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FIRM CHARACTERISTICS AND TAX AGGRESSIVENESS OF QUOTED INDUSTRIAL GOODS FIRMS IN NIGERIA

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ABSTRACT

The study examined the effect of firm characteristics on tax aggressiveness of industrial good firms in Nigeria. Using firm size and institutional ownership as a proxy for firm characteristics and effective tax rate for tax aggressiveness, the study employed the *Ex-Post Facto* research design for the study. The sample size of 13 quoted industrial goods firm was used from population sixteen firms on the Nigerian Exchange Group (NGX). Data were extracted from the annual reports and accounts of the sampled firms for a nine-year period of 2012-2020. The panel data were analyzed using descriptive statistic, multiple regression analysis was used to test the hypotheses. The outcome model showed that institutional ownership has a negative and insignificant effect on tax aggressiveness; firm size shows a positive significant effect on tax aggressiveness. The study recommends, among others, that Given the finding that large enterprises were much less tax aggressive in Nigeria, regulatory organizations and tax authorities should focus their attention on all companies' tax saving techniques, regardless of size, in order to discourage aggressive tax avoidance schemes.

Keywords: *Firm characteristics, Institutional ownership, Firm size and Effective tax rate*

1. INTRODUCTION

Taxation, both corporate and personal, has existed since the dawn of time. It has shown to be an efficient method of obtaining funds from individuals and institutions in order to effectively manage a society. At the same time, it has been seen that at certain levels, it can be a fantastic tool to deprive people of their value and money (Antonio and Giliard, 2014). However, according to Omotoso (2001), a modern tax is a mandatory levy imposed by a public body on the income of persons and enterprises as determined by government decrees, acts, or case laws, regardless of the exact amount of services supplied to the payer in return. On the other hand, taxation or tax administration can be defined as the process of relevant tax authorities assessing and collecting taxes from individuals and businesses in such a way that the proper amount is collected efficiently and effectively with minimal tax avoidance or evasion (Guenther, Matsunaga and Williams, 2013). Tax aggressiveness, according to Chen, Cheng, and Shevlin (2010), is the "downward control of taxable revenue through tax planning efforts." These actions consider both legal and unlawful issues (as well as those in the inevitable gray area). Crocker and Slemrod (2005) and Desai and Dharmapala (2006) laid the foundations for the association between tax aggression and agency concerns in previous investigations. Managers can raise the size of tax deductions using illegal tax evasion tactics since they have privileged information on the scope of legally authorized income tax reductions. The structure of their remuneration mechanisms and the potential personal penalties for getting discovered determine the motivations for managers to push the boundaries of tax rules.

Whether a business is young or established, it must incur certain costs in the business environment, as no success can be achieved without incurring costs in the form of taxes or other business expenses. Companies' payments to the government have the potential to grow into a large sum over time, reducing the amount paid to the government significantly. As a result, businesses look for legal loopholes in the tax code and use accounting knowledge to implement techniques that decrease the amount of taxes they must pay in the long run. Nonetheless, taxation is a worldwide concern since it affects every element of business and the economy, regardless of country distinctions. Tax aggressiveness, according to Hurwich (2001), is an important part of employing tax policy to achieve the goal of effective resource utilization and the promotion of adequate benefits that debt inclusion might have on a company's capital structure.

Few comparable research available focused on taxpayers' attitudes toward tax compliance (Junpath, Kharwa, and Stainbank, 2016) and tax professionals' patterns of tax aggression (Killian and Doyle, 2005). All of them used primary data (questionnaires) that might be easily altered. A review of the findings of prior investigations revealed some inconsistencies. While Ezejiofor and Ezenwafor (2021); Salaudeen and Eze (2018) found that all of the firm attributes they studied were significant determinants of tax aggressiveness, Salawu and Adedeji (2018), John-Akamelu, Ifurueze and Iyidiobi (2018); Ezekwesili and Ezejiofor (2022) found that leverage (LEV) impacted positively on firm growth, but the impact was insignificant in explaining variations in tax. The inconsistent data in previous studies indicated that the questions surrounding the effect of firm characteristics on tax aggression were far from being resolved experimentally, necessitating this study. This study was to determine the effect of firm characteristics on tax aggressiveness of quoted industrial goods firms in Nigeria. However, the specific objectives are:

1. To determine the impact of firm size on tax aggressiveness of quoted industrial goods firms in Nigeria.

2. To find out the impact of ownership structure on tax aggressiveness of quoted industrial goods firms in Nigeria.

2. REVIEW OF RELATED LITERATURE

2.1 Tax aggressiveness

Tax aggressiveness, according to Rego (2003), is defined as a reduction in the present value of tax payments. Thus, tax aggressiveness is a tactic towards lowering taxes in general. Effective tax avoidance aims to reduce taxes as much as possible while also maximizing after-tax returns (Scholes, Wolfson, Erickson, Maydew and Shevlin, 2009). In a broad sense, tax aggressiveness refers to a company's efforts to avoid paying taxes in any way possible, and it may or may not entail tax sheltering or evasion (Dyreng, Hanlon and Maydew, 2008). Tax avoidance, according to Kirchler and Maciejovsky (2001), is merely an attempt to minimise tax payments using lawful measures, such as exploiting tax loopholes. On the influence of firm age on the tax aggressiveness of deposit money banks in Nigeria, Okerekeoti and Ezejiofor (2022) found that firm age had no significant effect on tax aggressiveness of deposit money banks in Nigeria.

Tax evasion is the legal use of the tax system to one's advantage in order to lower the amount of tax owed by using legal ways while fully disclosing all relevant information to the tax authorities (Desai and Dharmapala, 2009). Tax aggressiveness, according to Wang (2010), is a continuum of tax planning tactics that includes both totally legal operations and more aggressive transactions that fall into the grey area (for example, abusive tax shelters). Tax aggressiveness, according to Pasternak and Rico (2008), is defined as the legal use of the tax system to one's benefit in order to lower the amount of tax owed using legal means. Corporation tax aggressiveness is described by Annuar, Salihu, and Sheikh Obid (2014) as a reduction in explicit corporate tax liability.

In summary, tax aggressiveness is defined as behavior that occurs inside the legal framework of the tax system, in which people or businesses take advantage of the tax code, exploit loopholes, and participate in legal but illegal activity. Tax evasion usually refers to specific activities undertaken solely to reduce tax bills. An example of tax aggressiveness is strategic tax planning where financial affairs are arranged in such a way to minimize tax liabilities, for example, using tax deductions and taking advantage of tax credits.

2.1.1 Effective tax rate (ETR)

The effective tax rate "ETR" can detect tax aggression, according to accounting and tax literature (Dyreng, Hanlon, and Maydew, 2008; Richardson, Taylor, and Lanis, 2013). Several authors deemed the "ETR" metric to be the most important indicator of a company's capacity to reduce its tax burden (Ayers, Jiang and Laplante 2009). Minnik and Noga (2010) used average ETR to calculate tax burden and found that it was appropriate for calculating cash flows and the distributional tax burden. According to Rego (2003), the average ETR can be used as a proxy for quantifying a company's tax burden, as well as understanding the efficiency and equity of a tax system. Umeh, Okegbe, and Ezejiofor (2020) reported that effective tax rate (ETR) has a negative impact on corporate value, though the impact is minor.

In the United States, this is referred to as GAAP ETR. It's the ETR as recorded in the financial statements. Firms are required to declare the effective tax rate in the footnotes of their financial statements. It's the proportion of pre-tax income to tax expense (Dyreng, et al., 2008). As a result, it indicates the total proportion of accounting income that is taxed. As a result, it compares tax avoidance to accounting earnings. Although accounting ETR has been a popular tool for detecting tax evasion, it does have some drawbacks. Because it evaluates tax avoidance in relation to accounting earnings, accounting ETR could only catch non-conforming tax avoidance. Secondly, it might not also reflect the strategies for tax deferral due to the use of aggregate tax expenses. Thus, the traditional effective tax rate for a given firm i for year t (*ETRit*) is given by:

$$ETR_{it} = \text{Total tax expense}_{it} / \text{Pre-tax income}_{it}$$

2.1.2 Institutional ownership

This study focused on institutional ownership as one of the ownership structure variables. It was because several Nigerian authors (for example, Salaudeen and Ejeh, 2018) had already looked into ownership structure characteristics such as management ownership and ownership concentration - the latter being unimportant while the former being adversely significant.

Institutions varied from individuals as investors in numerous ways, according to previous research by Ying, Wright, and Huang (2017). First, it is commonly known that institutions are better at monitoring and acquiring data than individuals. Gathering information, analyzing it, acting on it, or persuading others – whether management or other shareholders – are all examples of monitoring (Fich, Harford and Tran, 2015). Institutions invest more in each stock and hence have a greater motivation to devote resources to monitoring. Second, institutional investors are distinguished from individual investors by taxes and regulations. Some entities, like as pension funds, are exempt from paying capital gains or dividend taxes. Third, institutions are fiduciaries, which means they invest on behalf of others and thus face agency conflicts. According to Lang and McNichols (1997), institutional investors preferred short-term returns above long-term profitability, a phenomenon known as myopia.

Institutional investors are frequently divided into active and passive investors, according to recent study. Activists who amass shares or active fund managers who sell shares in a target firm with the goal of influencing management are referred to as active investors. Instead, many institutions are passive, with the goal of replicating the performance of a market index. These investors do not actively buy or sell stocks (Appel, Gormley and Keim, 2016). A passive investment strategy is based on the premise that market returns will be favorable over time. Passive

investors are known for their well-diversified portfolios, low turnover, and extended investment horizons (Bushee and Noe, 2000). Many studies show that active institutional investors add value to shareholders by effectively influencing target organizations' governance, capital structure decisions, and operating performance (Brav, Jiang, Thomas and Partnoy, 2008). Rather, passive institutional investors are suspected of undermining corporate governance and performance. The key findings of this burgeoning literature, on the other hand, demonstrate that passive investors are active owners: they strengthen numerous areas of corporate governance and increase business transparency (Appel et al. 2016; Crane, Michenaud and Weston, 2016). Because they do not have the power to depart, passive institutions exert pressure on portfolio firms by monitoring managers and improving market performance. These efforts raise the value of their assets under management (Appel et al. 2016).

Recent studies (Khan, Srinivasan, and Tan, 2017; Bird and Karolyi, 2017) looked at the impact of institutional ownership on corporate tax practices, and they all found a significant positive relationship between institutional investors and corporate tax avoidance for all tax avoidance measures they looked at. Bird and Karolyi (2017) discovered some evidence of a link between the two. These results are partly contradictory to the studies of Hasan**,** Kim, Teng and Wue (2016) who found an overall negative relation between institutional investors and corporate tax avoidance.

2.1.3 Firm size

The natural log of total assets is used to calculate firm size. Firm size approximates the degree of capital market frictions, with larger firms having lower transaction costs (Fischer, Heinkel and Zechner 1989). In tax reform debates and discussions about corporate tax laws, interest groups and policymakers have historically relied on average effective tax rates (ETRs) to bolster their views (Callihan 1994). The controversy over corporate size sparked a flurry of study into whether there was a logical relationship between firm size and annual average ETRs.

Empirical investigations on the association between effective tax rate and firm size came to diverse conclusions. Several studies have discovered a link between ETR-based avoidance proxies and firm size (Vieira, 2013; Kraft, 2014, Ryandono, Ernayani, Atmojo, Susilowati and Indriastuty, 2020; Mihaela, Sergiu Bogdan and Vasile, 2021) which was consistent with the political cost hypothesis, meaning that large firms were characterized by higher visibility and thus subject to a greater regulatory activity (Watts and Zimmerman 1986). Effective tax rates, according to this idea, are a proxy for political costs since taxes are a way of wealth transfer from corporations to other social groups. Because effective tax rates are also a proxy for corporate success, if larger firms are more successful than smaller ones, larger firms will be subjected to more political scrutiny.

As tax authorities scrutinize larger businesses more closely, they become hesitant to lower effective tax rates. As a result, larger enterprises are projected to face a higher tax burden than smaller ones, because taxes paid represent political costs borne by businesses. Another alternative hypothesis contends that because larger companies have greater power and resources to handle taxes, they should have lower ETRs. Wilson (2009) demonstrated a positive relationship between tax shelter participation (a proxy for extremely aggressive tax planning) and firm size using a non-ETR measure of tax avoidance.

Meanwhile, multiple studies have found a link between ETR and company size (Richardson and Lanis, 2007). This is consistent with the political power or cost argument, which assumes that huge corporations have more resources for lobbying and tax planning (Porcano 1986). Others, however, found no link between ETRs and business size (Gupta and Newberry 2007; Mills, Erickson and Maydew 2008). Inconsistencies between ETR and firm size, according to Gupta and Newberry (2007), were sample specific (connected to sample selection) and would not occur in organizations with longer histories. This indicates that if the samples utilized are from companies with longer histories, the results will demonstrate that ETR and company size have no meaningful relationship. Meanwhile, if the samples used are related to companies with shorter histories, the result would show that there are significant relations (either negative or positive) between ETR and company size.

In an Australian scenario, Richardson and Lanis (2007) investigated the relationship between business size and ETRs. The authors found a strong negative relationship between company size measured as the natural logarithm of total assets (at book value) and ETRs for a sample of publicly-traded firms from 1997 to 2003, which was consistent with the political power theory. However, Richardson and Lanis (2007) noted the limitations of their research design in terms of data scarcity: there was no control for foreign operations or ownership structures, and it was impossible to say whether the findings would apply to non-listed firms because none were included in the sample. Recent research has established that there is a link between corporate performance and employee satisfaction (Richardson *et al.,* 2013; Aburajab, Maali, Jaradat, and Alsharairi, 2019; Ryandono *et al.,* 2020; Mihaela *et al.,* 2021). Several authors considered effective tax rate as the most relevant measure of the ability of the company to optimize its tax burden and invariably avoid tax (Chadefaux and Rossignol, 2006).

Ezekwesili and Ezejiofor (2022) looked into the impact of leverage on Nigerian consumer goods manufacturers' tax dodging. Ex-Post Facto research was used in this study. The study's participants were Nigerian consumer products companies listed on the Nigeria Exchange Group (NGX). The data for the study was gathered from the sampled businesses over the course of nine (9) financial years (2012-2020). The data was evaluated with descriptive statistics, and the hypothesis was tested using regression analysis in E-view 9.0. As a result, the study suggests that leverage has little influence on tax evasion by Nigerian consumer products companies. Martinez, Brito, and Chiachio (2020) investigated the impact of corporate tax aggression on the replacement of CEOs of companies listed on the Brazilian Stock Exchange B3 between 2010 and 2016. Their results demonstrated considerable low tax aggressiveness using the proxies: - Cash Effective Tax Rate and Long Run Effective Tax Rate for tax aggressiveness. As a result, CEOs who were less tax aggressive were more likely to be replaced. As a result, the findings confirmed that tax preparation is a key element in keeping a job. From 2008 to 2017, Akintoye, Adegbie, and Onyeka-Iheme (2020) investigated the impact of tax planning tactics on the profit performance of Nigerian listed manufacturing companies. In analyzing secondary data, they used descriptive and inferential statistics. Their findings revealed that tax planning had no substantial impact on manufacturing firm profitability in Nigeria (as measured by ROA). The impact of corporate characteristics on tax aggression in Nigerian listed insurance firms was investigated by Yahaya and Yusuf (2020). From 2010 to 2018, their sample included twenty (20) insurance companies that were listed on the Nigerian Stock Exchange. They conducted their research using a two-step system GMM panel regression model and discovered that firm size and leverage had a positive impact

on tax aggression, whereas firm age and profitability had a negative impact. Tax revenue on Nigerian per capita income was studied by Ezejiofor, Oranefo, and Ndum (2021). This study relied on ex post facto research. The population of Nigeria made up the economy, and data for this study came from the Central Bank of Nigeria's (CBN) Statistical Bulletin and the Federal Inland Revenue Service (FIRS). Customs and excise duties, as well as per capita income (PCI), were obtained as variables. The information for this study was acquired from CBN, FIRS, and NBS publications and statistical bulletins. Correlation and Ordinary Least Square (OLS) regressions were used to evaluate the hypothesis. According to statistical research, customs and excise fees have a non-significant positive impact on Nigeria's per capita income. The effect of financial restrictions, investment opportunity set, and financial reporting aggression on tax aggressiveness was explored by Amrie and Reza (2019). Financial constraints were positively associated with tax aggressiveness, the investment opportunity set was negatively associated with tax aggressiveness, and financial reporting aggressiveness was not associated with tax aggressiveness, according to regression data from 88 non-financial companies listed on the Indonesian Stock Exchange from 2011 to 2015. Ex post facto research was used to evaluate the effect of corporate tax aggression on business growth in Nigeria by John-Akamelu, Ifurueze, and Iyidiobi (2018). They used secondary data from seven (7) publicly traded manufacturing companies (2007-2016). They used the pooled OLS method to analyze the impact of ETR on firm growth, and found that it was not statistically significant; hence it should be dismissed as a primary factor of business growth. They also discovered that leverage (LEV) had a beneficial impact on business growth, however it was not statistically significant. The influence of CEO duality on the effective tax rate of publicly traded food and beverage companies is investigated by Ezejiofor and Ezenwafor (2021). This study relied on ex post facto research. During the data gathering phase, a purposive sample strategy was used to choose nine (9) companies. Data was gathered from the tested companies' annual reports and accounts from 2013 to 2019. The study's data was examined using descriptive statistics, and regression was employed with the e-view, which had a confidence level of 95 percent at five degrees of freedom (df). According to the data, CEO duality was significant and had a positive coefficient on profitability. This study used an ex-post facto research design and utilised time series data. The hypothesis was evaluated using Ordinary Least Square (OLS) regression analysis, and the data was analyzed using descriptive statistics. Tax collection has a significant positive impact on Nigeria's per capita income, according to the data. The Corporate Effective Tax Rates (ETRs) of non-financial enterprises listed on the Nigerian Stock Exchange were studied by Salaudeen and Eze (2018). The study also determined the association between ETRs and business specific factors such as size, leverage, profitability, capital intensity, inventory intensity, labor intensity, and auditor type among Nigerian economic sectors. Data on the variables was taken from the financial records of sampled firms and analyzed using ordinary least square (OLS), random effect, and fixed effect models. The findings revealed that ETRs were lower than the statutory tax rate during the study period, and that there were disparities in ETR between sectors of the economy. The influence of tax avoidance on business openness in the United Kingdom was investigated by Balakrishnan, Blouin, and Guay (2017). They used secondary data from the Compustat database, which included 40,193 firm-year records spanning the years 1990 to 2013. They discovered that aggressive tax planning was substantially associated with the GAAP-ETR tax aggressive measure in a multiple regression analysis technique. They came to the conclusion that management at tax-aggressive firms tried to address the lack of openness by raising various tax-related disclosures. The impacts of size, leverage, capital intensity, profitability, and the sort of company on tax aggression of fifty-five companies listed on the Nigerian Stock Exchange were investigated by Salaudeen (2017). (NSE). The findings found that tax aggression was negatively influenced by the size, leverage, capital intensity, profitability, and nature of the business. The effects of debt, fixed asset intensity, size, and political ties on manufacturing enterprises listed on the Indonesian Stock Exchange were investigated by Dharma and Ardiana (2016). Leverage and fixed asset intensity were found to have a beneficial impact on tax avoidance. Size and political connections both had a negative impact on tax avoidance, although the effects were not significant. Yetty, Eka, and Eneng (2016) used manufacturing firms listed on the Indonesian Stock Exchange to investigate the use of leverage in corporate tax avoidance in Indonesia from 2010 to 2014. Purposive sampling was utilized to choose 108 companies for the investigation. Secondary data was employed, such as yearly reports and accounts produced throughout the observation years. The study's findings demonstrated that leverage had no significant influence on tax avoidance when using the multiple linear regression equation. The impact of the value added tax on the Nigerian economy was studied by Oraka, Okegbe, and Ezejiofor (2017). This investigation employed an ex post facto research design. The study examined the Nigerian economy from 2003 to 2015 using GDP, PCI, and TR. Simple regression analysis was used to assess the data collected. According to the analysis, the value added tax has had little impact on Nigeria's GDP. Furthermore, a negative association has been established between VAT and per capita income. The impact of the Tertiary Education Tax Fund (TETFUND) on management in Nigerian higher education was studied by Oraka, Ogbodo, and Ezejiofor (2017). The hypothesis was created with the study's goals in mind. A survey and a timer were utilized. Financial ratios were utilized to collect data from the National Bureau of Statistics, which was then examined with regression analysis using SPSS statistical software version 20.0. According to the data, ETF fund allocations to Nigerian Tertiary Institutions have no association with the enrolment rates of Nigerian Tertiary Institutions. Hsieh (2012) drew information from the Taiwan Economic Journal data base, which included companies listed on China's two main stock exchanges, the Shanghai Securities Exchange and the Shenzhen Securities Exchange. The information was gathered between 1998 and 2001. Leverage (total liabilities divided by total assets), capital intensity return on assets (pre-tax earnings divided by total assets), and business size were among the variables studied (total assets). They discovered that firm size had no bearing on ETR and that ETR was independent of firm size. Lanis, Richardson, and Taylor (2015) focused on the link between corporate tax avoidance and a company's liquidity. Between 2006 and 2010, the sample included 200 publicly traded Australian companies. The analysis was conducted using the Ordinary Least Squares (OLS) regression model. The findings revealed that liquidity was strongly and positively linked to tax evasion. Udeh and Ezejiofor investigated the impact of accounting information on deferred taxation in Nigerian deposit money institutions (2018). Ex post facto research was done to acquire data from Nigerian deposit money banks' annual reports and accounts. To test the hypothesis, a pooled multiple regression analysis was used. According to the statistics, earnings per share (EPS) and cash flow (CASHFL) have a negative impact on our dependent variable, deferred tax, but book value of equity has a statistically significant impact, but EPS and CASHFL don't. Salaudeen and Eze investigated the Corporate Effective Tax Rates (ETRs) of non-financial firms listed on the Nigerian Stock Exchange (2018). The variables were extracted from the financial records of the sampled businesses and evaluated using OLS, random effect, and fixed effect models. According to the data, ETRs were lower than the statutory tax rate during the study period, and there were differences in ETR from one sector of the economy to the next. The study also found that larger and more lucrative companies suffer a higher tax burden, but companies with significant leverage face a lower ETR.

3. METHODOLOGY

3.1 Research Design

Ex-Post Facto research design was employed in this study, since the study sought to establish cause-effect relationship and the researcher has no control over the variables under study. This design is appropriate where the researcher to directly manipulate the independent variable.

3.2 Population of the Study

The population for this study consists of all the sixteen (16) industrial goods firms quoted on the floor of Nigeria Stock Exchange as at 31st December, 2020. They include: Dangote Cement Plc; Beta Glass Plc; CAP Plc; Ashaka Cement Plc; Cement Company Northern Nigeria; Berger Paints; Cutix Plc; First Aluminum Nigeria Plc; DN Meyer Plc; Premium Paints Plc; African Paints Nigeria Plc; Austin Laz & Company Plc; Avon Crowncaps & Containers Nigeria Plc; Portland Paints Plc; Greif Nigeria Plc and Wapco Nigeria Plc.

3.3 Sample Size and Sampling Technique

Purposive sampling technique was adopted to select the sample size of this study. The sample size of this study consist of thirteen (13) quoted industrial goods firm that were continuously listed by Nigeria stock exchange during the period 1st January 2008 to 31 December 2020 and whose financial statements and reports are available and have been consistently submitted to Nigeria stock exchange for the period of study. They include: Dangote Cement Plc; CAP Plc; Ashaka Cement Plc; Berger Paints; Cutix Plc; First Aluminum Nigeria Plc; DN Meyer Plc; Premium Paints Plc; Austin Laz & Company Plc; Avon Crowncaps & Containers Nigeria Plc; Portland Paints Plc; Greif Nigeria Plc and Wapco Nigeria Plc.

3.4 Source of Data

This study employed the use of secondary data. Information was sourced from Nigeria Stock Exchange fact books, annual reports and accounts, and other relevant publications and bulletins.

3.4.1 Model Specification

The econometric models of the study were adapted from the studies by Ilaboya *et al.* (2017),

The general econometric model for the study was specified thus;

$ETR_{it} = \alpha + \beta_1 FSZ_{it} + \beta_7 IOW_{it} + \varepsilon_{it}$ …………………………………..………….i

Where;

ETR = Effective Tax Rate

FSZ = Firm size measured as natural log of total asset.

IOW = Institutional ownership measured as the value of institutional ownership.

α = constant.

β_1 to β_3 = the coefficient of the parameter estimate.

ε = the error term or residual.

i = ith firm for cross-section

t = time period

3.5 Method of Data Analysis

The analysis of data for this study was done based on the data extracted from the annual reports and accounts of the quoted firms. Both the dependent and independent variables were computed from 2008 to 31st December 2020.

Descriptive statistics were employed to summarily describe the mean, standard deviation, kurtosis and skewness of the study variables. Inferential statistics was also employed with the aid of E-Views 9.0 using Panel Least Square (PLS) multiple regressions analysis:

Decision Rule

Accept the alternative hypothesis, if the Probability value (P-value) of the test is less than 0.05 (5%). Otherwise reject.

4. DATA ANALYSIS AND RESULTS

4.1 Data Analysis

Table 4.1: Descriptive Analysis

	ETR	IOW	FSZ
Mean	0.507034	0.374274	21.31147
Median	0.188000	0.320000	21.33056
Maximum	4.130000	0.910000	23.06357
Minimum	-0.636000	0.000000	18.86861
Std. Dev.	0.762522	0.240858	0.967325
Skewness	2.377554	0.508456	-0.254240
Kurtosis	8.871849	2.255722	2.293732
Jarque-Bera	278.3121	7.741796	3.692162
Probability	0.000000	0.020840	0.157855
Sum	59.32300	43.79000	2493.443
Sum Sq. Dev.	67.44705	6.729463	108.5432
Observations	117	117	117

The descriptive statistics in table 4.1 has 117 observations. Table 4.1 reveals that the average effective tax rate (ETR) of the sampled firms is 51% approximately; the maximum ETR of the sampled firms is 4.1 with a minimum ETR of -0.64 with a standard deviation of 0.76. The average institutional ownership (IOW) from the sampled observations is 0.37; standard deviation of 0.24; a maximum IOW observation of 0.91 with a minimum value of 0.00. The mean value of FSZ stood at 21.3; a standard deviation of 0.97; maximum FSZ observation of 23.06 with a minimum value of 18.87.

4.2 Test of Hypotheses

Table 4.2: Regression analysis between ETR, IOW and SIZE

Dependent Variable: ETR

Method: Least Squares

Date: 05/03/22 Time: 20:21

Sample (adjusted): 1 117

Included observations: 117 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.339905	1.657720	-2.014759	0.0463
IOW	-0.080801	0.304464	-0.265387	0.7912

FSZ	0.181929	0.075810	2.399818	0.0180

R-squared	0.057759	Mean dependent var	0.507034
Adjusted R-squared	0.041228	S.D. dependent var	0.762522
S.E. of regression	0.746638	Akaike info criterion	2.278834
Sum squared resid	63.55140	Schwarz criterion	2.349659
Log likelihood	-130.3118	Hannan-Quinn criter.	2.307588
F-statistic	3.494052	Durbin-Watson stat	1.529207
Prob(F-statistic)	0.033670		

Interpretation of Regression Analysis

Table 4.2 shows that the determination R^2 of 0.058, explains the individual variation of the dependent variable (ETR) as a result of the changes in the independent variables (IOW and FSZ). It can be said that IOW and FSZ have combined predictive power of 6% in affecting ETR of quoted industrial goods in Nigeria, while the remaining 94% is accounted for by other factors which are not captured in the model.

Hypotheses One

Ho_1: Institutional ownership has no significant effect on tax aggressiveness of quoted industrial goods firms in Nigeria.

From table 4.2, the regression analysis between institutional ownership (IOW) and effective tax rate (ETR) shows a negative and insignificant at 5% level of significance. This can be observed from the beta coefficient (β_1) of -0.080801 with p value of 0.79 which is insignificant at 5%. The drawn inference from this model shows that holding every other factors constant, increase in IOW will exert 8% decrease in ETR.

Decision

Since the P-value of the test = 0.79 is greater than 0.05 (5%), Thus, this study rejected H_1 and accepted Ho_1 thereby upholds that institutional ownership has no significant effect on tax aggressiveness of quoted industrial goods firms in Nigeria. at 5% level of significance.

Hypotheses Two

Ho_2: Firm size has no significant effect on tax aggressiveness of quoted industrial goods firms in Nigeria.

From table 4.2, the regression analysis between firm size (FSZ) and effective tax rate (ETR) shows a positive and significant at 5% level of significance. This can be observed from the beta coefficient (β_1) of 0.181929 with p value of 0.018 which is significant at 5%. The drawn inference from this model shows that holding every other factors constant, increase in FSZ will exert 18% increase in ETR.

Decision

Since the P-value of the test = 0.02 is less than 0.05 (5%), Thus, this study rejected $Ho_1$and accepted H_1 thereby upholds that firm size has a significant effect on tax aggressiveness of quoted industrial goods firms in Nigeria at 5% level of significance.

However, the value probability statistics shows (0.03) which is less than 5%, indicating that firm characteristics has a significant effect on tax aggressiveness of quoted industrial goods firms in Nigeria.

5. CONCLUSION AND RECOMMENDATIONS

Conclusion

Using multiple regression analysis, this study investigated the effect of business characteristics on tax aggressiveness of industrial goods firms in Nigeria. The hypothesized results revealed that firms with a higher proportion of institutional shareholdings had lower total ETR. Institutional investors were projected to have little motive to push management toward aggressive tax policies, but they did advocate tax compliance among management in order to maintain a good reputation for the corporation, as predicted by the legitimacy theory. According to the hypothesis investigated, the size of the company had a substantial impact on tax aggression. Despite the fact that the variable of firm size was statistically significant as predicted. Because of

the different coefficients of firm size, the impact of firm size (in terms of total assets) on tax aggressiveness showed that industrial firms in Nigeria were less tax aggressive. As a result, the study concludes that firm characteristics have a significant impact on industrial firms' tax aggressiveness in Nigeria.

Recommendations

The study made the following suggestions based on the findings and inferences obtained from the study's findings:

1) The findings suggested that larger institutional ownership was only weakly associated with high tax aggressiveness, was not statistically significant, and hence could not be used to implement any policy. Management should ensure that institutional investors' influencing role in company tax avoidance decisions is adjusted to ensure that the cost of tax avoidance does not outweigh the advantages generated.

2) Given the finding that large enterprises were much less tax aggressive in Nigeria, regulatory organizations and tax authorities should focus their attention on all companies' tax saving techniques, regardless of size, in order to discourage aggressive tax avoidance schemes.

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