to “vulnerabilities in far too many corporations’ governance principles.” (Smieialiwas & Bewley, 2016, pp. 407–412). Billow (2010) observed that in Nigeria, at least one-fifth of the listed companies in Nigeria lack an appropriate board mix or board committees. Similarly, the absence of openness and tawdriness in disclosing CSR practice and expenditure, company financial and non-financial results, and ownership structure has led to a situation whereby shareholders form solidarity groups at the annual meetings of shareholders, investors, and the management board, i.e., the AGM. Nonetheless, there are slight, remarkable improvements. This improvement is feasible mainly in the financial sector, where, before the 1990s, several companies were liquidated or collapsed because of the lack of good corporate governance practice (Billow 2010). According to Billow (2010), corporate governance is an ethical practice that seeks to guarantee the firm’s well-being through interested parties saddled with ensuring that managers or other insiders act or safeguard the interests of the firm’s stakeholders. Protecting the interests of the company’s stakeholders arises due to the separation of corporate ownership from corporate management by many modern firms. Owners with no managerial role and administrators with no ownership stake in the company are prevalent in today’s corporate world. Equity lenders are usually many, and the median stockholders’ portion of influence is inherently negligible. The smallness of average shareholders’ control manifests in a loss of interest and close business monitoring. The managers are in charge of the business’s day-to-day operations, and they may pursue an individual goal that differs from the overarching plan of the business owners or equity shareholders. Sound corporate governance is essential for increasing investor confidence, protecting stakeholders such as lenders, borrowers, staff, and the government and complying with supporting tax laws (Muka, 2010, pp. 1–18).

As a result, the upper management team needs to carry on the responsibility of ensuring that the incident of tax does not “encourage conduct that is” detrimental to the “interest of the entity or its stockholders” (Friese, Link, & Mayer, 2008, p. 365). OECD guidelines on taxation emphasise compliance with tax law through discernment and implementation of the legal intent of the law. The ‘tone of the board’ should reflect ongoing effort to keep itself abreast of issues affecting its tax strategy, tax planning, tax compliance and reputation risks that may arise from tax evasion. A company whose board is generally uninterested in tax affairs may run the risk of financial scandals. Tax managers must effectively plan corporate tax obligation to maximise profit. Nigeria’s corporate governance codes aim to ensure corporate transparency, responsibility, and equity to stockholders through the management board. The code aims to ensure top management act transparent and accountable towards the company’s stakeholders, such as investors and governments. For several years, literary works treated taxation and corporate governance as separate entities or fields of inquiry. However, the latest evidence has shown that organisational governance and taxation are related topics because specific

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Y. M. Salaudeen*
Department of Accounting, University of Abuja, Abuja, Nigeria.
(e-mail: yinka.salaudeen@uniabuja.edu.ng)
S. S. Abdulwahab
Federal Inland Revenue Service, Abuja, Nigeria.
(e-mail: saliuwahab@gmail.com)
*Corresponding Author
corporate governance processes significantly affect companies’ tax conduct.

Nevertheless, there was little theoretical effort (e.g., Shamsudin, 2014; Sartori, 2009; Desai, Dyck and Zingales, 2003; Andreoni, Erard and Feinstein, 1998, Desai and Dharmapala, 2007). There is yet an empirical investigation of the extent to which tax compliance is related to corporate governance. It is so, despite the existence of researches with interest in evaluating tax evasion (Franzoni, 1999), tax avoidance (Annuar, Salihu and Obid, 2014), tax aggressiveness (Boussaidi and Hamed, 2015 and Zemzem and F투hi, 2013), tax management (Minnick and Noga, 2009), and tax planning (Kiabel and Akenbor, 2014 and Hannetel, 2014). In light of this, the thesis conducts an analytical analysis of the impact of corporate governance on tax compliance by record data derived from annual tax return files and financial reports of firms listed on the Nigeria Stock Exchange.

II. LITERATURE REVIEW

A. Corporate Governance Principle

In the view of major financial scandals that rocked the United States in the 1990s and 2000s, corporate governance heavily emphasised disclosure, transparency, and accountability against alleviating organisational issues. Oman (2011) notes that corporate governance comprises rules, legislation, and business models that regulate the relationship between corporate insiders (corporate managers) and investors or shareholders. It is a partnership system between management, investors, and other company stakeholders and entails adherence to legislation and mechanisms for establishing ownership and control of companies in an economy (OECD, 2004; Abor, 2007).

Corporate governance principles are a way of identifying who owns and has authority over a company. The principle is a method to establish market confidence and company reputation. The OECD created the Principles in 1999, made amendments to them in 2004, and revised them in 2015. Initially, for large companies, the authorities may desire to raise the standard for good corporate governance for small companies. A summary of the OECD principle of good corporate governance is as follow:

1) Sound corporate governance should incorporate well-known policies to improve market transparency, company accountability, and the regulation of separate supervisory, disciplinary, and implementation agencies.
2) Secondly, the corporate governance framework must protect and simplify investors’ ability to express their views, and any breach of investor interest addressed.
3) Also, under the corporate governance system, documentation on all relevant corporate matters, such as the corporation’s financial performance, efficiency, holdings, and management, are completed promptly and accurately.

B. Corporate Governance Mechanism

This analysis uncovers seven governing systems according to the literature. They include Board size, Independent auditor quality, gender equality/diversity, concentrated ownership structure, non-executive directors, institutional ownership, and management ownership.

1) Board size

Board size, which pertains to the number of directors of an organisation, influences board activities and management policies (Jensen, 1993). Competent, professional, and autonomous directors are a must on large-sized boards. Big firms are more likely to incorporate several directors to help oversee and manage the organisation (Coles et al., 2008). Minnick and Noga (2010) investigated which board size is optimal for successful corporate governance and concluded that; large board size increases the likelihood of decision-making bottlenecks while small board size is better for practical tax management purposes. Minick and colleagues’ findings support Yermack’s earlier conclusion that larger board sizes increase the BOD’s communication, coordination, and interaction complexity. Stockholders hold the board of directors fully responsible for the firm’s tax difficulties (Erle, 2008; Hartnett, 2008). Landolf (2006) says that as tax issues get more complicated, the board get more directly involved in the company’s tax planning activities as part of the company’s risk control program. In addition, the author argues that the board should approve such a policy only after meticulously scrutinising the critical concerns of profitability, conformance with business standards, and taxation processes, among other difficulties. The tasked of ensuring long-term and dependable returns to its investors while working to maximise market services provided is the responsibility of the board of directors (Dogan & Yildiz, 2013).

2) Gender Diversity

Gender inequality is a hot subject that has emerged over time. In conclusion, the number of women in management and corporate boards has grown (Singh et al., 2001). Having a diverse workforce makes the board’s knowledge base, inventiveness, and innovation better. Gibbins et al. (1992) found that board gender diversity enhances businesses’ annual report disclosure practices. Huse and Solberg (2006) found that female directors want to attend a meeting than men, which means they are more likely to make good choices. Ferriera and Adam argue (2008) that female directors influence board input and production. Men still have worse attendance records. The Higgs Derek Report of 2003 recognised the benefits of gender diversity in boosting BOD management performance. This study suggests that a pro-tax compliance stance should be more common in women dominated BODs (Croson and Gneezy, 2009).

3) External Auditor Quality

Audit quality varies according to many dimensions, such as expertise, experience, and competency. Audit quality has received much attention because of its complicated and multifaceted nature. It is a tool used to deter management and directors from engaging in mismanagement and thievery. BIG4 external audit consulting business has a lower chance of being tax aggressive, according to Richardson et al. (2013).

4) Managerial Ownership

Executive management ownership, particularly the percentage of shares owned by the executive team, encourages managers with a financial or non-financial stake in a firm to defend their interests. As a result, the effective tax
rate is lowest in firms with a more significant proportion of executives interested in the company. In a previous study, Ying found that more tax-averse firms have higher management ownership levels. Additionally, Mimnick and Noga (2010) observed that corporations with a large percentage of management ownership are more likely to engage in tax avoidance. Even though tax aggressiveness correlates with firm ownership structure, Adhikari et al. (2006) state that this question is inadequately studied in underdeveloped or emerging economies (Boussaidi & Hamed, 2015).

5) Ownership Concentration

Apart from forms of managerial ownership, the concentration of ownership creates a separate conflict of interest between controlling and minority shareholders (Desai & Dharmapala, 2008). According to recent studies (e.g., Chen et al., 2010), companies in which family members possess the bulk of the stock are less likely to have difficulties with tax concerns. Family-owned companies may be more likely to lower pricing than pay the expense associated with non-tax compliance penalties. Tax avoidance, especially for small family shareholders, incites the desire to decrease tax rates, even at the expense of increasing non-tax expenditures. It is easier to manipulate stock prices and engage in aggressive tax tactics when a firm has an elevated level of concentrated equity in the hands of a key shareholder or family member.

6) Non-Executive Directors

Non-executive directors ensure unbiased supervision of all issues related to executive officer and other senior management compensation. In general, paid for their job, but not considered workers. Non-executive board members have recently garnered attention from corporate governance legislation and academic Study (Chen et al., 2011; Johansson & Ostergren, 2010). Every director should be able to perceive the challenges from a broader perspective. Non-executive directors perform unbiased supervision on sensitive topics, such as executive officer and other senior management compensation, using an agency hypothesis developed to restrict managerial opportunism (Allegreni & Greco, 2013). García-Meca and Sánchez-Ballesta (2010) found that having independent board directors accessible significantly increased the protection of shareholders.

7) Institution Ownership

Institution owners serve as administrative filters (Demsetz, 1983; Shleifer and Vishny, 1986). This conclusion arises from the assumption that institutional investors often have huge portfolios. Institutional investors, ranging from selling shares (exit) to actively exercising voting rights (voice), may be found in the firms’ operations.

C. Tax Compliance

Every individual and corporate citizen has a moral and ethical obligation to pay taxes. It is part of social and business sustainability. Although obligatory by many countries’ tax legislation, citizens must nevertheless freely comply. Surprisingly, citizen behaviour has consisted chiefly of avoidance, evasion, and innovative tax planning and management. Alm, Martinez-Vazquez, and Schneider (2003) report that tax requirement is a hardship and not a sign of patriotism to the nation of origin. The notion of tax as hardship results in the tax collector finding it difficult to collect taxes due. Therefore, governments have additional duty and obligation to make sure citizens are law-abiding in addition to governments’ core welfare and security responsibilities. To do this, the government makes sure that everyone performs their civic duty. To be effective, all applicable tax policy, legislation, and administrative measures must be in place.

The self-assessment tax method enables taxpayers to pay their taxes voluntarily. Effective punishment measures may be enforced, including the imposition of fines, interest, and jail if criminal behaviour is involved. Penalties lead to changes in behaviour, which leads to mutual compliance (FIRS, 2012). Tax compliance reflects tax compliance, government tax policy, and administration. Tax compliance entails making sure citizens (individuals or corporations) disclose their natural tax base and avoid window dressing books of account and financial statements, correct determination of tax liability file accurate and up-to-current estimates of the tax liabilities, and also prevent defaulting on the payment date (Alabede et al., 2011). Non-compliance is any non-compliant behaviour. Voluntary tax compliance is a plan for cooperating with tax rules without first being forced to comply. Citizens must earn, pay their taxes, and submit yearly taxes (Pyikison, 2011). In addition, taxpayers must complete, and file all required tax returns on time, as Roth, Scholz, and Dryden-Witte (1989) described. (Alabede et al., 2011).

Tax compliance is measured by the level of tax compliance and rule adherence (Alabede et al., 2011). What it means to be tax compliant can differ from the author’s perspective. James and colleagues say that tax compliance encompasses a willingness and spirit to comply with tax law, policy, and administrative rules and mechanisms, without the necessity for government use of executive order or authority (Alabede et al., 2011). According to Kirchler (2007), the voluntary and coercive forms of tax compliance are supported by writing. Voluntary tax compliance is only feasible when trust, confidence, and collaboration continues between the taxpayer and the government (the tax authority). The taxpayer is agreeable to the tax law provision. The tax environment turns unfriendly, and taxpayers refuse to pay, requiring the government to compel tax compliance through executive, judicial, and legislative action. The method of government enforcement is by the tax authorities via court order, audits of financial books, the firm’s closure, and the use of fines. The OECD (2001) classifies conformity to tax regulations, policies, and administrative mechanisms under technical and administrative compliance (Alabede et al., 2011). It deals with all tax compliance other than precise tax estimation or computation and the tax base determination. It focuses on reporting, process, and regulation compliance.

D. Theoretical Framework

1) Agency Theory

Agency theory focuses on the agency connection and the associated problems. Although working for the same objective, Managers may not always have the same interests as the owner. In the early 1970s, Stephen A. Ross and Barry M. Mitnick proposed a new agency theory. They developed distinct theories of agency (Delves & Patrick, n. d). “The
Principal’s Problem: Ross Delivered a Column at the American Economic Association’s Annual Conference in December 1972. This article defined the agency as a basic idea but not a theory. Research zeroed attention on the reward problem and offered a paradigm for increasing the agent’s return for shareholders. Mitnik’s 1973 paper, “Fiduciary Rationality and Public Policy: The Theory of Agency and Some Consequences,” presented a more theoretical view of agency that was useful in many social contexts. Most research on corporate governance has employed the agency theory as the fundamental theoretical framework (Boussaidi & Hamed, 2015). It was essential due to the conflicting interests of management and ownership and control separation. The theory claims that if knowledge asymmetry exists, then the director and manager will act in the interest of the primary or shareholder (Ross, 1973; Fama, 1980).

2) Stakeholder Theory

Stakeholder theory holds that a firm has many stakeholders: consumers, suppliers, workers, investors, and many others who have a stake in the company. The notion says that a company should help stakeholders thrive, not simply shareholders. In 1984, Edward Freeman formulated the stakeholder theory in his book, Strategic Management: A Stakeholder Approach identifies and models the stakeholders of a company and techniques by which management shows adequate consideration for the interests of these groups (Simon, 2016). The stakeholder argument serves as a theoretical base for this study. The theory talks about companies and other stakeholders, for example, investors, tax authorities, political groups, customers, suppliers, bankers/lenders, and employees. Stakeholder theory looks beyond the shareholders-management connection and seeks to address the diverse needs of other corporate stakeholders, for example, a partnership model. The manager-shareholder connection is exclusive to agency theory and not included in the more comprehensive stakeholder theory.

E. Empirics

There have been several scientific studies about the relationship between corporate governance and taxation. The summarised aim and findings are:

A study was performed by Boussaidi and Hamed (2015) on the degree of aggressive tax behaviour by select Tunisian Listed businesses in 2006-2012. Gender diversity in board composition, managerial dominance in shareholder ownership, and concentrated ownership all influenced the tax-dodging behaviour of businesses. Board composition diversity and managerial-dominated ownership contribute to an effective tax rate (ETR), whereas concentrated ownership decreases. There was no significant effect seen in the ETR tax aggression measure by Boussaidi and colleagues. In Malaysia, Annuar, Salihu, and Obid (2014) examine the correlation between company ownership structure and corporate tax evasion. The study concluded that family, global, and government ownership are correlated with business tax evasion amongians based on a cost/benefit analysis of tax avoidance. A solid governance structure may help to reduce these associations.

The Laffer-curve theorem explains the Laffer Curve in different nations in Desai, Dyck, and Zingales (2003). The study found that higher corporation tax rates reduce sales because ownership is centralised and corporate governance becomes inefficient. The Study by Desai and colleagues revealed that the tax system controls the extent of managers’ benefit. In short, a more severe tax enforcement regime reduces the money available for management use, whereas a high tax rate raises it. Once the additional capital becomes available, this will affect the company’s stock market value because of the extra free cash flow, even with a tax burden.

Additionally, Desai and colleagues have discovered that governments’ tax income is responsive to the alterations in the tax structure. A hike in the company tax may lead to a reduction in government revenue. BOD members influence the tax aggressiveness of 73 businesses on the SBF 120 index in France (Zemzem and Fhouhi, 2013). The research began in 2006 and ran until 2010. To analyse factors that minimise management opportunism and tax planning practices, Zemzem and colleagues employ a linear regression model. Based on the findings, more women should sit on the BOD while the board size decreases. Nogal and Minnick (2009) study the long-term tax management of corporations. They use a hand-collected data set of S&P 500 businesses from 1996 to 2005 to investigate pay, board composition, and entrenchedment. Compensation levels and performance sensitivity for CEO and directors have a substantial effect on corporate tax management.

Punish or Persuade? (Murphy, 2008) the project is dealing with strategies to better cope with tax evasion offenders. The research involved 652 taxpayers having enforcement experience with the Australian Taxation Office. Based on offenders’ perceptions of compliance as prejudicial or re-integrative, the study revealed that anger might moderate how negatively a later compliance experience impacts subsequent behavioural intentions: anger, resentment, and outrage drive who would or would not contribute to society in their wake. Khan, Srinivasan, and Tan (2016) evaluated how tax evasion methods adapt to institutional ownership structures. The study builds on previous research by adding to the data showing that increased institutional ownership is linked to tax evasion. The profits and analysts’ expectations will both be greater with a tax haven usage than without it. Using the Russell index reconstitution environment and a regression discontinuity methodology, the study reveals that lower institutional ownership concentration promotes tax avoidance and evasion.

Tahir, Saleem and Arshad (2015) looks at the influence of institutional ownership on the firm’s performance. Data cover the years from 2008 to 2013. Due to endogeneity concerns, the Durbin-Wu-Hausman test is used to disprove endogeneity. The study used OLS and 2SLS to conclude. When institutions own a majority of company stock, corporate performance is positively influenced and more inclined to conduct business with dividend-paying businesses. Modugu, Ergahe, and Izedonmi (2012) explore the connection between government transparency and voluntary tax enforcement in Nigeria within the context of a mutually agreed fiscal/social pact. Standardised Likert scale questionnaire findings were favourable, indicating that citizens’ perceptions of government accountability are critical in fostering tax compliance, encouraging voluntary tax enforcement. According to the Study, public sector standards would improve, encouraging voluntary compliance.
with tax laws. Meanwhile, the debt ratio correlates with business performance negatively.

Fakile and Uwuigbe (2013), in a study of African nations, identify the link between tax planning or tax behaviour and corporate governance. The research examines how corporate governance rules in Africa’s tax system affect company tax compliance levels from 1970 to 2008. African authors discover the non-existence of anti-tax provision and enforcement. As a result, tax planning is possible without affecting operations. Shamsudin and Noor (2012) studied the link between governance and tax compliance in Malaysian SMEs for 11 years, i.e., 2000 to 2010. It focuses on two aspects of corporate governance: board composition and director compensation. The study observed that director remuneration strongly impacted tax enforcement. Once directors earn vast quantities of money, they work harder to improve the company’s outcomes. In short, when a firm is doing well, tax enforcement increases. Board size is associated with higher tax compliance.

In their study, Aliani and Zarai (2012) investigate 32 Tunisian capital market businesses from 2000 to the 12th month of 2007. The objective is to explore company tax planning initiatives affected by the board characteristic. The study found the tax planning efforts of the 32 firms to greatly influenced by the duality and diversity on the BOD. Duality has a negative link to effective tax rate (ETR), while board composition dramatically influences company tax rates. Another study using the Compustat and Thomson Reuters databases for 2011-2015 by Leipada (2017) into tax planning or avoidance issues found a bad connection between company tax non-compliance and institutional ownership. Results show that businesses with institutional owners engage in more compliant tax evasion. On the other hand, firms with under forty distinct institutional block holders use more nonconforming tax evasion schemes.

The tax rate and company tax compliance in Africa are analysed by Mas’ud et al. (2014). Using random probability sampling, Mas’ud and his colleague selected an African cross-country sample. The cross-country data is analysed using linear regression, and the results indicate a strong correlation and detrimental impacts of tax rates on corporate tax compliance. The report suggests that nations in Africa with tax rates above the average threshold - who are prone to experience tax non-compliance - should decrease and align their tax rate to the average threshold.

Dinku and Alamirew (2018) utilised secondary macro data to see how audit productivity, tax prosecution, and penalty affect cooperative taxpayer adherence. They utilise frequency tables and interpretative data analysis approach in their study. According to the study’s findings, there was a personnel deficit at the tax agency, and, as a result, the audit coverage efficiency was low, resulting in decreased audit productivity. Multiple regression findings have revealed a substantial connection between voluntary tax compliance and audit productivity, tax prosecution, and penalty. Therefore, tax enforcement, along with audit and penalty effectiveness, is essential in order to facilitate tax compliance.

III. METHODS

A. Population and Sample

173 companies were listed on the Nigeria Stock Exchange as of December 2016. In selecting companies for this study, companies whose financial reports or tax returns were not available within the five years of 2012 to 2016 covered by this study were eliminated from the population. 79 firms met these criteria and therefore used as the sample of the study.

B. Data Source and Measurement

The study extract compliance data from the annual tax returns file submitted by listed firms to Federal Inland Revenue Service (FIRS) for five (5) years, i.e., 2012 to 2016. Corporate governance mechanism data, on the other hand, are sourced from published annual reports financial statements of selected publicly traded companies in Nigeria for the same number of years as above.

C. Tax Compliance

The study measures tax compliance in terms of four indices identified by Companies Income Tax Act (2007, Sec.55) as amended, and they include:

1. Correct tax base determination (Income),
2. Accurate tax liabilities estimation,
3. Prompt payment of the amount due, and
4. Prompt return filing.

Indices (i) above is determined by comparing the income declared in the tax return with the tax authority reviewed figure, while (ii) is on whether or not the tax authority raised additional tax liabilities. The paper extends Akhand (2015) 3 point tax compliance scale of 0 to 3 to a 4 point scale of 0–4. As such, in each year, codes 0, 1, 2, 3, and 4 were used depending on the extent of compliance or non-compliance with the four indices as an example, if in a year, a firm complies with one, two, three, and all of the indices, code 1, 2, 3, and 4 is used to rate compliance level respectively. Otherwise, code 0 is used to indicate non-compliance.

D. Tax Compliance Predictors

Board Size (BSI): According to Godard (2002), the study measured the board size of directors’ total headcounts, which made up the board of directors. A negative (-) effect is expected in line with Lipton and Lorsch (1992) and Jensen (1993) monitoring and coherence hypotheses to support small board size, and a positive (+) effect according to Barnhart and Rosenstein (1998) and Dalton and Dalton (2005) pooling and diversity enrichment hypotheses.

Managerial Ownership (MONW): The study calculates MOWN as a proportion (in percentage) of shares held by BOD executive members (Boussaidi & Hamed, 2015). A positive (+) effect subsists in line with the lower effective tax rate and tax aggressiveness prediction of Ying (2011) and Chan et al. (2013), respectively.

Gender Diversity in Corporate Board (GDIV). GDIV is the ratio of women member on the BOD of a company to the total number of members on a company BOD (Zemzem & Fiouhi, 2013). A positive effect of GDIV subsist following compliance, professionalism and effectiveness of women proposition by Higgs Derek Report (2003) and Kaslunger et al. (2010).
External Auditor Quality (AUD): AUD is measure as the selection of any of the BIG 4 audit firms. The BIG4 audit firms include Pricewaterhouse Coopers, KPMG, Deloitte & Touche, Ernst & Young. Selection denoted as 1. Otherwise, 0. In line with the consciousness proposition suggested by Boussaidi and Hamed (2015).

Ownership Concentration (OCON): OCON represents the total shares of stock of shares attributed or allocated to controlling shareholders. OCON is a proxy as the accumulative ordinary share proportion (in percentage) belonging to all significant shareholders with greater than 5% “voting rights” (Boussaidi & Hamed, 2015, p. 6). A negative (-) impact subsists between tax compliance and ownership concentration, according to Khurana and Moser (2013).

Non-Executive Directors (NED): Non-executive officials are stakeholders of a corporation’s board of directors and are not part of the executive board. The non-executive directors are measured as the ratio of outside directors to the total number of the board of directors (Zemzem & Ftouhi, 2013). A positive (+) impact of non-executive directors’ usage is expected on tax compliance because of industry experience and background information and knowledge (Minnick and Noga 2010).

Institutional Ownership (IO) refers to the ownership of a company by an equity stake in a corporation owned by an organisation of other entities, such as a major banking organisation, a mutual fund, or an endowment referred to as institutional ownership. Institutional ownership (IO) is defined as the total portion (in %) of a corporation’s common shares owned solely by investment firms (Tahir, Saleem & Arshad, 2015). A positive (+) impact of IO on tax compliance is expected because the more ownership by investment firms, the more controlling the likelihood of monitoring the management (Maug 1998). Table I provides a quick summary of all the variables discussed.

E. Model Specification

To empirically model how tax compliance is affected by corporate governance mechanism in Nigeria business environments, this study adopted the model of Boussaidi and Hamed (2015).

ETRit = α0 + α1BSIt + α2DIVit + α3AUDit + α4MOWNIt + α5OCONit + α6SIZEIt + α7DEBIt + α8ROAIt + α9MKTBKit + α10SECPtrit + Etit

The model of Boussaidi and Hamed (2015) uses tax aggressiveness as the dependent variable and “firm-size (SIZE), debt-level (DEB), Return on Asset (ROA) as a corporate performance measure, growth opportunities” (Boussaidi & Hamed, 2015, p. 7) and privileged sector (SECP) as control variables.

This study uses tax compliance as its dependent variable. The control variables were removed from the model since all the companies sampled were large listed firms. Further, Non-executive director and Institutional ownership were introduced as independent variables that were not in the model. The equation for the empirical model is as follows:

Model: TCit = α0 + α1BSIt + α2GDIVit + α3AUDit + α4MOWNIt + α5OCONit + α6NEDit + α7IOit + µit

where, C is Tax compliance; BSI is Board Size; GDIV is Gender Diversity; AUD is Quality of External Auditor; MOWN is Managerial Ownership; OCON is Ownership Concentration; NED is Non-Executive Director; IO is Institutional Ownership; µit is the disturbance (error) term; α0 is the Constant Parameter; α1α2α3 are the Coefficients of the explanatory Variables.

F. Descriptive Approach

We explored the minimum, maximum, average (i.e., mean and median), standard deviation points of our data and established the bivariate direction of association between the dependent variable TC and the independent variables BSI, GDIV, AUD MOWN, OCON, NED and IO. The bivariate correlation scale ranges from -1 to +1 indicating perfect

| Variables                  | Abbreviations | Basis of Measurement                        |
|----------------------------|---------------|---------------------------------------------|
| Tax Compliance             | TC            | Code 0,1,2,3, and 4 to rate the compliance level. Franzoni (1999), Akhan (2015) |
| Board Size                 | BSI           | Total number of board of Directors Minnick & Noga (2010), Boussaidi & Hamed (2015) |
| Managerial Ownership       | MO            | Cumulative percentage of shares owned by the executive directors Minnick & Noga (2010), Ying (2011), Chan et al. (2013), Boussaidi & Hamed (2015), Croson & Gneezy (2009) |
| Gender Diversity           | GDIV          | Ratio of women on the board Boussaidi & Hamed (2015) |
| Quality of External Auditor| AUD           | Value of 1 if company hires among the BIG 4 audit firms and 0 if not. Richardson et al (2013), Boussaidi & Hamed (2015) |
| Ownership Concentration    | OCON          | Cumulative percentage of shares owned by major shareholders with 5% of the total shareholding Minnick & Noga (2010), Chen et al. (2010), Boussaidi & Hamed (2015) |
| Non-Executive Director     | NED           | Ratio of Non-executive directors on the board Minnick & Noga (2010), Zemzem, & Ftouhi, (2013) |
| Institutional Ownership    | IO            | Cumulative percentage of shares owned by organisations Shleifer & Vishny (1986), Tahir, Saleem & Arshad (2015) |

Source: Researcher’s Compilation.
negative or inverse and positive correlation, respectively. The farther away from this point in each opposite direction, the weaker is the association and relationship (Akpa, 2011).

**G. Data Quality Diagnostic**

Although there are many data quality issues in econometric literature, we investigate multi-collinearity using the Variance Inflation Factor (VIF) method, a unit root, autocorrelation and normality of the variables.

**H. Inferential Analysis**

The regression framework is applied to guide findings and conclusion. The choice of regression is because of the focus of this study on the association between tax compliance and corporate governance mechanisms. The fixed and random effect variant of the regression model for panel data allow for the inclusion of the often unobserved time invariants, cross-sectional and temporal (i.e. time) dimension into the data.

### IV. RESULTS

**A. Descriptive Result**

Table II indicates that the average tax compliance score, board size, non-executive directors’ proportion, board diversity score, audit quality index, managerial ownership proportion, ownership concentration, non-executive directors’ concentration, and institutional ownership concentration of publicly traded firm in Nigeria is 3.046, 10.684, 65.5%, 15, 0.68, 18.75%, 60.39, 65.55% and 52.18% respectively.

| TABLE II: DESCRIPTIVE ANALYSIS |
|--------------------------------|
| Var | TC | BSI | GDIV | AUD | MOWN | OCON | NED | IO |
|----|----|----|-----|-----|------|------|-----|----|
| Obs| 395| 395| 395| 395| 395| 395| 395| 395|
| Mean | 3.0 | 10.7 | 15.3 | 0.7 | 18.8 | 60.4 | 65.5 | 52.2 |
| Median| 3.0 | 10.0 | 14.3 | 1.0 | 6.0 | 63.4 | 64.7 | 57.1 |
| Max | 4.0 | 21.0 | 62.5 | 1.0 | 100.0 | 100.0 | 92.9 | 94.9 |
| Min | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 7.6 | 0.0 | 0.0 |
| Std. | 1.0 | 3.5 | 11.2 | 0.5 | 26.4 | 23.6 | 15.3 | 24.0 |

Source: E-Views version 9 output.

Furthermore, the result of Table III shows a weak positive association of board size index (BSI), ownership concentration (OCON), non-executive director’s concentration (NED) to Tax compliance (TC) with a coefficient of 0.008, 0.075 and 0.071, respectively. On the other hand, audit quality (AUD) and institutional ownership (IO) has a strong positive association with tax compliance (TC), a coefficient of 0.16 and 0.14, respectively. In contrast, board diversity (GDIV) and managerial ownership (MOWN) have a weak negative relationship with a coefficient of -0.029 and -0.055, respectively.

**B. Diagnostic Result**

For the result of the Multi-collinearity test reported in Table IV, Multi-collinearity issues are not in existence because the variance Inflation Factor (VIF) and the tolerance value of the conditions or predictor tested are below five (5) and above 0.1, respectively.

**TABLE IV: VARIANCE INFLATION FACTOR (VIF) TECHNIQUE TO DETECT MULTI-COLLINEARITY**

| Coefficients (a) |
|-------------------|
| Model            | Collinearity Statistics |
|                  | Tolerance | VIF |
| BSI              | 0.923      | 1.084 |
| GDIV             | 0.929      | 1.077 |
| AUD              | 0.827      | 1.209 |
| MOWN             | 0.82       | 1.22  |
| OCON             | 0.593      | 1.686 |
| NED              | 0.969      | 1.031 |
| IO               | 0.579      | 1.727 |

Source: SPSS Version 16 Output.

Similar to the test for unit root existence, which causes instability and non-stationarity of all variables across time in Table V using the p-value, all variables are level stationery except for board size and stationery only after its differenced or innovated once. It is stationary because the null hypothesis that variables have unit roots is rejected for all variables at 5% significance. The result of 3 estimators out of four (4) used in Table VI also shows that the residuals and the predictor variables to be uncorrelated at a 1% significance level.

**TABLE V: UNIT ROOT TEST RESULT**

| Variables | Levin, Lin & Chi test | Im, Pesaran & Shin W-stat | ADF – Fisher Chi-square | PP-Fisher Chi-square | Remarks |
|-----------|-----------------------|--------------------------|------------------------|----------------------|---------|
| TC        | 0.000                 | 0.0103                   | 0.2109                 | 0.0271               | Stationary@ Level I(0) |
| BSI       | 0.000                 | 0.0000                   | 0.0000                 | 0.0000               | Stationary@ Diff. I(1) |
| GDIV      | 0.000                 | 0.0039                   | 0.2919                 | 0.0455               | Stationary@ Level I(0) |
| MOWN      | 0.000                 | 0.0000                   | 0.0720                 | 0.0292               | Stationary@ Level I(0) |
| OCON      | 0.000                 | 0.0000                   | 0.0017                 | 0.0000               | Stationary@ Level I(0) |
| NED       | 0.000                 | 0.0000                   | 0.0001                 | 0.0000               | Stationary@ Level I(0) |
| IO        | 0.000                 | 0.0000                   | 0.0000                 | 0.0000               | Stationary@ Level I(0) |

Source: E-Views version 9 output.
is significant, the fixed-effect model is more appropriate.

V. DISCUSSION

The study found that when firm management is allowed to partake in the firm’s ownership, it will motivate and encourage the management to work hard to increase its performance. As a result, when the performance of a company is good, it will increase tax compliance. The result buttresses the need to ensure value for resources invested into the business and create a motivating stimulus for the manager to guide shareholders’ financial and non-financial interest in a corporate entity (Boussaidi & Hamed, 2015). Furthermore, the data also supports the proposition that increases in the proportion of non-executive directors increase tax compliance and decrease aggressive tax planning. The result implies that non-executive directors determine whether a firm engages in regressive tax planning or not. The findings are consistent with the agency theory (Allegrini & Greco 2013) and the result Aliani and Zarai (2012) and Lanis and Richardson (2011) and failed to support the inverse relationship prediction of Zemzem and Ftouhi (2013).

Meanwhile, the effect of institutional ownership, concentrated ownership, audit quality and gender diversity, even though favourable, is not strongly supported. The findings contrasted Boussaidi and Hamed (2015), Aliani and Zarai (2012) and Zemzem and Ftouhi (2013), Ying (2011), Chen et al. (2010), Jalali et al. (2013), Khan et al. (2016), and Leipala (2017) where a strong positive or inverse relationship is discovered.

A. Recommendation

In light of the findings of this study, corporate entities should maintain a moderate board size, use internationally recognised audit firm, encourage managerial ownership, engage investors as non-executive directors and encourage equal representation of women on the board of director. The recommendation arises due to the need to facilitate quality and timely decision-making, board efficacy, and compliance with tax law provisions and authority. Furthermore, the study recommends that the concentration of a company’s ownership in a few hands and the involvement of institutional investors could slightly improve tax compliance and compliance with regulatory and extant tax laws

B. Suggested Research Area

Potential work should investigate the impact of audit efficiency, tax audit, and criminal charges on tax compliance. Further investigation is because audit efficiency, tax enforcement, and criminal penalties will significantly enhance cooperative taxpayer compliance by influencing taxpayer conduct. Also, future researchers can examine the sectorial tax compliance of Nigerian listed companies.

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