Exploring the Relationship between Effective Tax Rate and Corporate Governance in Quoted Service Companies in Nigeria

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Abstract
The study examined the effect of corporate governance on effective tax rates of quoted service companies in Nigeria. Based on Ex-post facto research design, panel data set was collected from twenty four (24) quoted service companies within an eight year period spanning from 2011 to 2018 financial year. Five hypotheses were formulated with the dependent variable as tax effective rate and the independent variables as board size, board gender diversity, board independence, ownership structure and quality of external audit. Ordinary least square regression technique was used to analyze the data. The results revealed that board size and quality of external audit had negative significant effects on effective tax rates during the period under investigation while the other explanatory variables (board gender diversity, board independence and ownership structure) were not statistically significant. In the light of the result obtained, we advocate among others that if the goal of corporate owners is minimization of tax liabilities, then more should be done to engage the services of big four audit firms not minding the cost.

Keywords: Nigeria, corporate governance, effective tax rate, service companies

Introduction

Amongst other benefits, taxes emanating from companies/corporations in Nigeria constitute an important contribution to the revenue of the government. However, for the companies, taxes are significant expenses that affect financial performance hence require major decisions. Dias and Reis (2018) described effective tax rate as a regular measure used to calculate the tax volume of companies, evaluate tax planning efficacy and trace tax evasion practices. It is a more reliable and realistic measure of a firm's tax burden. Firms seek to reduce their effective tax rates because they gain cash savings which can be used to make new investments. Furthermore, such gains can improve the value of the firms, increase the wealth of the management team and that of the shareholders. On the other hand corporate governance which is seen as a structure of rules, practices and processes used to direct and manage a company have also been well known to be a tool used to approve and monitor important company decisions such as effective tax compliance. Governance of a company consists of the board of directors who have the power to recruit, dismiss and compensate top management. The board protects the interest of shareholders and solves agency problems emanating from separation of ownership and control of the firm. The efficacy of the board in carrying out the above functions depends on its composition (Choi & Lee 2013). Understanding the factors that affect effective corporate tax rates in Nigeria is important not only to corporations but also to governments, policy makers, domestic tax system and other stakeholders (Osebe, Kirui & Naibei, 2019).

According to Dar and Oyesola (2017), studies on tax planning (effective tax rate) and corporate governance have remained majorly unravelled empirically. Specifically there is paucity of research on listed firms in Nigeria. Therefore the goal of this paper is to investigate the impact of corporate governance on effective tax rate of quoted service companies in Nigeria. We carry out this study given the relevance of taxes to government revenue and the need for strategic compliance by companies. We also note that more investigations into the factors that influence effective tax rates will be useful for stock exchange market regulators, policy makers and other stakeholders. Thus in line with other researchers, this study investigates the link between effective tax rate and corporate governance of quoted service companies in Nigeria. Specifically it examines the effect of some identified proxies of corporate governance such as board size, board independence, board gender diversity, quality of audit and corporate ownership structure on effective corporate tax rates of quoted service firms in Nigeria for the period 2011 and 2018. This research makes significant contributions to extant literature on corporate governance and corporate taxation by contributing to the growing sectoral analysis of the Nigerian Stock Exchange.

The rest of the paper proceeds as follows: Section 2 provides conceptual as well as theoretical reviews and expresses the null hypotheses. Section 3 outlines the research method and the model used to prove the hypotheses. Presentation and discussion of results are provided in section 4 while in section 5, we conclude and proffer some recommendations.

Literature Review

Theoretical/Conceptual Review

In line with the study of Osebe et al. (2019), this study adopts the Agency theory to provide theoretical framework for this study. Agency theory is one of the most important theories in managerial finance and economic literature due to the existence of agency problems in different types of organisations. It discusses the problems that surface in firms due to the separation of powers between owners and managers (Panda & Leepsa, 2017) and emphasizes on the reduction of the problem. According to Khurana and Moser (2012), agency's theory states that the function of the board of directors is an internal control tool that works to protect shareholders' interests from the opportunistic behaviour of managers and to reconcile the interests of managers and shareholders.

The importance of this theory is obvious in companies where there is a separation of ownership from management of the company. According to Osebe et al. (2019), not all shareholders are available to run the company and even if they are, they may be too many to run the company effectively. The shareholders delegate authority to the managers (agents) to efficiently run the business on their behalf and expect that managers/hired agents would take those decisions and actions that are in the best interest of the business and shareholders. In practice however, most managers pursue their personal interests instead of those of the owners. However, this results into different agency problems such as conflicts of interest, agency costs, different risk preferences, moral hazards to name a few. Agency theory helps in implementing various governance mechanisms that controls the agent's actions in jointly held corporations (Panda & Leepsa, 2017).

Effective Tax Rate

Effective tax rates (ETRs) have been defined in different ways by different authors. However, Dias and Reis (2018), merging three definitions described effective tax rate as a regular measure used to calculate the tax volume of companies, evaluate tax planning efficacy and trace tax evasion practices. This study defines ETR as a measure used to calculate the tax volume of companies. In any company or corporation, effective tax rate is very important in the context of fiscal management and tax optimization. Corporate effective tax rate provides a better picture of a firm's total tax expense than statutory tax rate (Ribeiro, Cerqueira & Brandao, 2015) because it provides a convenient summary statistic of the cumulative effect of various tax incentives and tax changes. It is based on the actual average tax payable on the company's pre-tax income and is different from the statutory tax rate which is imposed on the taxable income. Policy-makers, government and other stakeholders often use it as a tool to make inferences about corporate tax systems. According to Dar and Oyesola (2017), ETR is the acceptable index for measuring effectiveness in tax planning. It can affect corporate decision making and other related aspects such as capital structure, payout policy and risk management hence firms take actions to minimize the tax burden (Graham, 2003) as cited in Ribeiro et al. (2015). Considering the relevance of this concept, several researchers have attempted different studies. In recent years, Dar and Oyesola (2017), Inua (2018), Păunescu, Vintilă and Gherghina (2016), Ribeiro et al. (2015), Uchendu, Ironkwe and Nwaiwu (2016) and Uniamikogbo, Bennee and Adeusi (2019) to name a few have carried out studies on corporate governance, firm's financial and operational characteristics and effective tax rate. In Nigeria few authors have researched the link between corporate governance and effective corporate tax rate (Dar & Oyesola, 2017; Inua, 2018; Uchendu et al., 2016).

Corporate Governance

Different researchers have referred to corporate governance from different perspectives hence there is abundance of definitions with little consensus on what constitutes a widely accepted definition of corporate governance (Nerantzidis, Filos, & Themistokles, 2012). Corporate governance is seen as a means of reducing tax avoidance activities (Chytis, Tasios, Georgopoulos & Hortis, 2019). This study adopts the definition by OECD which states that corporate governance is the system by which companies are directed and controlled (Nerantzidis et al., 2012). Capital markets, stock exchanges, international organisations and all related stakeholders believe that corporate governance practices constitute a key factor in addressing financing and accounting scandals, extensive tax evasion and tax avoidance (Chytis et al., 2019). In addition, corporate governance improves efficiency, growth, investor confidence when it provides a structure through which the company goals are set, monitored and achieved.

Previous researchers have used many proxies to represent corporate governance (Pratama, 2017). They include Board size, Gender diversity, CEO duality and Ownership structure (Uniamikogbo et al., 2019); ownership concentration, board independence and audit type (Chytis et al., 2019);board independence, board size, CEO ownership and CEO tenure (Păunescu et al., 2016); board size, board independence, board gender diversity, corporate ownership structure (Osebe et al., 2019) and foreign ownership, external audit quality, ownership concentration, gender diversity, and board size (Dar & Oyesola, 2017). In order to establish the relationship between effective tax rate and corporate governance in quoted service companies in Nigeria, this study employs some proxies used in previous research to provide a comprehensive picture of the measurement of corporate governance. They include board size, board independence, board gender diversity, quality of audit and corporate ownership structure.

Effective Tax Rate and Corporate Governance

Board Size and Effective Tax Rates (ETR)

Prior studies have reported mixed and inconclusive findings on the relationship between board size and effective corporate tax rates. Uniamikogbo et al. (2019) and Osebe et al. (2019) revealed that board size (total number of directors on the board) has a positive significant effect on effective tax rates. This finding was in tandem with the study of Ribeiro et al. (2015) that larger boards are related to higher ETRs. A possible reason for this is that as the board size increases it is more difficult to arrive at a consensus on key decisions. On the other hand a similar study by Pratama (2017) on listed Indonesian companies indicated a statistically significant negative relationship between the size of the board and effective tax rates. In the same vein in exploring the link between corporate governance characteristics and effective corporate tax rates amongst United States Listed Companies, Păunescu et al. (2016) got a similar result. However the study of Abdulraheem (2018) on the Impact of Corporate Governance Mechanisms on Corporate Tax Avoidance in Nigerian Listed Manufacturing Companies, identified board size as an insignificant factor that affects ETR.

Hypothesis 1: *Board Size has no significant impact on Effective Tax Rate of quoted Service Companies in Nigeria.*

Board Independence and Effective Tax Rates

The board of directors consists of non-executive (outside) and top executive (inside) directors of firms. Empirical evidence has shown that a properly constituted board with the right mix of non-executive directors tend to contribute more to performance than corporate boards with a predominance of inside directors (Ahmadu, Garba, & Mikailu, 2011). Some have argued that the board can be truly independent if non-executive directors are more than the executive directors. Others advocate an equal number. Previous studies have returned conflicting findings on the effect of board independence on effective tax rates (Osebe et al., 2019) probably because of a lack of consensus on what constitute an independent board. Păunescu et al. (2016) identified a statistically significant negative impact of board independence on effective tax rate. The study of Sartaji and Hassanzadeh (2014) showed that Board of directors' independence has no significant relationship with effective tax rate in companies listed in Tehran stock exchange. Chytis et al. (2019), by using effective tax rate as proxy for tax avoidance, revealed that board independence showed no statistically significant impact on tax avoidance. However, Osebe et al. (2019)'s review of listed firms in Kenya obtained a positive and significant effect on effective tax rates. This could be as a result of better monitoring by non-executive directors who deny managers the opportunity to engage in wrongful activities.

Hypothesis 2: *Board Independence has no significant impact on Effective Tax Rate of quoted Service Companies in Nigeria*

Board Gender Diversity and Effective Corporate Tax Rates

Board gender diversity refers to the percentage of female directors represented on the board. The female board participation connotes where at least one female director exists on the board (Uniamikogbo et al., 2019). There have been arguments that diversity could improve the effectiveness of the board and that companies can benefit from the existence of professional women on their boards (Oyenike & Olayinka, 2016). The reasons for this could be attributed to the facts that women serve as better monitors of management; they are more compliant with legal requirements and so more interested in tax matters. Previous empirical studies have however revealed diverse findings. The study of Corporate-governance-and-tax-aggressiveness-in-Nigeria revealed that a positive and significant relationship exists between gender diversity and tax aggressiveness (Uniamikogbo et al., 2019). Supporting this notion is a similar study of Tunisian listed firms where Board`s diversity exhibited a positive association with the effective tax rate (Boussaidi & Hamed, 2015). (Chen et al., 2017) reported that board gender diversity is negatively associated with tax avoidance. In a study conducted by Aliani and Zarai, (2012), the results showed a non-significant relationship between board gender diversity and tax planning.

Hypothesis 3: *Board Gender Diversity has no significant impact on Effective Tax Rate of quoted Service Companies in Nigeria*

Corporate Ownership Structure and Effective Tax Rates

Ownership structure is defined by the distribution of equity with regard to votes and capital, and also by the identity of the equity owners (Uniamikogbo et al., 2019). It influences the nature of the agency problems arising in the corporate environments. Ownership by corporate board members create an incentive to protect their financial interest (Boussaidi & Hamed, 2015). The dearth of studies showing the effect of corporate ownership structure on effective tax have different results. Chytis et al. (2019) revealed that the impact of ownership concentration on expected tax rate was not statistically significant. Osebe et. al. (2019) revealed a negative impact of corporate ownership on effective tax rate. On the other hand, a positive relationship was seen between ownership concentration and effective tax rate (Boussaidi & Hamed, 2015).

Hypothesis 4: *Board Independence has no significant impact on Effective Tax Rate of quoted Service Companies in Nigeria*

External Audit Quality and Effective Tax Rates

External auditors are expected to provide an independent judgment of the company's financial statements. Although the quality of the external auditor is a complex and multidimensional, concept (Boussaidi & Hamed, 2015), firms that purchase tax services from external audit firms that engage in a wide range of accounting , tax and auditing services (big four audit firms) might get advice on how to reduce income tax legally. According to Pratama (2017), previous studies in this area have found that the Big four audit firms have greater capabilities and competent resources in tax expertise compared to non-Big four audit firms. However the study of Pratama (2017), revealed a positive impact of the audit firm on effective tax rate; implying that companies which use Big 4 audit firms tend to have a higher effective tax rate. In line with Pratama, this research employs the Big 4 audit firms in Nigeria (Pricewaterhouse (PwC), KPMG, Deloitte, Ernst & Young,) to distinguish firms with such expertise.

Hypothesis 5*: Quality of External Audit has no significant impact on Effective Tax Rate of quoted Service Companies in Nigeria*

Methodology

This study adopts ex-post facto research design due to the historical nature of the data set. Annual financial report of the sampled companies was employed as the source of secondary data, due to its degree of reliability and widespread acceptability by organizational stakeholders (Deegan & Rankin, 1997; Haniffa & Cooke, 2005). The population of the study contains all twenty five (25) quoted service firms on the floor of the Nigerian stock exchange market as at 31st December 2018. However, we employed a sample of twenty-four (24) service companies on the basis of the fact that these firms had their published annual reports for all eight (8) consecutive years (2011 – 2018). The statistical technique employed in testing the hypotheses is the Ordinary Least Square Regressions Analysis Techniques. However, before we proceeded to interpreting the coefficient estimates, we ensured that the estimated model is free from all possible least square regression errors as recommended by Green (2017).

Possible least square regression errors which were tested in this study includes; test for homoscedasticity, test for multicolinearity, test for normality of residual, test for model specification error, test for appropriate functional form and test for influential possible observation. Specifically our check result reveals that all possible errors are absent but for the test for normality of residual. Consequently, we rely on the position of Green (2017) who noted that normality is not required in order to obtain unbiased estimates of the regression coefficients but only required for valid hypothesis testing, that is, the normality assumption assures that the p-values for the t-tests and F-test will be valid. Hence, in an attempt to investigate the impact of board size, board independence, board gender diversity, external audit quality and corporate ownership structure on effective corporate tax rates in quoted service firms in Nigeria (see table 1) we modified a similar regression model obtained from the study of Osebe et al. (2019) and specify its functional form as:

ETR = f(BSIZE, BIND, BGD, QEA, OWNS)

However, the econometric model is expressed as:

$$ETR_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BGD_{it} + \beta_4 QEA_{it} + \beta_5 OWNS_{it} + \varepsilon_{it}$$

Aprior Expectation: β_1, β_2 , β_3, β_4 and $\beta_5 > 0$

Where
ETR = Effective tax rate
BSIZE = Board Size
BIND = Board independence
BGD = Board gender diversity
QEA = Quality of External Audit
OWNS = Ownership structure

Table 1: Operationalization of variables

Variable	**Measurement**
Dependent Variable	
Expected tax rate	Total Tax expenses divided by Pre-tax income multiplied by 100
Independent Variables	
Board size	Natural logarithm of total number of directors present on the board
Board independence	Percentage of non-executive directors
Board gender diversity	Percentage of female board members
Quality of external Audit	If the firm engaged a Big4 audit firm for the year under investigation =1. If not, = 0
Ownership structure	Shareholders who own more than 5% of voting rights

Authors' Compilation, 2020

Results and Discussion

Table 2: Ordinary Least Square Regression Result

VARIABLES	BGD	BIND	BSIZE	OWNS	QEA	CONS
Coefficient	-1.274	6.209	-18.125	-0.006	-0.859	5.152
t_ Statistics	(-0.19)	(0.20)	(-2.34)	(-0.04)	(-2.20)	(4.61)
Probability_t	{0.850}	{0.841}	{0.022}**	{0.967}	{0.031}**	{0.000}***

No. of Obs = 165 F-Statistics = 0.0392 R^2 = 0.1509

***Note*: t-statistic and probability statistics are represented in () and {} respectively; w*here*: ** represents 5% and *** represents 1% level of significance.**

Source: Authors' Computations, 2020

From the regression results in table 2 above, the probability F statistic (0.0392), is statistically significant at 5% level hence the overall model can be considered as good. We are 95% confident that we can reject the null hypothesis and state that the regression model has some explanatory power. Although about 85% is explained by factors not captured in the model, future studies can look into the possibility of using more corporate governance related variables. R^2, which is the coefficient of determination shows that 15.09% of the variation in effective tax rate of listed service firms in

Nigeria is explained by the selected corporate governance mechanisms.

Furthermore, board size has a coefficient of -18.125, t-statistics of -2.34 and Probability of t as 0.022 while quality of external audit has a coefficient of -0.859, t-statistics -2.20 and probability of t as 0.031 implying negative statistical significant effects on effective tax rate at .05 level. The negative impact of board size on effective tax rates of listed service firms implies that as board size increases effective tax rate reduces. This result contradicts that of Ribeiro et al. (2015) who noted that increases in effective tax rate as a result of larger board size is due to issues related to communication and coordination. However the result shows strong support for studies like those of Pratama (2017) and Păunescu et al. (2016). More specifically, the negative impact of external audit quality on effective tax rate implies that firms using big four audit firms tend to experience lower effective tax rate. This is contrary to the notion as stated in Pratama (2017) that companies using Big 4 audit firms tend to have a higher effective tax rate. Our result is likely because of litigation exposure and reputational concerns (Watts & Zimmerman 1983, Palmrose, 1988; Shu, 2000). Loss of reputation, as in the case of Arthur Andersen, could put a Big four auditor out of business (Huang & Li 2009). Litigation risk also motivates Big four auditors to remain vigilant and independent. Hindo (2003) reports that Deloitte and Touche, Ernst and Young, and Pricewater house Coopers resigned from more than 1,200 clients following the Enron-Andersen scandal in order to reduce the risk of litigation.

The other explanatory variables, board independence, board gender diversity and ownership structure were seen to insignificantly affect effective tax rate of service firms in Nigeria during the period of analysis. These findings are similar to those obtained from the studies of Sartaji and Hassanzadeh (2014), Aliani and Zarai (2012) and Chytis et al. (2019) respectively.

Conclusion and Recommendation

The findings of this research revealed that of all the selected corporate governance measures (board size, board gender diversity, board independence, ownership structure and quality of external audit), only board size and quality of external audit are statistically significant and negatively affect effective tax rate of listed service firms/companies in Nigeria. Following our empirical findings, we recommend larger boards for listed service companies in Nigeria whose target policy is to reduce corporate tax effective rates. We also advocate that corporate owners should do more to engage big four audit firms not minding the cost if their goal is to minimize their tax liabilities.

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