



Effect of tax planning on financial performance of listed conglomerate firms in Nigeria

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Abstract

This study empirically examined the effect of Tax Planning on the financial performance of listed conglomerate firms in Nigeria. The study employed ex-post factor design. The population and sample of the study consist of six (6) listed conglomerate firms on the Nigerian Exchange Group as at 31st December, 2023. Secondary data were sourced from the annual reports and audited accounts of the selected firms. Secondary Data for a period of eleven (11) (2012-2022) years were collected and analyzed with the aid of STATA 14 version. Descriptive statistics, correlation and multiple regression analysis (OLS) was the technique employed for data analysis. Findings are made that thin Capitalization is negative and insignificantly associated with financial performance of listed conglomerate firms, whereas; capital intensity is negative and significantly associated with financial performance and finally Research and Development expenditure is positive but insignificantly associated with financial performance of listed conglomerate firms in Nigeria. The study recommends that conglomerate firms increase investment in capital assets to ensure a steadier efficiency in output which could translate to increase in their financial performance.

Keywords: Thin Capitalization, Capital Intensity, Research and Development, Financial Performance, Conglomerate Firm

1. Introduction

Tax planning is a strategic approach employed by both multinational and national entities to minimise tax payments by implementing assertive yet lawful measures, translating in higher financial performance. Ibilola, et al (2022) argued that tax planning, which aims to boost distributable profit by minimising tax expenses, typically requires strategic efforts by management to ensure the company pays the minimum amount of tax to the government. The corporations attained this tax decrease using diverse strategies, including thin capitalization, capital intensity, and research and development.

Accordingly, thin capitalization refers to a situation when a corporation relies heavily on debt financing in comparison to equity

financing (OECD 2012). According to Osamor et al. (2023), thinly capitalised enterprises are also known as highly leveraged or highly geared companies. Tax avoidance activity brought about by thin capitalization affects the amount of income tax that is owed to the government (Osamor, 2022). Moreover, Capital intensity is the fraction of non-current asset and total assets. Investment in fixed assets qualifies a corporation for Industrial Building Deductions (IBD), Investment Deductions (ID), and depreciation allowances (ITA, 2015). However, research and development investment attract organisations to participate into a competitive business environment by providing a better and improved competitive products.



Prior empirical evidence indicates study indicated conflicting result regarding the effect of tax planning on financial performance of firms (Akabom & Ejabu, 2018; Osamor, 2022; Osamor et al, 2023; Otuya & Omoye, 2021; Howlader 2022; Al-Shaikh & Hagen, 2023). Tax planning variables and financial performance have been found to have a positive relationship in some studies (Osamor 2022; Chukwu & Egbuhuzor 2017; Nangih & Onuora 2020; VanderPal 2015), Ferdaous & Rahman 2017; Ghazi & Rim 2015), others found negative relationship (Olawajolu & Olayiwola 2019; Ftouhi et al 2015; Vithessonthi & Racela 2016; Usman et al 2017). As a result, a study has been done to examine how tax planning affects the financial performance of Nigerian listed conglomerate companies.

Objectives of the study

This study's primary goal is to investigate, through empirical means, how tax planning instrument affect the financial performance of Nigerian listed conglomerate companies. Nevertheless, particular goals are as follows:

- i. Examine the effect of thin capitalization on the financial performance of quoted conglomerate companies in Nigeria.
- ii. Examine the effect of capital intensity on the financial performance of quoted conglomerate companies in Nigeria.
- iii. Examine the effect of research and development on the financial performance of quoted conglomerate companies in Nigeria.

2. Literature Review and Hypotheses Development

Thin Capitalisation and Financial Performance

According to the Organisation for Economic Cooperation and Development (OECD) (2012), thin capitalization is the condition in which an organisation is financed by a comparatively high degree of debt as opposed to equity. According to Osamor (2022), thin capitalization is a financial plan that firms leverage on in securing debt in financing the organisation's activities in order to profit from tax reductions. Conglomerate firms sometimes adopt thin capitalisation in order to avoid taxes on their investment portfolios abroad. Previous studies on thin capitalization and financial performance have revealed a mixed result. For instance, Akabom and Ejabu (2018) found that thin capitalization as a revenue-shedding strategy has an impact on the performance of multinational corporations in Nigeria. Similarly, Osamor (2022) and Fagbemi et al. (2019) document a significant positive relationship between thin capitalization and financial performance. Conversely, Osamor et al.'s (2023) analysis of the effect of thin capitalization on the financial performance of multinational corporations operating in Nigeria between 2014 and 2022 found that financial leverage and debt ratio had no discernible influence on return on assets (ROA). Otuya and Omoye (2021) documented insignificant but positive link between thin capitalization and MNC financial performance. Olawajolu and Olayiwola (2019) and Ftouhi et al (2015), documented a negative but insignificant relationship. Hence, the study hypothesized that:

H₀₁: Thin capitalization is negatively related with the financial performance of quoted conglomerate firms in Nigeria

Capital Intensity and Financial Performance

Capital intensity, which may be calculated by dividing the total value of non-current assets in the statement of financial position by the entire value of the firm's assets, represents the total amount of money that



an entity has invested in non-current assets (Shahean & Malik 2012). According to Nangih and Onuora (2020), a firm's understanding of capital intensity is essential since it shows the proportion of non-current assets to total assets. Previous research has shown that capital intensity and financial performance are positively related. Chukwu and Egbuhuzor (2017), for instance, look into how tangible assets affect the corporate performance of Nigerian manufacturing companies. The findings indicate that there is a positive association between return on assets and land and buildings, but a strong negative relationship between return on assets and plant and machinery. Similarly, Chukwu et al. (2017) investigated the impact of intangible assets on the market value of money deposit banks that are quoted in Nigeria. The findings showed that there was no discernible relationship between market value and the cost of computer software. Furthermore, Nangih and Onuora (2020) investigated the impact of capital intensity on the profitability of Nigerian listed oil and gas companies. The study's specific goal was to ascertain how investment property, non-current prepayments, intangible non-current assets, and property, plant, and equipment affected Nigerian oil and gas companies' profit margins. With the exception of intangible non-current assets, which had no significant impact, the results demonstrated that every variable had a significant positive impact on the profit margin. However, the research postulated that:

HO₂: Capital intensity is negatively related with the financial performance of listed conglomerate firms in Nigeria

Research and Development and Financial Performance

According to the OECD (2015), research and development (R&D) is the creative, methodical, and systematic work that tries to increase knowledge; including human, community knowledge, and cultures and

use that knowledge to develop new applications. Successful transmission from inputs to outputs is made possible by the efficient use of limited resources, which increases production with the same or lesser quantity of resources (Al-Shaikh & Hagen, 2023; Khalayleh et al 2022; Al-Zyadat et al, 2022). Therefore, research on the connection between research and development and financial performance has produced varied results. Rahman and Howlader (2022), for instance, looked into how research and development spending affected business performance and value. Using data from an emerging South Asian economy and the pooled ordinary least square (OLS) regression method, they discovered a strong and positive relationship between R&D spending and financial performance of firms. Similar findings were reported by Ghazi and Rim (2015), Ferdaous and Rahman (2017), and VanderPal (2015), who found a positive relationship between R&D spending and the company's financial performance. Conversely, research by Usman et al. (2017) and Vithessonthi and Racela (2016) showed a negative link between R&D and financial performance. When Al-Shaikh & Hagen (2023) looked into the effect of spending in research and development on the success of Jordanian enterprises, they discovered no significant link between the investment in R&D and the financial performance. Thus, the research postulated that:

HO₃: R&D is negatively related with the financial performance of quoted conglomerate firms in Nigeria.

Theoretical Framework

Trade-Off theory

According to the trade-off theory, businesses would weigh the benefits and drawbacks of debt finance before deciding how much debt financing to use (Ai et al., 2020). Because they must weigh the advantages of advantageous tax treatment

from debt financing against increased interest rates and bankruptcy costs, businesses will decide to use leverage within a capital structure until the ideal capital structure is reached. When the marginal tax shelter benefit and the marginal insolvency and agency costs related to debt are equal, the optimal amount of leverage is reached. The theory acknowledges that issuing bonds will be attractive to reduce the company's tax liability because interest expense is tax deductible. Furthermore, the firm will not receive any tax benefits from paying dividends on equity. Trade-off theory, however, suggests a combination of debt and equity financing to counteract the rising financial risk to a company because rising

debt also raises the probability of bankruptcy for a corporation (Osamor et al., 2023).

3. Methodology

The study employed an ex-post factor design and sample six (6) conglomerate companies quoted on the Nigeria Exchange Group (NGX) as at December, 2023. Data were sourced from the annual financial reports of our sampled firms between 2012 to 2022. Descriptive, correlation and panel regression techniques analysis were employed using STATA software to test the relationship between tax planning instruments and financial performance of listed conglomerate firms.

Table 1: Variables and Measurement

Variable	Type	Measurement	Source
Return on Asset (ROA)	Dependent	Profit before tax/Total Asset	Olayiwola & Okoro, (2021)
Thin Capitalization (TC)	Independent	Long term debt divided by shareholders equity	Oyeyemi et al, (2016)
Research and Development Expenditure (RD)	Independent	Dummy variable where 2 was recorded for companies that said the cost that was incurred, 1 for companies engaged in R&D but did not expressly said the amount and 0 for companies that did not embark on R&D for the years under study	Jost et al, (2015)
Capital Intensity (CI)	Independent	Property plant and equipment divided by total asset	Simeon et al (2019)

Model Specification

$$ROA_{it} = \alpha_0 + \beta_1 TC_{it} + \beta_2 CI_{it} + \beta_3 RD_{it} + \varepsilon_{it}$$

Where:

ROA = Return on Asset

TC = Thin Capitalization

CI= Capital Intensity

RD = Research and Development

β_0 = constant of the model

$\beta_1 - \beta_3$ = coefficients of the study model

ε = error term

i = Firm

t = time

4. Results and Discussion

Here, preliminary estimations such as descriptive statistics and correlation analysis results as well as diagnostic test are

presented. Finally, the regression result of the relationship between the dependent and independent variables are also presented.

Table 2: Descriptive Statistics

Variables	Obs	Mean	Std. Dev	Min	Max
ROA	66	6.851	1.652	0.556	9.814
TC	66	0.587	0.327	0.0019	0.996
CI	66	0.311	0.308	0.0005	0.999
RD	66	0.712	0.548	0	2

Source: STATA, 2024

Table 2 shows the outcome of descriptive statistics. The total number of observations, mean, standard deviation, and maximum and minimum means are all displayed in the table. These studies aim to provide a comprehensive summary of the whole collection of data. Table 2 shows that there were 66 observations in total for all the variables and 6 firms over an 11-year period. With a minimum and maximum mean of 0.556 and 9.814, ROA has a mean of 6.851 and a standard deviation of 1.652. According to the mean, listed consumer goods companies have an average ROA of roughly 6.9%; the lowest ROA is approximately 0.55%, and the highest ROA is approximately 9.8%. More so, the mean for Thin Capitalisation (TC) is 0.587. This

indicates that the chosen companies' average TC is roughly 58.7%. The minimum and maximum TC stand at 0.0019 and 0.996, respectively, and the standard deviation of 0.327, which is not far from the mean, indicates that all firms have similar TC during the period under review. In the same vein, Capital Intensity (CI) has a mean of 31.1%, with a minimum and maximum CI of 0.005 and 0.999, respectively. Additionally, the 0.308 deviation suggests that all organisations' CI fall within the same range and do not deviate from the mean. Lastly, Research and Development (RD) mean is 71.2%, its standard deviation is 0.548, and its minimum and maximum means are 0% and 2%, respectively.

Table 3: Correlation Matrix

	ROA	TC	CI	RD
ROA	1.000			
TC	-0.117	1.000		
CI	-0.280	0.174	1.000	
RD	0.141	0.084	-0.071	1.000

STATA output, 2024

The link between the independent and dependent variables is displayed in Table 3 above. The criteria made popular by Cohen (1988) are used to interpret the strength of the link between the variables. Cohen (1988) defined minor correlation as 0.1 to 0.29, medium correlation as 0.3 to 0.49, and large correlation as 0.5 to 1.0. Table 3 shows that there was no single correlation value over the acceptable threshold of more

than 0.90, indicating that the correlation between all the explanatory factors was fair. As a result, ROA and CI had the highest correlation value (-0.280) among independent variables.

Table 4: Diagnostics Result

Mean VIF	1.03
Heteroskedasticity	0.049
Normality	Normally distributed
Autocorrelation	No autocorrelation

Source: STATA, 2024

In this study, the multicollinearity of the independent variables is tested using the mean VIF. The multicollinearity test result showed that there is no multicollinearity, with a mean VIF of 1.03 depicting the absence of multicollinearity. More so, the result of the Breush-pagan

heteroskedasticity test reveals that there is heteroskedasticity in the model because the probability of the chi square is 0.049. This signifies present of heteroskedasticity and absence of homoskedasticity in the model. Thus, the result is interpreted by OLS robust.

Table 5: OLS Robust Regression Result

Variables	Coefficient	t-statistics	P-value
Constant	7.247	17.12	0.000*
TC	-0.419	-0.56	0.580
CI	-1.375	-2.14	0.037**
RD	0.392	1.07	0.288
R ²	0.1004		
F-statistics	2.43		
Prob	0.043		

* = 1%, ** = 5%

Table 5 presents the outcome of the OLS robust regression. The R² value is 0.1004, indicating that 10.04% of the systematic variations in ROA can be explained by the model. In addition to testing the joint statistical significance of all the variables investigated collectively and the presence of a significant linear relationship between the dependent and independent variables, the F-stat value is used to assess the model's goodness of fit. The hypothesis of a significant linear association at 5% is supported by the F-statistic (2.43) and p-value (0.043).

Thin capitalization (TC) is shown to be negative (-0.419) and insignificant (p = 0.580) at all level of significance, indicating that companies with higher levels of TC will have a relatively lower performance. More specifically, the ROA will drop by 0.419 for every 1% increase in thin capitalization. This study contradicts the findings of Fagbemi et al. (2019), who discovered a positive correlation between

SIBA's financial performance and thin capitalization. Instead, it supports the findings of Ftouhi et al. (2015), Olarewaju, and Olayiwola (2019). HO₁ is therefore supported. Furthermore, there is a significant negative association (Coeff = -1.375; P=0.037) negative between capital intensity (CI) and the financial performance of Nigerian listed conglomerate firms. This indicates that a listed conglomerate's financial performance will drop dramatically by -1.375 for every 1% increase in capital intensity. While Simeon et al. (2019) and Nangih et al. (2020) discovered that companies with higher capital intensity outperform those with lower ones financially, this conclusion is in line with Vinny and Lina (2017). HO₂ is therefore supported. Research and Development (RD) also shows a positive (0.392) and insignificant (P=0.288) relationship at all level of significance, indicating that increase RD may not have a substantial impact on the financial

performance of Nigerian listed conglomerate companies. More precisely, the FP will rise by 0.392 for every 1% increase in research and development. This result contradicts the findings of Vithessonthi and Racela (2016) and Usman et al. (2017), but it concurs with the result of Rahman and Howlader (2022) and Ferdaous and Rahman (2017). Thus, HO_3 is rejected.

5. Conclusion and Recommendation

The study looks into how tax planning affects Nigerian listed conglomerate companies' financial performance. Consequently, the study comes to the conclusion that, research and development have a positive but insignificant relationship with the financial performance of listed conglomerate firms in Nigeria, thin capitalization and capital intensity have a negative association with that financial performance. The study's findings will provide managers, investors, and legislators greater confidence to fund R&D expenditures that will ultimately guarantee the long-term viability of the organisation. To guarantee a more consistent level of output efficiency, which may improve their financial performance, the study advises listed conglomerate companies to enhance their capital asset investments. In order to guarantee the organization's sustainability, the report also suggests making a significant investment in R&D.

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