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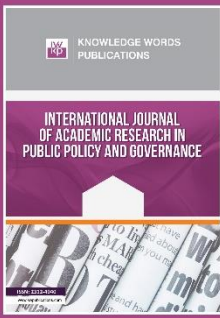
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Firm Characteristics and Tax Aggressiveness of Listed Firms in Nigeria: Empirical Evidence

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Abstract

The study examined firm characteristics and tax aggressiveness of listed firms in Nigeria using pool and panel data for the period 2012 to 2016. The data used was sourced from the annual reports of the selected firms. Both the panel and dynamic panel methods were used to analyze the data generated. Findings from the study revealed that firm size exerts positive and significant effects on tax aggressiveness. There is significant and positive relationship between external audit quality and tax aggressiveness. Leverage is significant and exerts negative relationship with tax aggressiveness. Interest charges have significant and positive relationship with tax aggressiveness. Based on the robust empirical findings obtained in this study, it is recommendations that listed firms in Nigeria should make it a practice to adequately compensate managers / board of directors strategically as this will assist to reduce their tendency to engage in rent seeking / managerial opportunism, mitigate agency problem, enhance operational efficiency and lead to lower effective tax rate.

Keywords: Firm Size, Leverage, Audit Quality, Interest Charges and Effective Tax Rate.

Introduction

Firm characteristics are very essential to the optimal operation and performance of companies from time to time. Firm characteristics are often analyzed in relation to varying aspects of a company such as financial performance, firm value, corporate social responsibility disclosure, assets disclosure including intangible assets with a view to determining their contribution to shareholders wealth. Some of the firms' characteristics commonly examined in extant literature encompass firm size, firm age, which could be incorporation age or managerial age, industry type, ownership concentration, audit firm size, profitability, among others. These varying characteristics of firm interact to influence expense reduction, including tax liability of firm. In the light of present day global challenges, the performance of firms, whether large or small and level of investors' confidence are hinged on the reduction of expenses including tax expense, assuming all other factors are held constant. Large firms for instance are presumed to be more efficient than smaller ones due to size and managerial skills differentials. Efficiency in this context connotes sound expense management towards influencing the overall financial performance. The overall performance of firm is dependent on how costs are

reduced in a systematic manner. Tax is a major cost to firm which managers are expected to reduce through adequate understanding of the loopholes in the existing tax laws in the jurisdiction of operation. Intuitively, the performance of firms and the goal of maximization of shareholders wealth is a function of effective firm characteristics like size, leverage, audit quality and other measures, given all others factors are held constant. Apart from size, leverage is also a component of firm characteristics and is very germane towards the financial well-being of a company. Leverage influences the operation, profitability and size of a firm. Firms that employ considerable amount of debts, whether short term or long term debts often enjoy tax shield and make them tax aggressive in a way. A firm that is tax aggressive always seeks to reduce the amount of tax expense payment. Although leverage sometimes adversely affects the financial performance of companies, this is however subject to the systematic management in terms of taking into critical consideration the cost and benefit. Increase in leverage by firm with the intention to take advantage of tax shield and minimize tax expense, may pose the danger of bankruptcy. Therefore, tax aggressiveness, otherwise refers to minimization of tax liability has associated costs and positive effects. The costs majorly are reputational costs, which arises from the trap of sliding into tax evasion by the managers, political costs occasioned by the firm size and the likelihood of managers engaging in rent extraction subject to the degree of agency problem as propounded by Jensen and Meckling (1976). The attendant benefit of tax aggressiveness is simply increase in net earnings and transferring of wealth from the government to the shareholders, thus promoting the wealth maximization goal of the firm. In the same vein, the quality of the external auditor which the firm uses to audit the financial statements plays a vital role of influencing tax aggressiveness. The effect of the statutory auditor on tax aggressiveness may be direct or indirect. A statutory auditor that is very independent, objective and seeks to be the watchdog of the existing shareholders may not play a significant and direct function of minimizing tax liability payment on behalf of its client firm probably because of the avoidance of litigation and reputational costs from other concerned stakeholder like the government. But where the auditing firm performs non-audit role in the client firm, there is the probability that it can contribute to tax aggressiveness. However, minimization of tax expense payment in a firm is much more of administrative and managerial in nature and not the direct role of the external auditors. On the flipside, it could be said that the external auditor plays a sort of indirect function at reducing the tax liability of a company. If the auditor expresses a free and fair view of the contents of the financial statement in which tax expense reduction is a component, then it said to indirectly contributes to tax aggressiveness. Interestingly, there are little or no studies that have empirically determined the effect of audit quality as well as other firm characteristics like firm size and leverage on tax aggressiveness in the Nigerian context; hence this study seeks to bridge the gap. Ilaboya, Obasi and Izevbekhai (2016) examined firm level characteristics and effective tax rate in Nigeria for the period 2008 to 2014. Two firm characteristics like firm size and leverage were examined on effective tax, a proxy for tax aggressiveness. The results from the study appear to be inconclusive. The inconclusiveness of the results may not be unconnected with the sample size, method of estimations used such as panel data which fails to account for endogeneity effect occasioned by the transcendental effect of tax liability payment and periods of study. This study seeks to improve on the prior studies by increasing the sample size and period and also use a more appropriate estimation method like the dynamic panel method in Nigeria.

Literature Review

Empirical Review

The nexus between firm characteristics and tax aggressiveness of listed companies is yet to gain ascendancy in developing countries like Nigeria. Tax aggressiveness rates are often determined by myriad important firm characteristics; and firms size is one of the characteristics expected to influence effective tax rates (Ribeiro, 2015). Firm size is one of the characteristics expected to influence tax aggressiveness of firms. The economic and political power advantage of larger firms relative to small companies makes them more prone to tax aggressiveness (Hoi, Wu & Zhang, 2013). On the empirical fronts, Dyreng, Hanlon and Maydew (2010); Richardson and Lanis (2007) ascertained a negative relationship between firm size and tax aggressiveness, proxy as effective tax rates, while Kraft (2014) reported that firms' size has a positive impact on effective tax rates. Stickney and McGee (1982), Richardson and Lanis (2007) found a negative relationship between company size and effective tax rate. Richardson and Lanis (2007), Siegfried (1972) reported that larger company in terms of size will lead to lower effective tax rates (ETRs). They stressed that larger companies are better in using their resources to form good tax planning than smaller companies. Firm with huge investment in physical assets for example tend to use higher value of depreciation expense to reduce their assessable income and therefore pay lower income tax expense. Investment allowance and capital allowance do combine to minimize the tax burden because of the total assets holding; suggesting that firm size proxy as total asset has a correlate with the reduction of tax liability. Larger firms with track record of success history appear to be exposed to better political scrutiny which tends to minimize the chances of tax minimization.

Kanagaretnam, Lee, Lim and Lobo (2016), empirically examine the relation between audit quality and corporate tax aggressiveness on a cross – country basis. They used a sample of 41958 firms across 31 countries with the aid of panel regression method. The study found strong evidence that auditor quality is negatively associated with the likelihood of tax aggressiveness, after controlling for other institutional determinants like home – country tax system characteristics. Sometimes, the influence of external audit on tax aggressiveness of firms may be inversed. A situation where external auditors have stronger incentives by way of higher fees, they will always want to enforce stringent financial reporting quality and compliant, and by so doing will indirectly damper tax aggressiveness particularly when investor protection is strong. The conclusion of Karagenathnan et al (2016) empirical investigation is that Big N auditors are associated with a lower likelihood of corporate tax aggressiveness. Using logistic estimation, Gaeremynck, Meulen and Willekens (2008) found that Big N auditors are correlated with lower likelihood of compote tax aggressiveness. Boussaidi and Hamed (2015) did not find significant effects of external auditors' profile on the tax aggressiveness of listed firm in Tunisia. In contrast, Boussaidi and Hamed (2015), found that if a company engages an external auditor (BIG4), it is likely to be less tax aggressive. They ascertained that a negative but not significant relationship between the quality of the external auditor (BIG 4) and effective tax rate (ETR). There is little evidence on how auditor quality relates to tax aggressiveness (Kanagaretnam et al., 2015). Usually, part of the engagement in audit concerns evaluating the validity of the assessment and disclosing of tax – related items in the financial statements. By so doing, auditors may influence the level of tax aggressiveness indirectly (Kanagaretnam et al., 2015). If external auditors take into consideration the implication of the litigation risk in supporting firms to engage in aggressive tax behavior, they restraint from it. Generally, Big four auditors are likely to contribute less to firms' tax aggressive behavior. This may due to litigation and damage to reputation they may want to avoid (Zimmerman, 1983). Intuitively, if a firm does not face litigation after being audited by a big audit

firm and there are no negative signals to the markets/public, then it can be said that external audit quality contributes directly and indirectly to tax aggressiveness.

Leverage is one of the firm characteristics variables that can easily be used to discipline managers to reduce the tendency for rent seeking. This is because managers of companies with higher amount of leverage are subject to the discipline of financing agreements imposed by creditors through the inclusion of limiting clauses (Ribeiro, 2015). The author opined that these restrictions reduce the leeway available to take decisions that are not value maximizing only for the purpose of extracting private benefits. Financial leverage otherwise refers to as a firm characteristic reflects the company's ability to repay debts, especially long-term ones. Tax benefits are considered as one of the factors that influence the financing strategy (Graham, 1996). To achieve a certain level of debt, management manipulates financial statements; and as a result, the high level of debt creates the interest tax advantage for these companies (Hashemi & Mehrabi, 2008). Jensen (1986) shows that higher levels of debt combat agency problems. DeAngelo (1981) argue that companies substitute between debt and non-debt tax shields. Hasan, Keung, Wu and Zhang (2013) find that the positive relation between tax avoidance and bank loan spread is particularly pronounced in firms with higher information risk, higher agency risk. Richardson and Lanis (2007) study showed a positive relationship between financial leverage and tax wedge; but on the contrary, Didar, Matsusaka and Ozbas (2014) found that there is a negative relationship between financial leverage and tax gap. Also, Frank, Lynch and Rego (2009) show debts is negatively associated to tax avoidance. Prior research (Stickney & McGee, 1982) finds that leverage is positively associated with tax avoidance. LEV is positively associated with tax avoidance due to tax-deductible interest payments. Ilaboya, Obasi and Izevbekhai (2016) examined a relationship between firm size and effective tax rate and found a positive result in this regard. Boussaidi and Hamed (2015) did not find a significant effect of leverage on tax aggressiveness of listed firms in Tunisia. Highly levered firm are faced with high-interest expense; and since interest expense is tax deductible; it tends to lower the effective tax rate. Ribeiro (2015) established that leverage expenses have a negative impact on effective tax rate (ETRs). Ribeiro (2015) established that more leverage firms exhibit lower effective tax rates. Richardson and Lanis (2007) and Kraft (2014) found a significant negative relationship between leverage and effective tax rate. Richardson and Lanis (2007) document a significant negative relationship between leverage and tax effectiveness. Increase dependent on leverage capital decreases tax expense payment. Therefore, the interest element in leverage financing has a tax shield which tends to reduce the income tax liability. Derashid and Zhang (2003) ascertained a negative relationship between leverage and effective tax rate.

Listed companies usually benefit from the advantage of using debt to finance operation which is in the form of debt tax shield. The employment of optimal debt level by firms causes them to take advantage of tax shield. Tax shield revenue contributes to firms' financial performance. But there has to be a trade – off between the cost of debt and the benefit due to bankruptcy or liquidation problem. So, companies that employ debts pay less or no interest charges, thereby minimize tax payment expenses. According to Richardson and Lanis (2007), while for leverage variable, interest cost reduces tax cost, enhances the value of a company and thereby cause the effective tax rate (ETR) to be lower. Capital structure has been observed as a fundamental factor that can influence effective tax rates (Ribeiro, 2015). A firm in terms of financing decision may choose to finance its operation with debt or equity. If a firm chooses to finance its operation with equity, the implication is that it would pay dividends to investors, which is tax deductible for tax purposes. Tax paid on dividend is referred to as withholding tax. Debt financing is more often preferred by firm because of the non – deductibility of interest expenses (tax shield) unlike the case of equity financing. The non – deductible tax expense is

a way of engaging in aggressive tax behaviour to influence earnings and enhance shareholders' wealth. Ribeiro (2015) posited that more leveraged firm exhibit lower effective tax rates (tax aggressiveness). Richardson and Lanis (2007) and Kraft (2014) ascertained a significant negative association between leverage (debt) as a proxy for capital structure and effective tax rates. Firms that are more capital intensive benefit more from depreciation deductibility and depreciation is a capital allowance items firms can optimize to reduce tax expenses for a period. Due to the existence of varying depreciation methods, more capital – intensive companies can easily manage taxes by accelerating or deterring depreciation expense and as a result, they can take advantage from temporary book differences. Akanksha, Jayant and Constanza (2013) examine corporate tax aggressiveness and the role of debt in the U.S from 1986 to 2012 for a sample of 268 firms with the use of panel regression method. The result revealed a negative relation between leverage and tax aggressiveness of the firms in the period. The use of debt to reduce tax expense is often regarded as debt tax aggressiveness and companies are always advised to be careful with it because of the attendant implications.

Methodology

This study used the causal effect research design. The population of the study is the entire listed companies in the non-financial sector in Nigeria. as at 31st December 2016. The sample size is eighty five listed non- financial firms and there were selected using the Taro Yamani (1967) sample selection technique. Data for the study was sourced from the secondary source, basically from .the annual financial statements of the selected listed companies in the Nigerian non- financial sector under the reference period. This study uses the descriptive and inferential statistics methods to carry out the data analysis. This is further explained as follows:

Model Specification

The model used in this study was adapted from the framework of Ilaboya et al (2016) where they ascertained the influence of firm characteristics on tax aggressiveness in Nigeria. Thus, the model used in this study is a follow up of the research mentioned above. The mathematical and stochastic form of the models in this research is stated algorithm as follows:

Tax aggressiveness = f(Firm characteristics)3.1

$$ETR_{it} = \alpha_i + ETR_{it-1} + \beta_1 FSIZE_{it} + \beta_2 AUDTQ_{it} + \beta_3 LEV_{it} + \beta_4 INTC_{it} + \varepsilon_{it}$$

.....3.2

$\beta_1 - \beta_4$ are parameters of estimation. The subscripts i and t refer to individual firms and time period (2012-2016) respectively. ETR represents tax aggressiveness of the sampled firms and ε is the error term. The coefficient of lagged dependent variable; Y is expected to be positive. The inclusion of the lagged dependent variable ETR_{it-1} is meant to take care of potential endogeneity of the independent variables which included likelihood of omitted variables, simultaneity and variable measurement error in the context of dynamic panel data method. FSIZE= Firm Size; AUDTQ = audit quality; LEV = leverage and INTC= Interest charges.

Measurement of Variables

S/N	Variables	Type of Variables	Measurement	Sources
1.	Tax aggressiveness	Dependent variable	Effective tax rate	Boussaidi & Hamed (2015)
2.	Effective tax rate (ETR)	Dependent variable	Total cash tax expenses divided by pre-tax income, expressed in percentage.	Boussaidi & Hamed, 2015, Oyeleke & Emeni, 2016
8.	Audit quality	Independent	Measured using the amount of money paid as fees to the external.	Eiya & Ogbeide (2014) Boussaidi & Hamed, 2015
9.	Firm size	Independent variable	Firms' total assets	Hairul et al. (2014)
10.	Leverage	Independent variables	Total debts	Hairul et al. (2014)
11	Interest charges	Independent	Total amount paid as interest expenses	Ribeiro (2015)

Source: Researcher's compilation, 2018.

Empirical Analysis**Table I: Descriptive Statistics**

Variables	Mean	STD	Skewness	Kurtosis	Jarque-Bera
ETR	24.37	90.33	7.83	94.59	140331.3 (0.00)
FSIZE	50908971	1.36	6.468	55.88	48530.53 (0.00)
LEV	29700939	67690364	5.08	39.58	23615.11 (0.00)
AUDITQ	25507.03	51013.88	6.41	60.57	56976.27 (0.00)
INTC	1615350	4808776	6.84	62.02	60118.43 (0.00)

Source: Researcher's Computation from 2018 from E-Views 8.0 Version

The descriptive statistics in table I above shows that on the average, ETR is 24.37%. This figure is far less than the statutory company income tax rate of 30%. The result is an indication that the sampled firms were very tax aggressive in the period under reference. Intuitively, it can be said that the firms have tax management experts and tax consultants who do employ every legal strategies and also take advantage of the loopholes in the tax laws to minimize tax liability, increase net income and maximize the wealth of the shareholders. The result is in line with Koanantachai (2013) study which reported 13.98% for ETR in Thailand between 2007 – 2011; Ying (2011) recorded 22.7% ETR in China for the period 2003 to 2009; Aliani and Zarai (2012) reported 17.4% ETR in Tunisia for the period 2000 to 2007. Ribeiro (2015) in a study reported 24.5% for ETR, Boussaid and Hamed (2015) found 12.37% in Tunisia for the period 2006 to 2012 which was less than the statutory corporate tax rate of 30% in that country. In Nigeria, Oyeleke et al. (2016) reported 12.10% for the period 2012 to 2014 in the financial sector contrary to expectation; Ilaboya, Obasi and Izevbekhai (2016) reported 29.88% in Nigeria in the period 2008 to 2014. Sar and Martani (2010) reported 29% for ETR in Indonesia for the

period 2005 to 2008. Konstantinos (2016) reported 7.5% ETR in Greece. However, it suffices to point out here that the variations in tax aggressiveness of the firms across the different countries reported may be due to sample size, period, number of observations, variables and sectors specific differentials. The standard deviation for ETR shows 90.33. This spells out the risk implication particularly the reputation cost to managers and organization arising from litigation / penalty due to engagement in tax aggressiveness practices. The values of the risk (standard deviation) is higher than 3.28 recorded by Konstantinos (2016); 0.92 by Ilaboya et al. (2016) in Nigeria; 0.08 in Nigeria by Oyeleke et al. (2016); 0.26 and 0.239 by Ribeiro (2015); 0.1865 by Aliani and Zarai (2012); 0.136 reported by Ying (2011). There is positive kurtosis of 94.59 and 365.39. It is an indication that they are very leptokurtic. The Jarque-Bera values of 14033.13 shows that ETR is statistically significant at 1%. It can be said that the variable was normally distributed. Firm size mean value is 50908971 billion. The figures reported is a pointer that the sampled firms invested heavily in total assets perhaps to enable them optimize the benefit of economy of scale and capital allowance. The implication of this is to reduce tax expense. The result obtained is quite close to the empirical value obtained by Ilaboya et al. (2016) of 7.303577 billion. It is an indication that the sampled firms are highly capital intensive by way of fixed assets investments. The standard deviation is 1.36, the skewness and kurtosis are positive (6.468 and 55.88). The Jarque – Bera value of 48530.53 ($p < 5\%$) is statistically significant at 1% level. The average value of leverage is 29700939 billion; which implies that the firms which constitute the sample size are highly geared. This affords them to take advantage of tax shield arising from interest expenses to minimize tax liability since interest expense on leverage is tax deductible. The standard deviation is 67690364. It suggests the risk the firm face for using much leverage to influence their operation and minimize tax liability. The skewness and kurtosis are positive (5.08 and 39.58) while the Jarque – Bera value of 23615.11 is statistically significant at 1% level; an indication that the variable is normally distributed. Audit quality, proxy as audit fee has an average value of 2507.03 million. The standard deviation is 51013.89 while the skewness is 6.41. The Jarque – Bera value of 56976.27 is statistically significant at 1%. The mean value of interest charge is 1615350 million. The standard deviation is 4808776, the Jarque – Bera value of 60118.43 is statistically significant at 1% level. This portends that the variable does not suffer from outlier.

Table 2: Correlation Matrix

Variables	ETR	FSIZE	LEV	AUDTQ	INTC
ETR	1				
FSIZE	-0.033	1			
LEV	-0.037	0.062	1		
AUDTQ	-0.024	0.073	0.044	1	
INTC	0.036	0.010	0.097	0.681	1

Source: Researcher's Computation from 2018 from E-Views 8.0 Version

The table above is the Pearson Correlation Coefficient of effective tax rate and firm level characteristics. It can be observed in J that FSIZE and ETR 1 are negatively correlated ($r = -0.033$); this finding is not consistent with the finding of Richardson et al (2013); Desai and Dharmapala (2006); Ribeiro (2015). Leverage and ETR, are inversely correlated, evidencing a negative impact of leverage on the reduction of effective tax rate (ETR). This finding agrees with that of Ribeiro (2015), Richardson and Lanis (2007). The degree of leverage no doubt determines the interest expense payable, the amount of earnings before tax which no an extent translates to tax expense minimization. External

audit quality is inversely correlated with tax aggressiveness of the firm. The finding is not consistent with Boussaidi and Hamed (2015). Interest cost is directly related to effective tax rate (ETR). This implies that interest cost is a source of tax shield which helps to increase profitability, especially profit after tax. Leverage is positively correlated with firm size ($r = 0.062$). It is an indication that larger firms are likely to hold higher amount of leverage. The finding is consistent with Oyeleke, Erin and Emeni (2016). Firm size is positively associated with audit quality ($r = -0.073$). The finding is consistent with Gallemore et al. (2014); Kanagaretnam et al. (2015). Firm size is positively associated with leverage ($r = 0.062$). It connotes that larger firm can borrow large amount of debt to financing operation in order to enjoy tax shield and thus reducing tax expenses and maximize wealth for the shareholders. The finding is in tandem with Desai and Dharmapala (2006); Stickney and McGee (1982); Seidman (2010). Leverage is positively related with audit quality ($r = 0.044$) while leverage is also positively related with interest cost.

Table 3: Correlated Random Effects – Hausman Test

Test Summary	Chi-square statistic	Chi-square prob
Cross section random	0.977	0.96

Source: Researcher's Computation 2018 from E-view 8.0 version

From the two tables above, the Hausman test chi-square statistics is 0.977 with probability value of 0.96. Thus, based on the Hausman test result, we accept the null hypothesis and conclude that the random effect is preferable in this study.

Table 4: Regression Results

Dependent variables ETR

Variables	Panel OLS (A)	Fixed effect	Random effect B	Pooled Regression C	Gmm D
ETR 1(-1)	-	-	-	-	-0.038 [0.043]**
FSIZE	4.200 [0.005]**	2.490 [0.030]**	2.160 [0.000]**	4.200 [0.004]**	7.360 [0.000]*
LEV	-1.120 [0.004]**	-5.440 [0.034]**	-5.110 [0.040]**	-1.120 [0.003]**	-1.490 [0.311]
AUDTQ	3.850 [0.804]	3.830 [0.853]	-2.020 [0.0892]	3.850 [0.010]**	0.002 [0.000]*
INTC	-6.710 [0.000]*	-7.020 [0.013]**	-9.840 [0.005]**	-6.710 [0.458]	-2.450 [0.000]*
R-squared	0.600	0.703	0.760	0.601	-
Adjusted R-squared	0.518	0.696	0.709	0.550	-
F-statistics	0.177	0.925	0.061	1.255	-
Prob (f-Statistic)	0.000*	0.000*	0.003**	0.005**	-
Durbin-Watson stat	1.635	2.050	2.080	2.053	-
J- Statistics	-	-	-	-	0.322

Source: Researcher's Computation 2018 from E-view 8.0 version

The above table 4 is concerned with the regression estimations methods of the model result. Significance levels are reported in three forms. * $p < 0.000$ is statistically significant at 1% level. ** p

< 0.05 is statistically significant at 5% level. The non-asterisked is statistically not significant at 1% 5% level. [] represent the probability value (p – value).

Table 4 above reveals that the panel OLS estimation (panel A) which is the baseline has R-squared of 60% and adjusted R-squared of 51.8%. This connotes that the model largely account for 60% and 51.8% systematic variation on ETR leaving the other percentage unexplained due to the presence of stochastic error term. The F – statistic is 0.177 with p – value of 0.000 ($p < 5\%$). The Durbin-Watson statistics is 1.635 which portends that there is absence of serial correlation in the regression result. In baseline panel B, being random effect result, the R^2 is 0.703 and while the adjusted R^2 is 0.696. With the coefficient of determination (adjusted R^2), it implies the model explained about 69.6% systematic variation in effective tax rate (ETR), leaving the remaining percentage unaccounted for due to the presence of error term. The F-statistic value of 0.925 with p – value of 0.000 ($p < 5\%$) is statistically significant at 5% level. It further shows that all the firm characteristics indicators used viz – a – viz firm size, leverage, audit quality and interest charges were positive and significant on tax aggressiveness of listed firms in the non – financial sector in Nigeria. The D.W statistic value of 2.080 implies the presence of autocorrelation is unlikely in the regression result. In the pooled data estimation (panel C), the adjusted R-squared is 0.550. This implies that the exogenous variables account for about 55% systematic variation on the dependent variable (ETR), leaving the other percentage unexplained as a result of the error term. The f – statistic which explains the overall goodness of fit of the model has a value of 1.255 with p – value of 0.005 ($p = 5\%$), implying all the variables were significant at reducing tax liability in the firm. The D.W statistic of 2.053 portends the absence of serial correlation is likely in the regression result. In panel D, the GMM estimation, the Hansen J – statistic test (0.322) of over – identifying restrictions accepts the joint null hypothesis that the variables were uncorrelated with the error term in the model. Examination of the firm characteristics indicators reveals that firm size is positively signed (4.200) in panel A, (2.160) in panel B, (4.200) in panel C and (7.360) in panel D. Firm size is statistically significant with $p = 5\%$ in each of the estimations. The result connotes that the sampled firms are exposed to effective and efficient scrutiny by the various regulatory agencies, stakeholders and particularly the tax authority such that they have little or no chance to aggressively minimize tax expense payment. Leverage (LEV) is seen to have a negative effect (-1.120) in baseline panel A, (-5.110) in baseline panel B, (-1.120) in panel C and (-1.490) in panel D. It was statistically significant at 5% level ($p = 5\%$) in panels A, B and C with the exception of panel D whose p – value is greater than 5% ($p > 5\%$). Conventionally, leverage is expected to exert negative effect on tax liability due to the interest element. The interest element serves as tax shield which firms use to minimize tax liability. Therefore, the negative and significant effect of leverage on tax aggressiveness suggests that the sampled firms in this study use the tax shield of the interest element to reduce their tax burden. Audit quality (AUDTQ) has a positive effect (3.850) in panel A, (3.850) in panel C, (0.002) in panel D and a negative impact (-2.020) in panel B. It is statistically significant at 1% and 5% levels respectively in panels C and D and not significant in panels A and B. However, the positive and significant effect of audit quality at minimizing tax liability intuitively may be indirect since external auditors are not directly in charge of the day to day operation of the firm, except where they render advisory services or any non – audit services. Interest charges have a negative effect (-6.710) in baseline panel A, (-9.840) in baseline panel B, (-6.710) in panel C and (-2.450) in panel D. It is statistically significant at 1% and 5% levels respectively. The negative and significant signs of interest charges in the quoted firms signify reduction of tax liability to the tax shield element. Interestingly, this leads to increase in the net income and the wealth of the

shareholders. Therefore, interest charge is one of the indicators companies can use to reduce the adverse effect of tax liability while taking into cognizance the trade-off of using debt financing.

Discussion of Findings

Firm characteristics were ascertained to determine tax aggressiveness in the sampled firm and were statistically significant in the reference period. The result is consistent with Zimmerman (1983) study which established that larger firms are associated with higher effective rate as also explained by the political cost theory. The empirical finding is also in tandem with that of Boussaidi and Hamed (2015); Ilaboya et al. (2016) as well as Ribeiro (2015). For example, Boussaidi and Hamed (2015) found a significant effect of firm characteristics on the tax aggressiveness of listed firms in Tunisia while Ribeiro (2015) established that firms' specific characteristics have influence on ETRs. However, this study finding in this regard is opposite of Dyreng et al. (2008); Lanis and Richardson (2007) which found a negative relation between firm characteristics and effective tax rate. Firm size is often observed as one of the characteristics expected to influence effective tax rates. It is an indicator with a high prediction power over ETRs. However, the direction of the relationship between firm size and ETRs could be ambiguous. The study is in tandem with other studies like Ribeiro (2015), Kraft (2014) and Rego (2003) which established a positive and significant relationship between firm size and tax aggressiveness. It is however contrary with studies like Dyreng et al. (2008), Stickney and McGree (1982), Boussaidi and Hamed (2015) which found a negative and non-significant relationship between firm size and tax aggressiveness. Naturally, larger companies with track record of success history appear to be exposed to better political scrutiny which tends to reduce the chances of tax aggressiveness. Similarly, firm with huge investment in physical assets for example tend to use higher value of depreciation expense to reduce their assessable income and therefore play lower income tax expense. Investment allowance and capital allowance do combine to minimize the tax burden because of the total assets holding; suggesting that firm size proxy as total assets has a correlate with the reduction of tax liability. It was found that leverage is significant and exerts negative effect on tax aggressiveness. Most of the time, highly levered firms are faced with high interest expense. Since interest expense is tax deductible, it tends to lower the effective tax rate. In addition to this, leverage is one of the firm characteristics that can easily be used to reduce the tendency for rent seeking by managers. Managers of firm with huge amount of leverage are sometimes subjected to the discipline of financing agreement imposed by creditors via inclusion of limiting clauses (Ribeiro, 2015). This tends to mitigate agency costs. So far, the finding in this regard affirms the result of prior researches of Ribeiro (2015), Lanis and Richardson (2011), Kraft (2014) Boussaidi and Hamed (2015). It did not agree with the finding of Oyeleke et al. (2016), Derashid and Zhung (2003). Interest charge was found to have significant and positive relationship with tax aggressiveness. This finding is presumed to be correct given the fact that dependent on leverage capital decreases tax expense payment due to the interest element. The interest element in leverage financing has a tax shield which tends to reduce the income tax liability. The conflict in the finding may be apportioned to the sector specific differential studied by prior researchers. The study finds that there is significant and positive relationship between external audit quality and tax aggressiveness. This finding is in tandem with Atwood, Drakes, Myers and Myers (2012), Boussaidi and Hamed (2015). It disagreed with the finding of Kanagaretnan et al. (2015), Zimmerman (1983). This causality between external audit quality and tax aggressiveness may not always hold. For example, if external auditors take into consideration the implication of the litigation risks in supporting firms to engage in aggressive tax behavior, they restrain from it. This affirms the point of view by Zimmerman (1983) that big 4 auditors are likely to

contribute less to firms tax aggressiveness behavior, perhaps due to litigation and damage to reputation. Intuitively, if a firm does not face litigation after being audited by an audit firm and there are no negative signals to the market/public, then it can be said that external audit quality contributes indirectly to tax aggressiveness.

Conclusion and Recommendations

This study examined firm characteristics and tax aggressiveness of listed firms in Nigeria. The achievement of organizational goals is a function of the efficient management of scarce resources and the influence of the features of the firm. In recent times, attention of academics, researchers and the general public has concentrated at evaluating factors that cause increase in firms' net income and shareholders wealth maximization. It is a fact that minimization of operating costs, including tax expense bring about increase in firms earnings. The findings arising from the empirical investigation are that firm size exerts positive and significant effects on tax aggressiveness. There is significant and positive relationship between external audit quality and tax aggressiveness. Leverage is significant and exerts negative relationship with tax aggressiveness. Interest charges have significant and positive relationship with tax aggressiveness. Based on the robust empirical findings obtained in this study, the following recommendations are put forward. Listed firms in Nigeria should make it a practice to adequately compensate managers / board of directors strategically as this will assist to reduce their tendency to engage in rent seeking / managerial opportunism, mitigate agency problem, enhance operational efficiency and lead to lower effective tax rate. Quoted firms should constantly ensure there is strict internal control to help reduce losses arising from the manager's tendency to act selfishly in pursuant of tax aggressiveness behaviour / practice.

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