FUDMA JOURNAL OF ACCOUNTING AND FINANCE RESEARCH [FUJAFR]
VOLUME 3, ISSUE 3; ISSN: 2992-4693 (ONLINE); 2992-2704 (PRINT)

The Moderating Effect of Audit Quality on the Relationship between Board Attributes and Tax Avoidance of Listed Industrial Goods Firms in Nigeria

Aminu Yusuf[1]*
Murtala Ahmed[1]
Sa'idu Bello Ibrahim[2]
Babangida Shehu[2]
Balaraba Baffale[3]

[1]*Department of Accountancy, Binyaminu Usman Polytechnic, Hadejia, Jigawa State, Nigeria*
[2]*Department of Business Administration, Binyaminu Usman Polytechnic, Hadejia, Jigawa State, Nigeria*
[3]*Department of Foundation Courses and Remedial Studies, Binyaminu Usman Polytechnic, Hadejia, Jigawa State, Nigeria*
**Correspondence Email : aminuyusufjhn1@gmail.com*

https://doi.org/10.33003/fujafr-2025.v3i3.243.255-271

Abstract
The study examines the moderating effect of audit quality on the relationship between board attributes and tax avoidance of listed industrial goods firms in Nigeria. Data for the study were sourced solely from the secondary sources extracted from annual reports and accounts of the sampled industrial goods firms in Nigeria. The sample size is 11 industrial goods firms out of the 13 industrial goods firms listed on the floor of Nigeria Exchange Group. Panel regression analysis was applied to analyze the data. The study reveals that board size and board independence exert positive and insignificant effects on the cash effective tax rate (CETR). It also finds that gender diversity and board financial expertise depict negative and significant effects on the CETR. The study further reveals a positive and significant moderating effects of audit quality on the CETR. The paper recommends that industrial goods firms in Nigeria should conduct a comprehensive assessment of the board size in relation to the firms' operational complexity and strategic needs and evaluate the effectiveness of board committees and subcommittees in managing tax related matters. Industrial goods firms in Nigeria should also strengthen the roles and influence of independent directors in strategic tax avoidance decisions to enhance objectivity, transparency and effectiveness of each director. Industrial goods firms and Financial Reporting Council of Nigeria (FRCN) should establish a structured nomination process that encourages the inclusion of qualified female directors in the board selection process and consider appointing directors with a strong background in taxation, finance, and accounting profession.

Keywords: Tax Avoidance, Board Attributes, Audit quality, Industrial Goods Firms, Nigeria Exchange Group.

1. Introduction

The industrial goods sector plays a vital role in the Nigerian economy, contributing to economic growth, employment generation and infrastructure development. It encompasses a wide range of industries involved in the production and manufacturing of goods used in infrastructure development, construction, and other industrial activities. It provides essential inputs for infrastructure such as cement, steel, paints, glasses and other construction materials, which are vital for the expansion of the transportation network, housing, and other physical infrastructure. The industrial goods sector offers job opportunities across various levels, from skilled labour in manufacturing plants to professional roles in engineering; management, and research and development. The availability of quality infrastructure enhances productivity, attracts investments, and improves the overall business environment for income generation. Conversely, taxes are imposed on corporate incomes as a major source of revenue for

governments all over the world. However, for companies, taxes are significant costs that reduce the wealth of shareholders without immediate compensation. It is a cost for firms and their shareholders, and as a result, there is a reduction in cash flow available to them as profit. Therefore, shareholders prefer tax avoidance activities in an effort to increase not only profit after tax but also cash available to shareholders (Khurana & Moser, 2013). This study considered tax avoidance as any activity carried out by the management that is aimed at reducing tax liabilities without breaching any provisions of tax laws. On the other hand, board attributes have been recognized as important factors that can influence firm behaviour. The board of directors plays a crucial role in overseeing and controlling a firm's activities, and its composition and characteristics can impact the decision-making process, including tax avoidance strategies. In examining what factors clarify tax avoidance by firms and corporations, earlier studies on corporate tax avoidance focused primarily on investigating whether firm-specific characteristics such as size, leverage, growth, and profitability, amongst others could explain the tax avoidance phenomenon for business entities.

Taxes on corporate incomes in Nigeria usually constitute a huge outflow for firms' and yet compulsory according to law. In Nigeria, a statistics from the Federal Inland Revenue Service (FIRS) now Nigeria Revenue Service (NRS) revealed that the targeted revenue in 2020 was N1, 767.8865b but only N1, 275.3806b were realized; which means 72.1% achievement. In 2021 the authority planned to generate 1,476.870b which is below the previous years' expectation (FIRS tax statistics report, 2022). This shows that over the past years, tax avoidance has been among the factors that cause the negative variance between amount of corporation tax actually collected and the amount that should be collected (Olanisebe et al., 2023). A company engaging in tax avoidance automatically reduces government revenue, so governments with a stricter anti-avoidance stance seek to prevent tax avoidance or keep it within limits. The obvious way to do this is to frame tax rules so that there is a smaller scope for avoidance. In practice this has not always been achievable and has led to an on-going battle between governments amending tax laws and corporate entities finding new loopholes for tax avoidance strategies in the amended rules as one of the reasons why Nigerian government keep reviewing Companies Income Tax Act (CITA) every year through Finance Act. Therefore, companies may engage in tax avoidance activities to decrease their tax burden by maximizing the loopholes in the tax laws. However, despite its legitimacy, governments may not be pleased because tax avoidance practice lowers the amount of revenue that should have accrued to the government to meet its expenditure obligations.

The researcher observes that little attention has been focused on whether board attributes have effects on corporate tax avoidance. Despite the efforts to enhance corporate governance practices in Nigeria, it is observed that there is limited empirical evidence on corporate tax avoidance practices in industrial goods firms in Nigeria. It seems therefore that the sector, despite its importance, has not been adequately studied by the researchers in relation to tax avoidance. in addition, to the best of the researcher's knowledge, none have considered the study period and the moderating effect of audit quality on the relationship between board attributes and tax avoidance of listed industrial goods in Nigeria. Furthermore, Minnick and Noga (2010) have earlier posited that different companies with different governance structures are likely to choose different tax management strategies. Given this assertion, it may therefore be misleading to assume that the empirical results of studies of some corporate sectors will hold for others. Hence, study sought to fill the gap on the determinants of corporate tax avoidance in listed industrial goods firms that is being relatively understudied in relation to the tax avoidance phenomenon in Nigeria. In particular, this will be done by examining the extent to which board attributes play a significant role in determining corporate tax avoidance and the moderating effect of audit quality in the industrial goods firms in Nigeria. Much research investigates the relationship between board

attributes and tax avoidance in various countries and industries. However, there is a paucity of research in the context of Nigeria's industrial goods firms despite its contribution to the country's Gross Domestic Product (GDP) (Tanko et al., 2021). Therefore, understanding the moderating effect of audit quality on the relationship between board attributes and tax avoidance in this sector is critical for both policy makers and investors. Hence, the study contributes to the growth and sustainability of industrial goods firms in Nigeria while expanding the knowledge base in this area of research.

2. Literature Review

Concept of Tax Avoidance

The term corporate tax avoidance does not have universal definition as it might give different meaning to different people (Hanlon & Heitzman, 2010). According to Salihu, Sheikh-Obid and Annuar (2013); Salihu (2014), corporate tax avoidance is absolute decrease in the explicit corporate tax incidence. Management may use tax avoidance to increase shareholders' wealth. Tax avoidance includes channels of exploiting the loophole in the tax laws to reduce tax expenses by firms. Tax avoidance is legal as long as it is carried out within the ambit of the laws. Tax Avoidance is about a taxpayer arranging his financial affairs in a manner that minimizes tax liabilities without contravening the tax laws. It involves looking ahead before the income is earned and arranging financial affairs in a manner that minimizes resultant tax liabilities but in compliance with relevant statutory tax provisions (Liman, 2019). Murphy (2008) defined tax avoidance as the process whereby taxpayers smoothed tax laws without breaking the tax laws; however, his definition did not state the drive why taxpayers round the tax law without breaching the law. The drive of the taxpayers rounding the tax laws is to reduce tax expenses (Tanko, 2020). Still in the Nigerian context, Osuegbu (2017) a tax planning consultant, defined tax avoidance as the lawful use of the tax laws to one's own advantage in order to reduce the amount of tax that is payable by means that are within the law. Mansur et al. (2023) defined tax avoidance as a way which companies engage in aggressive tax planning activities to reduce the payment of tax liability by using the loopholes in the tax framework which is in turn detrimental to the revenue generation and performance of any nation.

Concepts of Board Attributes

Board attributes are very essential to the optimal operation and performance of companies in Nigeria. Board attributes are responsible for ensuring the quality of the financial reporting processes of every organization. Board attributes are often analyzed in relation to varying aspects of firms with a view to determining their contribution to shareholders' wealth. Some of the board attributes commonly examined in extant literature encompass board size, board meetings, board remuneration, and board independence, among others. These varying attributes of the board interrelate to influence expense reduction including tax liability of firms. In the light of present global challenges, the performance of firms whether large or small and level of investors' confidence are hinged on the reduction of tax expense. The overall performance of firms depends on how costs are reduced in a systematic manner. Many of the board attributes indicated above have been empirically examined against many other variables particularly tax avoidance as will be discussed in the following sections.

Corporate Board Size and Corporate Tax Avoidance

Studies have looked into the impact of board size on tax avoidance of companies and come up with conflicting findings. According to Mohammed (2017), the size of a corporation's board of directors has no effect on corporate tax avoidance. Similarly, Peter et al. (2020) evaluates the effects of board attributes on tax planning of listed non-financial companies in Nigeria. The study found positive and insignificant effects of board size on ETR. The findings on board size for Peter et al. (2020) indicate that board size

does not visibly increase tax avoidance. In the same manner, Uniamikogbo et al. (2019) revealed positive effect of board size on ETR. However, Novita and Herliansyah (2019) revealed a negative relationship between board size and ETR. The focus on board size as an internal mechanism of board attributes centers concerns consistency, co-ordination, and timely intervention of the board in respect of advice over relevant organizational matters. In addition, regarding board stability, alignment, and timely intervention in relation to related organisational matters have prompted a focus on board size as a fundamental component of the features of the board that permit coping with aggressive managerial manipulation.

Corporate Board Independence and Tax Avoidance

The independence and the experience of the external directors enable them to make objective decisions. Several studies have shown that the number of independent directors on a board increases the firm's performance. Richardson and Roman (2011) show that companies having a high number of independent directors will reduce significantly the aggressive tax planning. The presence of independent non-executive directors on the board is often seen as a balancing force; their presence indicates good corporate governance, and shareholders are able to authorize management to be tax-responsive (Bhagat & Bolton 2008). Onyali and Okafor (2018) examined the effect of corporate governance mechanisms on tax aggressiveness among selected oil marketing firms in Nigeria and found that independent directors, that is, the proportion of non-executive directors to executive directors have a positive and significant impact on tax aggressiveness. Independent board members are independent of the company's management, so it is assumed that they will perform their supervisory function more efficiently and that independent boards will be in a stronger position to guide company resources towards tax avoidance. Independent boards are expected to lead to lower ETRs as a result of more effective tax burden management, as they help track managers.

Board Gender Diversity and Tax Avoidance

The communal characteristics of women are associated with better communication among board members, and better board participation, like attending board meetings (Adams & Ferreira, 2009). In assessing the attitude of men and women towards compliance with rules and regulations, Ahmed and Khaoula (2013) examine the effect of board characteristics on tax planning using a sample of 73 French companies on SBF 120 index for ten years (2006-2015). Regression analysis was employed, and the results show that percentage of women has negative effect on the ETR. Similarly, findings were documented by Olayinka and Francis (2016) who examined the relationship between board size, gender diversity, and tax planning, the findings revealed that the interaction between board size and female directors is negative and significantly associated with ETR, which means firms can benefit significantly from the existence of professional women in shaping tax avoidance strategies. In addition, higher participation of women on corporate board is generally promoted as female directors are believed to bring relevant information concerning tax avoidance strategies due to more wide-ranging professional experiences.

Board Financial Expertise and Corporate Tax Avoidance

Directors with accounting expertise, such as members of taxation or accounting professional bodies and individuals with sound financial experience, are among the financial experts. Financial experts will provide managers with useful advice and improve financial performance of firms because of their knowledge and vast experience in taxation, finance, and other accounting related issues. Similarly, when companies are audited by professional accounting firms with vast accounting experience, McGuire et al. (2012), find that their ETRs are lower. They recommend that experienced audit firms influence tax avoidance practices by incorporating their board financial literacy and tax expertise to establish

techniques that support clients from both a tax and financial statement perspective. Furthermore, considering financial expertise in terms of tax avoidance decisions may improve companies' financial performance and improve the credibility of financial information because of their knowledge and expertise in the area.

Audit Quality and Corporate Tax Avoidance

Audit Quality is one of the characteristics expected to influence tax avoidance of firms because it protects against the opportunistic and fraudulent actions of managers. Though there is no universally accepted definition of the concept of audit quality. Quality of audit is an important part of every organization's quality management system which is assessed by the ability of auditors in conducting audits in accordance with the relevant statutory and professional standards Examining through the above definition, it shows that audit quality entails the activities of an auditor in carrying out his audit function effectively and efficiently in a way that will benefit both the management and stakeholders of an organization. Gaaya et al. (2017) studied the mitigating effect of audit quality on the association between ownership structure and corporate tax avoidance in Tunisia. They found a positive and significant association between family ownership and tax avoidance. Hence, auditors are required to bridge the conflicts of interest between agents (managers) and principals (shareholders). Furthermore, considering financial expertise in terms of tax avoidance decisions may improve companies' financial performance and improve the credibility of financial information because of their knowledge and expertise in the area.

Theoretical Framework

Agency theory is concerned with the principal-agent relationship because the interest between shareholders and management differs. The relationship between the two parties is centered on the decision taken by management in terms of corporate tax. Tax expenses represent the cost of doing business and every taxpayer desires to reduce the cost of doing business. Tax is one of the costs of doing business that management would like to reduce. However, tax avoidance is activities that may be an opportunity for managers to engage in opportunistic behaviour. But if managers own shares in a company, they will ensure that management is engaged in tax avoidance activities to increase their profit after tax. However, political power theory argue that a firm's operation reaches beyond human factors but to include the firm's asset base. Siegfried (as cited in Siyanbola, 2021) was regarded as the first study to use political power theory to investigate the impact of firm attributes on tax avoidance and found that larger firms have lower ETR than smaller firms.

3. Methodology

The study uses correlational research design, which involves the collection of numerical data through the annual reports and accounts of sampled industrial goods firms in Nigeria. The target population of the study consisted of all the industrial goods firms listed on the floor of Nigerian Exchange Group (NGX) as at December 2022. According to records extracted from the NGX website and fact books, there were 13 listed industrial goods firms on the floor of the Nigerian Exchange Group (NGX, 2022) namely; Austin Laz & Company Ltd., Berger Paints Plc., Beta Glass Plc., BUA Cement, CAP Plc., Cutix Plc., Dangote Cement Plc., Grief Nig. Plc. (Vanleer), Larfage Africa Plc., Meyer Plc., Notore Chemicals Ind. Plc., Premier Paints Plc., and Triple Gee & Company Plc. The sample size comprised the entire working population of study for a period of eleven years (2012- 2022) using a two-point filter, the firm must be listed before 2012 and must not be delisted before 2022. The firm must have the available data for the study period. Using this filter, the study eliminated BUA cement which was listed in 2020 and NOTORE chemicals which was listed in 2018. The study arrived at eleven (11) firms which stand as the working

population of the study. The study employed the census sampling technique to adopt the entire eleven firms as the sample size. The secondary source of data collection method was used to generate data from the annual reports and accounts of the listed industrial goods firms in Nigeria.

Variables and their Measurements

The tax avoidance is the dependent variable in this study and was measured using cash ETR. ETR is calculated as actual tax paid (tax expense) divided by earnings before tax as used by Mohammed (2017), Yinka and Uchenna (2018), and Peter et al. (2020). Board attributes served as the study's independent variable. Board size, board independence, board gender diversity, and board financial expertise were used as board attributes in the analysis to determine their impact on tax avoidance. Board Size was measured as the total number of directors in the board, as used by Richardson and Roman (2011); Aliani et al. (2012); Peter et al. (2020). Board Independence was measured as the Percentage of independent directors sitting on the board, as used by Ahmed et al. (2013), Mahdi et al. (2015), and Mohammed (2017). Board Gender Diversity was measured as the ratio of female directors to total board size as used by Aliani et al. (2012), Oyeleke, Erin, and Emeni (2016), Streefland (2016). Board Financial Expertise was measured as the proportion of directors with financial literacy that are members of the board as used by Jean and Suzanne (2011), John et al. (2012). The moderating variable of the study is audit quality which was measured using dummy variable taking the value 1 if the firm was audited by Big 4 and 0 otherwise as used by Jihene and Moez (2019), Lestari and Nedya (2019), and Saidu and Aifuwa (2020). Return on Assets (ROA) being control variable, was measured as profit before tax divided by total assets, as recommended by Aliani et al. (2012), Aliani (2013), and Ana et al. (2015); Mohammed (2017); Peter et al. (2020). Leverage is calculated by dividing total debt by total equity as used by Chen et al (2010) and Hairul et al. (2014).

4. Results and Discussion

The study conducted several diagnostic tests to ensure the validity and reliability of the regression model. These tests include normality test, heteroscedasticity test, multicollinearity test, linearity test, model specifications test, Hausman specifications test, and Lagrangian multiplier test.

Normality of Residuals

The study uses the Shapiro Wilk test, which hypothesis that the error term in the distribution is normally distributed. The result as displayed below shows that the p-value for the model is insignificant, indicating that the residuals are normally distributed.

Table 1: Shapiro-Wilk W test for Normal Data

Variable	Observation	W	V	Z	Prob>z
Model 1	121	0.97921	1.339	0.637	0.26215
Model 2	121	0.98891	1.131	0.491	0.41091
Model 3	121	0.98707	1.253	0.506	0.30643

Note: Stata 14. Outputs based on data extracted from listed industrial goods firms (2012-2022)

Homoscedasticity of the Residuals

One of the assumptions of the CLRM is the homogeneity of variance (homoscedasticity) of the residuals, i.e., the error variance should be constant for all values of explanatory variables. The study uses Breusch–Pagan–Godfrey Test to affirm the compliance of the research model with the assumption. The results obtained from the Breusch-Pagan-Godfrey test for heteroscedasticity for models one, two and three are 0.9416, 0.4266 and 0.6554 respectively.

Hausman Specification Test

The study uses the Hausman Specification Test to examine the presence of endogenous explanatory variables in the models because of its potential to cause the OLS estimators to fail. The Hausman Specification tests were carried out in the model one, model two and three of the study to choose a more consistent estimator between the Panel Least Square (PLS) fixed and random effect. The results show that in the model one and two, unique error is not correlated with the regressors because the chi-square probability is 0.3840 and 0.8269 for model one and two respectively, which is insignificant. On the other hand, the result shows that in model three the unique error is correlated with the regressors because the chi-square probability is 0.0000 which is insignificant. In addition, the result of the model was interpreted using the estimated values obtained through the fixed effects model.

Breusch-Pagan Lagrangian Multiplier Test for Random Effects

The study uses the Breusch and Pagan Lagrangian Multiplier (BPLM) test for random effects to choose between OLS and a random effect for the model one and two, since the Hausman results is insignificant. Random effects assume that the change across entities is random and not correlated with the independent variables included in the model. The result was presented in favour of the random effects model estimation since the probabilities of the chi-square are 0.0000 and 0.0117. The model one was interpreted using random effect estimate.

Descriptive Statistics

The descriptive statistics provide an overview of the variables used in the analysis. The mean, standard deviation, minimum and maximum values of the variables are presented below:

Table 2: Descriptive Statistics

Variables	Observations	Mean	Std. Dev.	Minimum	Maximum
CETR	121	0.1223	0.2077	-0.9082	0.7945
BS (number)	121	8.5041	3.1382	4	19
BIN (ratio)	121	0.3349	0.1708	0.0909	0.75
BGD (ratio)	121	0.1859	0.1578	0	0.5
BFE (ratio)	121	0.1274	0.1502	0	0.6667
AUQ (dummy)	121	0.5537	0.4992	0	1
ROA (ratio)	121	0.0870	0.2631	-1.8203	1.2386
LEV (ratio)	121	0.2073	1.6938	-15.0673	5.1734

Note: Stata 14 outputs based on data extracted from listed industrial goods firms (2012-2022)

Table 2 displays the calculated values for the mean, the standard deviation, the minimum, and the maximum for each of the research variables for the 11 industrial goods firms during the period of the study. The Table also shows that the study uses 121 firm-year observations for the study. It also shows that the Cash Effective Tax Rate (CETR) has a mean of 0.1223. The average CETR is 12.23%, which indicates a higher level of tax avoidance since the average is lower than 20% and 30% tax rate for medium and larger firms, respectively. The results also show the standard deviation of CETR at 0.2077 which shows wide level of deviation around the mean. The minimum and the maximum values for CETR are -0.9082 and 0.7945, respectively. The negative minimum resulted from high loss of ₦7, 071,000 incurred by Meyer Plc. in 2019 and paid corporate tax of ₦6, 422,000. While the maximum is the low profit before tax of ₦40,149,000 by Greif Nigeria Plc. in 2015 and the firm paid tax of ₦31,898,000. Table 4.1 shows that, on average BS is 8.5041 that is approximately 9 members while the standard deviation is 3.1383

which show that the size of the board tends to deviate from the mean approximately by 6 members on average. More so, the minimum board size is 4 members, and the maximum is 19 members. The minimum value of board size was obtained from annual reports of Greif Nigeria Plc. in 2020 while the maximum value was obtained from annual reports of Lafarge Africa in 2014 and 2015. Moreover, board independence stood at the average level of 0.3349 indicating that 33.49 % of members of the board of listed industrial goods firms are independent members. The standard deviation implies that the level of board independence tends to deviate from the mean by approximately 0.1708 units on average. The minimum value for board independence is 0.0909 suggests that there are some accounting years that board independent members are 10% of the total members. The maximum value for board independence is 0.75. The maximum also indicates that some firms have independent board members of 75%, while the remaining 25% are executive directors.

Furthermore, board gender diversity mean is 0.1859 which indicates that on average 18.59% of the board members of listed industrial goods firms are female. The standard deviation is at 0.1578, the standard deviation implies that the level of board gender diversity tends to deviate from the mean by approximately 15.78%. The minimum value for board gender diversity is 0 suggests that there are some companies that do not have female board members. The maximum value for board gender is 0.5. The maximum also indicates that some firms have female members on board which is about 50%, while the remaining 50% are male. The table further shows that the average level of board financial expertise is 0.2174; this means that 21.74% of the board members are financial experts by either being members of professional accounting bodies or those with qualifications in taxation, accounting or finance. The minimum value for board financial expertise is 0. The maximum value for board financial expertise is 0.6667. The remaining 33.33% members of the board are not financial experts. The board has a minimum of 0 members who are financial experts and maximum of 66.67%. The standard deviation of 0.1502 signifies that there is no wide variation around the mean of the proportion of board members with financial knowledge in the sampled companies. The average audit quality is 0.5537; this implies that 55.37% of sampled firms engaged the service of the Big 4 audit firm. The standard deviation stood at 0.4992, standard deviation implies that the audit quality tends to deviate from the mean by approximately 0.4992 on average. The minimum number of audit quality is 0 and the maximum is 1, the minimum shows firms that engage the services of non-Big 4 audit firm while the maximum shows the firms that engaged the services of Big 4.

Table 2 also shows that profitability (measured as ROA) has a mean of 0.0870. This suggests that on the average sampled firms generate profit of 8.70% with a minimum loss of -1.8203 which is about 182.03% and maximum profit of 1.2386, which is about 123.86%. The minimum value resulted from loss of ₦311, 537,000 divided by total assets of ₦173, 542, 000 of Greif Nigeria Plc. in 2019, while the maximum was obtained from annual account of Greif Nigeria Plc. in 2020 which reported profit of ₦398, 529,000 and total assets of ₦137, 090,000. More so, the standard deviation of 0.2631 indicates wide dispersion in profitability among the sampled companies. The average leverage is 0.2073; this implies that, on average the sampled firm's capital structure is 20.73% debt capital. The standard deviation of the leverage tends to deviate from the mean by approximately 1.6934 on average which indicates wide variation. The minimum leverage is -15.0673, resulted from high gearing of Premier Paint Plc. in 2016. The firm has total debt of ₦115, 762,000 and shareholders' funds of -₦7, 683,000. The shareholders' funds were negative because of loss of -₦33, 556,000 incurred by the firm in 2016. Similarly, the maximum of 5.1734 resulted from high gearing of Premier Paint Plc. in 2012. The firm capital structure consists of ₦61, 538,000 and low shareholders' equity of ₦11, 895,000,000.

Correlation Analysis

Table 3: Correlation Matrix

VAR.	CETR	BS	BIN	BGD	BFE	AUQ	ROA	Lev.	VIF
CETR	1.0000								
BS	-0.1265	1.0000							1.48
BIN	-0.0624	-0.1663	1.0000						1.05
BGD	0.1062	-0.0433	0.0425	1.0000					1.16
BFE	0.2799	-0.6893	0.1278	0.1868	1.0000				1.49
AUQ	0.2670	0.4790	-0.0774	-0.1024	-0.1913	1.0000			1.37
ROA	0.5299	0.2127	-0.0009	0.2577	0.0033	0.4151	1.0000		1.14
Lev.	-0.1657	0.2838	0.1917	0.1300	-0.1918	-0.1729	0.0823	1.0000	1.02

Note. Stata 14 output based on data extracted from listed industrial goods firms from 2012 - 2022

Table 3 shows the correlation coefficients between the dependent variable and the explanatory variables in the study. Furthermore, it shows the correlation matrix with the values displaying the Spearman correlation coefficient between all the pairs of the research variables. The choice of the Spearman correlation over the Pearson correlation is because the outcome of the Shapiro Wilk test for normality indicates that the data are not normally distributed. The Shapiro Wilk test for all the variables is 0.0000 which is significant at a 1% level of significance. In addition, the values of the correlation coefficients range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative), the absolute values of the correlation coefficient indicate the strength, with larger values indicating stronger relationships.

The correlation coefficients on the main diagonal are 1.0000 for all the variables, which indicate perfect positive linear relationship that each variable has with itself. The table shows that there is a negative and weak relationship between the board size, board independence, leverage, and CETR at correlation coefficient of -0.1265, -0.0624 and -0.1657. This suggests that board size, board independence, and leverage reduce CETR, which signifies tax avoidance improvement. This indicates that board size, board independence, leverage, and CETR moved in same separate directions. It further shows that board gender diversity, board financial expertise, and audit quality have a weak and positive relationship with CETR at correlation of 0.1062, 0.2799, and 0.2670; however, ROA has a positive and strong relationship with CETR at correlation coefficient of 0.5299. This implies that board gender diversity, board financial expertise, audit quality and ROA moved in the same direction. Regarding the lack of relationships above 0.8 between the explanatory variables, it suggests that there is no strong multicollinearity issue among the variables. This is beneficial for conducting regression analysis or other modelling techniques that involve these variables, as the absence of high correlations reduces the risk of inflated coefficients or redundant information in the models.

Regression Analysis

Table 4: ***Panel Regression Results***

	Model one			**Model two**			**Model three**		
Variables	**Coef.**	**Z**	**P>|z|**	**Coef.**	**Z**	**p>/z/**	**Coefficient**	**T**	**P>|t|**
Constants	-0.0236	0.24	0.808	-0.0252	-0.26	-0.792	0.0966	3.01	0.010*
BS	0.0014	0.17	0.863	-0.0057	-0.67	0.505	0.0001	0.01	0.995
BIN	0.0510	0.43	0.666	0.0426	0.37	0.714	0.0414	0.35	0.734
BGD	-0.1212	3.00	0.011*	-0.0836	-0.60	0.548	0.1241	0.52	0.615
BFE	-0.5813	-3.87	0.000*	0.5451	3.67	0.000	0.5417	1.62	0.136
AUDQ				0.1194	2.25	0.025	0.1417	2.24	0.027**
BS_AUDQ							0.0012	0.11	0.911
BIN_AUDQ							0.0743	0.47	0.651
BGD_AUDQ							-0.3592	-2.04	0.044**
BFE_AUDQ							-0.1023	-3.77	0.000*
ROA	0.1612	2.36	0.018**	0.1644	2.45	0.014	0.1618	3.27	0.008
LEV	-0.0046	-0.50	0.619	-0.0066	-0.72	0.471	-0.0062	-1.07	0.0311
Overall R^2		0.2118				0.2820		0.2537	
Wald Chi2 (6)/F-Sta.		20.39	0.0024			26.09	0.0005	88.32	0.0000
Hausman (6)		6.36	0.3840			3.58	0.8269	46.00	0.0000
LM chibar2 (01)		15.15	0.0000			5.13	0.0117		
Hettest Chi2 (1)		0.20	0.6554			0.67	0.4266	1.89	0.0000

Note. Stata 14 output based on data extracted from listed industrial goods firms from 2012-2022
* and ** indicate 1%, and 5% level of significance respectively.

Model One: Board Attributes and Tax Avoidance

Model one the result shows that the overall R-square value is 0.2118. R-square, also known as the coefficient of determination represents the proportion of the dependent variable's variance that is explained by the independent variables in the regression model. In this case, the R-square value of 0.2118 indicates that approximately 21.18% of the variance in the CETR can be explained by the independent variables as well as the control variables (ROA and leverage). Furthermore, R-square value of 0.2118 suggests a moderate level of explanatory power (Hair et al., 2018). This means that factors other than those included in the model are likely influencing the CETR of listed industrial goods firms in Nigeria.

Regarding the random effect Wald chi2 test, the Wald chi2 is used to test the significance of the coefficients in a random effects model. In this case, the Wald chi2 test has a value of 20.39 with 6 degrees of freedom. The probability value associated with this test is 0.0024 which is less than the conventional threshold of 0.05; the study concludes that there is statistically significant evidence to suggest that at least one of the independent variables has a significant effect on the CETR of listed industrial goods firms in Nigeria. Model one reveals that board size has a positive but insignificant effect on the cash effective tax rate (coefficient value = 0.0014, probability value = 0.863). This indicates that the size of the board does not significantly influence tax avoidance behaviour. It aligns with agency theory, which suggests that larger boards may have more diverse interests, making it challenging to reach unanimous decisions on tax strategies (Tanko, 2020). The finding also implies that 1% increase of board size would increase CETR by 0.14% while other factors remain constant. This implies that board size does not encourage tax avoidance. This finding agreed with the findings of Mohammad (2017), Peter and Tahir (2020),

Uniamikogbo et al. (2019), who found that board size, has a positive and insignificant effect on tax avoidance. However, the result disagreed with the findings of Khoula and Ali (2012), Khoula and Ali (2013), who revealed that board size has negative and significant effect on tax avoidance. In addition, the study does not document enough evidence to reject the hypothesis which states that board size does not have significant effect on CETR of listed industrial goods firms in Nigeria. Hence, the study fails to reject the hypothesis.

The results show a positive yet insignificant effect of board independence on the cash effective tax rate (coefficient value = 0.0510, probability value = 0.666). This implies that independent directors' presence on the board does not significantly impact tax avoidance practices. The findings resonate with agency theory, which posits that independence may not necessarily curb managerial opportunism related to tax avoidance (Tanko, 2020). The positive coefficient suggests that 1% increase of board independence would lead to increase of CETR by 5.10%. However, the increase would be insignificant. This finding suggests that independent board members, who are not involved in the day-to-day operations of the company, cannot provide relevant information to increase tax avoidance if they lack knowledge about tax laws that can encourage tax avoidance. The presence of independent directors on the board does not strengthen the board ability to exercise effective monitoring and control, leading to tax avoidance.

Furthermore, the findings of the study are consistent with the findings of Onyali and Okafor (2018), and Peter and Tahir (2020), who found that board independence has positive and insignificant effect on CETR. The study finding is not in line with findings of Ogbeide and Obaretin (2018), Jamei (2017), and Salawu and Adedeji (2017), who documented that board independence, has negative influence on CETR. Consequently, the finding of the study does not provide enough evidence to reject the hypothesis which states that board independence does not has significant effect on CETR of listed industrial goods firms in Nigeria. Hence, the study fails to reject the hypothesis.

Interestingly, the results reveal a negative and significant effect of board gender diversity on the cash effective tax rate (coefficient value = -0.1212, probability value = 0.011). This indicates that 1% increase of board gender diversity would decrease CETR by 12.12%. This implies that more female on board is associated with high tax avoidance. The significant and negative relationship suggests that firms with more gender-diverse boards tend to engage more in tax avoidance. This aligns with agency theory, which argues that gender diversity on boards may lead to increased ethical considerations in tax planning and increase tax avoidance within the armpit of the law (Siyinbola, 2021). Therefore, the study documents enough evidence to reject the hypothesis which states that board gender does not have significant effect on CETR. The finding agrees with the findings of Ahmed et al. (2015), and Aliani et al. (2012), who documented that board gender diversity has a negative and significant effect on CETR. On the other hand, Olayinka and Francis (2016) found contradicted findings to the finding of this study.

The analysis from model one indicates a negative and significant effect of board financial expertise on the cash effective tax rate (coefficient value = -0.5813, probability value = 0.000). The significant negative relationship suggests that boards with financial expertise are more likely to engage in tax avoidance. This finding supports agency theory, as financially skilled boards might adopt more sophisticated tax strategies (Tanko, 2020). The negative coefficient also implies that 1% increase of board financial expertise would decrease CETR by 58.13% as other factors remain constant. This also means board financial expertise reduces CETR and encourages firms to indulge in tax avoidance. Therefore, the presence of members with financial expertise, such as accounting or auditing professionals enhances the board's

ability to critically evaluate financial statements, tax laws and identify potential loopholes and ensure compliance with tax laws to reduce tax incidence. Hence, the present study provides enough evidence to reject the null hypothesis which states that board financial expertise does not have significant effect on CETR of listed industrial goods firms in Nigeria. The finding of the present study is consistent with the findings of Oyeleke et al (2019), and Peter and Tahir (2020), who found that board financial expertise has negative and significant effect on tax avoidance. However, the finding disagrees with the finding of Bashiru et al (2020), who documented that board financial expertise has positive effect on tax avoidance. The results show a positive and significant effect of ROA on the cash effective tax rate (coefficient value = 0.1612, probability value = 0.018). This implies that firms with higher ROA are more likely not to engage in tax avoidance practices. The finding aligns with agency theory, as profitable firms may have more resources and influence on shape tax policies in their favour (Siyanbola, 2021). Model one reveals a negative and insignificant effect of leverage on the cash effective tax rate (coefficient value = -0.0046, probability value = 0.619). The result indicates that leverage does not significantly influence tax avoidance behaviour. This finding is consistent with agency theory, as the use of debt may directly impact tax avoidance decisions (Tanko, 2020).

Model Two and Three: Board Attributes, Audit Quality and Tax Avoidance

In model two and three, the overall R-squares values are 0.2820 and 0.2537 respectively. In this case, the R-squares values of 0.2820 and 0.2537 indicates that approximately 28.21% and 25.37% of the variance in the CETR can be explained by the independent variables, moderating variable as well as the control variables. The R-Square increased from 21.18% to 25.37 and 28.21%%. This indicates that the introduction of audit quality strengthens the relationship between board attributes and CETR. The R-squares values of 0.2820 and 0.2537 suggest a moderate level of explanatory power (Hair et al., 2018). This means that factors other than those included in the model are likely influencing the CETR of listed industrial goods firms in Nigeria.

Moving on to the random effect F-stat test, it is used to test the significance of the random effect and fixed effect coefficients in the models. In this case, the Wald chi of model two and F-stat test of model three has values of 26.09 and 88.33 respectively; the probability value associated with these tests are 0.0005 and 0.0000 for model two and three respectively. With a probability value of 0.005 and 0.0000, which is less than the conventional threshold of 0.05, the study concludes that there is statistically significant evidence to suggest that at least one of the explanatory variables (board size, board independence, board gender diversity, board financial expertise, audit quality, with their respective interaction, ROA, and leverage) has a significant effect on the CETR of listed industrial goods firms in Nigeria. The significant effect provides enough evidence to reject the null hypothesis which states that audit quality does not significantly moderate the relationship between board attributes and tax avoidance of listed industrial goods firms in Nigeria.

The findings from model two indicated that audit quality has a positive and significant effect on the cash effective tax rate at coefficient value of 0.1194 and probability value of 0.025. The positive value implies that as audit quality increases, CETR also increases by 11.94%. This result aligns with agency theory, as higher audit quality is expected to reduce the agency conflicts between shareholders and management, leading to lower tax avoidance behaviours (Jihene, 2019). The study also agreed with the finding of Gaaya et al. (2017), who found that audit quality lowers tax avoidance, however, disagreed with the findings of Kanagaretnam et al. (2016), Richard et al. (2013), Langli and Willekens (2017). In addition, the study documents enough evidence to reject the null hypothesis which states that audit quality does not have significant effect on CETR. Hence, the study rejects the null hypothesis.

Model three shows that the moderating effect of audit quality, when interacted with board size, showed a positive but insignificant influence on the cash effective tax rate. This implies that the size of the board, when combined with higher audit quality, does not significantly impact tax avoidance decisions. However, it is worth noting that the coefficient value was positive, indicating that larger boards might not lean towards increased tax avoidance, and this relationship was not statistically significant. More so, this moderation effect is found to be insignificant, as evidenced by the coefficient value of 0.0012 (p = 0.911). This suggests that the size of the board alone does not significantly influence CETR, irrespective of the audit firm which was involved to render tax service to the sampled firm.

On the other hand, board independence, when moderated by audit quality, exhibited a positive and insignificant effect on the cash effective tax rate. This finding suggests that an independent board, coupled with high audit quality, may not necessarily result in reduced tax avoidance activities. The coefficient value of 0.0743 (p = 0.651) indicates that audit quality increases the impact of board independence on CETR. However, this does not increase tax avoidance but reduces tax avoidance of the sample firms. This study shows that 1% increase of audit quality and increase of board independence by one member would insignificantly increase CETR by 7.43%. In contrast, board gender diversity, when moderated by audit quality, demonstrated a negative and significant impact on the cash effective tax rate. This indicates that gender-diverse boards, in the presence of high audit quality, may be associated with increased tax avoidance behaviours. The significance of this result can be discussed in the context of agency theory, as diverse boards might have varying tax preferences influenced by different societal factors. The negative coefficient of -0.3592 and probability value of 0.044 suggest that 1% increase of having quality audit firm for tax purposes in collaboration with increase in gender diversity would significantly decrease CETR by 35.92%, which implies increase in tax avoidance. This implies that audit quality can strengthen the impact of female board members on CETR. Similarly, board financial expertise, when moderated by audit quality, exhibited a negative and significant effect on the cash effective tax rate. This suggests that financially expert boards, combined with high audit quality, may contribute to higher tax avoidance practices. This finding aligns with agency theory as financially knowledgeable boards are expected to provide better oversight on tax-related matters. The coefficient value of -0.1023 (p = 0.000) suggests that quality audit enhances the influence of board financial expertise on CETR. This implies that when audit firm is of high quality, board with financial expertise is more effective in ensuring tax avoidance to reduce tax incidence. The study shows that 1% increase of audit quality would influence board financial expertise which would in turn decrease CETR by 10.23%. This implies increase in tax avoidance. The study found that return on assets (ROA) has a positive and significant effect on the cash effective tax rate. This result is consistent with agency theory, as higher ROA may imply better firm performance, leading to reduced tax avoidance incentives. However, leverage showed a negative and insignificant effect on the cash effective tax rate. This implies that the firm's financial leverage does not significantly influence tax avoidance decisions, contrary to expectations from agency theory.

5. Conclusion and Recommendations

The study identified that board size and board independence did not yield significant effects on CETR, indicating that these factors may not be the primary drivers of tax avoidance strategies in listed industrial goods firms in Nigeria. Conversely, board gender diversity and board financial expertise were observed to exert a negative and significant impact on CETR. This emphasizes the significance of gender diversity and financial proficiency in shaping tax avoidance decisions.

The study also found that audit quality played a significant moderating effect on the relationship between board attributes and CETR among industrial goods firms in Nigeria. Notably, audit quality had a negative and significant moderating effect on the relationship between board gender diversity, board financial expertise, and CETR. Financial expertise on CETR is amplified in the presence of higher audit quality which reduces CETR and increases tax avoidance. However, the moderating effects of audit quality on board size and board independence in relation to CETR were not found to be statistically significant. Similarly, this study contributes to the understanding of how board attributes and audit quality collectively shape tax avoidance decisions within the listed industrial goods firms in Nigeria. These insights hold practical implications for policymakers, regulators, and practitioners seeking to enhance corporate governance and tax management strategies in the Nigerian industrial sector.

The study recommends that industrial goods firms in Nigeria should conduct a comprehensive assessment of the current board size in relation to the firm's operational complexity and strategic needs and evaluate the effectiveness of board committees and subcommittees in managing tax-related matters. They should also strengthen the roles and influence of independent directors in strategic tax avoidance decisions to enhance objectivity, transparency and effectiveness of each director. Industrial goods firms and Financial Reporting Council of Nigeria (FRCN) should set gender diversity targets for the board composition considering their positive impact on tax avoidance efficiency and establish a structured nomination process that encourages the inclusion of qualified female candidates in the board selection process. Industrial goods firms should consider appointing directors with a strong background in taxation, finance, and accounting and provide on-going training on tax related matters and development opportunities for all board members to enhance their understanding of tax avoidance strategies and implications. Management of industrial goods firms should leverage the moderating effect of audit quality by working closely with audit firms to enhance the positive impact on tax avoidance strategies.

Reference

Adams, R. B. & Ferreira, D. (2009). Women in the Boardroom and their Impact on Governance and Performance. Journal of Financial Economics, 94(2): 291-309.

Ahmed, Z., & Khaoula, F. (2013). Moderating Effects of Board of Directors on the Relationship between Tax Planning and Bank Performance: Evidence from Tunisia. *European Journal of Business and Management,* 5(32): 148-154.

Aliani,K.,& Zarai, A. (2012). The board of directors and the corporate tax planning: empirical evidence from Tunisia. *International Journal of Accounting and Financial Reporting*, 2(2), 142 -156.

Aliani, K. (2013). Does Corporate Governance Affect Tax Planning? Evidence from American Companies. *International Journal of Advanced Research,* 1(10): 864-879.

Ahmed, H. A., Salihu, I. A. & Obid, S. N. S. (2013). Corporate ownership, governance and tax avoidance: An interactive effect. *International Conference on Accounting Studies,* 164. 150-160.

Bashiru, M., Ba'ba, S. & Bukar, M. (2020). The impact of corporate governance attributes on tax planning of listed Nigerian conglomerate companies. *International Journal of Academic Research in Business and Social Sciences*, 10(5), 229-238.

Bhagat, S., & Bolton, B. (2008). Corporate Governance and Firm Performance. *Journal of Corporate Finance* 14: 257-273.

Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2010). Are Family Firms more Tax Aggressive than Non-Family Firms? *Journal of Financial Economics, (95): 41-61.*

FIRS Tax Statistics Report (2022). https://www.firs.gov.ng/tax-statistics-report/(2022)

FRC. (2019). *Nigerian code of corporate governance 2018*.

Gaayer, F. B. Gillan, S. Slemrod, J. B (2017). CEO after-tax compensation incentives and corporatea tax avoidance. *Contemporary Accounting Research*, *31*(4), 1077–1102. https://doi.org/10.1111/1911-3846.12058

Hair, J.E.J., Hult, G.T.M., Ringle, C.M., Sarstedt, M., Danks, N.P., & Ray, S. (2018). Partial least square structural equation modelling. (PLS-SEM). Using R.A workbook. Springer

Hanlon, M., & Heitzman, S. (2010). A Review of Tax Research. *Journal of Accounting and Economics, 50*(2): 127-178.

Jamei, N., & Khedri, N. (2017). Investigation of the relationship between corporate governance, earnings management and tax management in Tehran stock exchange. *International Journal of Humanities and Cultural Studies (IJHCS) ISSN 2356-5926*, *0*(0), 2082–2090.

Jean, B., & Suzanne, P. (2011). Perception of Auditor Independence, Audit Committee Characteristics, and Auditor Provision of Tax Services. École de comptabilité Université Laval Québec City, Canada.

Jihene, F. & Moez, D. (2019). The moderating effect of audit quality on CEO compensation and tax avoidance. International Journal of Economics and Financial Issues, 9(1): 131-139

John, R.R., Yanfeng, X., & May, H.Z. (2012). Tax Planning and Financial Expertise in the Audit Committee. Available on http://ssrn.com/abstract=2146003 (accessed 16/03/2021)

Khaoula, A. & Ali, Z. M. (2012). The Board of directors and the corporate tax planning: Empirical evidence from Tunisia. *International Journal of Accounting and Financial Reporting, 2* (2), 142- 157.

Khaoula, A. (2013). Does corporate governance affect tax planning? Evidence from American companies. *International Journal of Advanced Research*, 1(10), 864-873.

Khurana I, Moser W (2013) Institutional ownership and tax aggressiveness. Unpublished working paper, University of Missouri.

Lestari, N., & Nedya, S. (2019). The Effect of Audit Quality on Tax Avoidance. advances in social sciences, education and humanities research, vol. 354

Liman, M. L (2019). MSc. Accounting lecture note, Bayero University, Kano

Longri, M., & Willeken. T. (2017). A Modest Proposal for Improved Corporate Governance. *Business Lawyer*, 48: 59–77.

Mahdi, V.A., & Mahdi, M. (2015). A Study of the Relationship of Firm Characteristics and Corporate Governance with the Difference between Declared and Final Taxes in Iran. *Mediterranean Journal of Social Sciences,* 6(4): 488-498.

McGuire, S., Omer, T., & Wang, D. (2012). Tax planning: Does Tax-Specific Industry Expertise Make a Difference? *The Accounting Review* 87: 975-1003.

Minnick, K., & Noga, T. (2010). Do Corporate Governance Characteristics Influence Tax Management? *Journal of corporate finance,* 16: 703-718.

Mohammed, A.N. (2017). Effect of Corporate Governance Mechanisms on Tax Avoidance in Deposit Money Banks in Nigeria. (Unpublished PhD Thesis) Ahmadu Bello University, Zaria – Nigeria.

Murphy, R. (2008). The Missing Billions: The UK Tax Gap. Tax Research LLP.

Nigerian Stock Exchange (2017). Report. Available on www.nse.com.ng (accessed 23/03/2021)

Nigerian Code of Corporate Governance (2018). Issued by Financial Reporting Council of Nigeria.

Novita, E.S., & Herliansyah, Y. (2019). The effect of corporate governance mechanism, liquidity and company size on tax avoidance. *Saudi Journal of Economics and Finance*. 366-373.

Ogbeide, S. O. (2017). Firm characteristics and tax aggressiveness of listed firms in Nigeria: Empirical evidence. *International Journal of Academic Research in Public Policy and Governance*, *4*(1), 556–569. https://doi.org/http://dx.doi.org/10.6007/IJARPPG/v4-i1/562

Ogbeide, S.O. & Obaretin, O. (2018). Corporate governance mechanisms and tax aggressiveness of listed firms in Nigeria. *Amity Journal of Corporate Governance*, 3 (1), (1-12).

Olanisebe, M.B., Sadiq, R.A., & Dandago, K.I. (2023). Managerial ownership and tax avoidance of listed companies in Nigeria. *FUDMA Journal of Accounting and Finance Research*, 1 (1), (1-2). http//doi.org/10.33003/fujafr-2023v1i1.2.1-26

Onyali, C.I., & Okafor, T.G. (2018). Empirical assessment of tax aggressiveness of listed firms in Nigeria. *Accounting and Taxation Review,* 2(3): 13 – 29.

Osuegbu, E. O. (2017). Good Tax Planning as Legal Options to the Illegality of Tax Evasion. A paper delivered at the tax awareness forum for public and organised private sector organised by the Federal Inland Revenue Service

Peter, Z., Hamid T, K. Ibrahim, M. (2020). Board attributes and tax planning of listed non-financial companies in Nigeria *International Journal of Accounting & Finance (IJAF),* 9(1), 130-146.

Peter, Z., & Tijjani, B. (2020). Ownership structure and tax planning of listed firms: Evidence from Nigeria. *Journal of Accounting and Taxation, 12(3), 99-107.*

Peter, Z. (2019). *Corporate and Tax planning in listed non-financial companies in Nigeria.* A Thesis Submitted to Department of Accounting, Bayero University Kano, Nigeria in Partial fulfilment of the requirement for the award of PhD. Degree in Accounting.

Richardson, G., & Roman, L., (2011). The Effect of Board of Directors Composition on Corporate Tax Aggressiveness. *Journal of Accounting and Public Policy*, 30: 50-70.

Richardson, G., Taylor, G., & Lanis, R. (2013). The impact of board of director oversight characteristics on corporate tax aggressiveness: An empirical analysis. *The Journal of Accounting and Public Policy*, 32(3), 68-88.

Salawu, R.O., & Adedeji, Z.A. (2017). Corporate Governance and Tax Planning Among Non-Financial Quoted Companies in Nigeria. *African Research Review,* 11(3): 42-59

Salihu, I. A., Sheikh Obid, S. N. & Annuar, H. A. (2013). Measures of corporate tax avoidance: empirical evidence from an emerging economy. *International Journal of Business and Society*, *14* (3), 412-427.

Salihu, I. A. (2014). *Investigating the determinants of corporate tax avoidance among Malaysian public listed companies* (Doctoral Dissertation). International Islamic University Malaysia, Kuala Lumpur.

Sa'idu, S., & Afuwa, R.W. (2020). Effect of Board attributes on tax avoidance of listed manufacturing firms in Nigeria. *Nigerian Journal of Management Sciences. Vol. 25(1): 159-160*

Securities and Exchange Commission (2011). Code of corporate governance in Nigeria.

Siyanbola, A. A. (2021). Firm attributes, interlocking directorship and tax aggressiveness: a study of selected listed companies in Nigeria. (Unpublished PhD. Thesis) Bayero University Kano, Nigeria.

Streefland, I.M. (2016). Gender Board Diversity and Corporate Tax Avoidance. (Unpublished M.Sc Economics & Business Economics Dissertation) Erasmus Universiteit Rotterdam.

Tanko, U.M., Siyanbola, A.A., Bako, P.M., & Dotun, O.V. (2021). Capital structure and firm financial performance: moderating effect of board financial literacy in Nigerian listed non-financial companies. *Journal of Accounting Research, Organizations and Economic*, 4(1), 47-67.

Tanko, U.M. (2020). The moderating effect of profitability on the relationship between ownership structure and corporate tax avoidance in Nigeria listed consumers goods firms International *Journal of Business and Technopreneurship,* 10(2), 153-172.

Uniamikogbo, E, Bennee, E., & Adeusi, S. A. (2019). Corporate governance and tax aggressiveness in Nigeria. *AE-FUNAI Journal of Accounting, Business and Finance (FJABAF)*, 4(1), 20-33.

Yinka, M.S., & Uchenna, C.E. (2018). Firm Specific Determinants of Corporate Effective Tax Rate of Listed Firms in Nigeria. *Journal of Accounting and Taxation*, 10(2): 19 – 28.