Corporate income tax and manufacturing sector performance in Nigeria: a panel data analysis

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Corporate Income Tax and Manufacturing Sector Performance in Nigeria: A Panel Data Analysis

Abstract
The study examined the impact of corporate income tax on the performance of the manufacturing sector in Nigeria from 2013 – 2017. The ex-post facto research design was adopted for this study. The population of this study covered all the 23 registered manufacturing firms dealing with consumable foods in Nigeria. The sample of five manufacturing firms, dealing with consumable foods in Nigeria which represent 35% of the quoted manufacturing firms on the Nigerian Stock Exchange (NSE) market was selected for the study. The data used for this research are secondary data obtained from various issues of Annual financial statement of five selected manufacturing firms in Nigeria namely: Dangote Sugar Refinery Plc, Cadbury Nigeria Plc, Guinness Nigeria Plc, Unilever Nigeria Plc and Nestle Nigeria Plc. This study made use of the fixed and random effect regression technique. The result showed that company income tax had direct significant impact on net income and return on equity of manufacturing companies in Nigeria. It was recommended based on findings that company income tax receipt should be channeled by the government into judicious use such as the provision of social amenities like electricity and good road network. The provision of this social infrastructure would help to reduce cost of production and promote easy distribution of goods and services produced in manufacturing firms.

Keywords: Company Income Tax, Company Performance, Net Income and Return on Equity

Introduction
The conundrum of the Nigerian economy is traceable to its manufacturing sector which is expected to stimulate the value added economy and serve as a catalyst for sustainable economic transformation. Regrettably, Nigeria’s Manufacturing sector has been neglected without a clear policy direction with attendant annihilation of the sector from the growth process. This becomes evident following the low share of manufacturing sector contribution to GDP and plummeted employment generation capacity of the sector. Nigeria’s ostentatious importation of manufactured products and weak export base of finished goods remains an undeniable signal to the inchoate weakness of the manufacturing sector. Meanwhile, the weak performance of the manufacturing sector is also evidenced in the low share of non-oil exports to total exports earnings, coupled with high share of manufactured goods in total imports.

Prior to the economic recession of 2016, several firms in the manufacturing sector of Nigeria, experienced some forms of business failures. Some of these companies include: Dunlop Nigeria Plc and Michelin (the surviving tyre manufacturing companies in Nigeria) which shut down its plants, laid off hundreds of its workers and relocated to Ghana. (Premium
Corporations pay 55 per cent of their operating profit is recorded in the United Arab Emirates, where the tax rate among the 120 countries surveyed by KPMG is recorded in the official market and N485 in the parallel market; the President of the Manufacturers Association of Nigeria (MAN) Mr Frank Jacob reported that not less than 272 firms shut down in 2016 while over 56 per cent of the surviving ones are ailing (Premium times, 2017). Figure 1 provided a thematic view of the performance of the manufacturing sector in Nigeria.

Despite achieving stability in exchange rate in 2017 and a growing external reserve, which stood at US$32.5 billion at the end of the third quarter, manufacturing output declined by 0.21 per cent in 2017 and its share in GDP remained at 9 per cent. The decline in manufacturing output was led by oil refining (-28%), motor vehicle and assembly (-22%), other manufacturing (-7%) and cement (-2%) (The Nigerian Economic Summit Group, 2018). The decline of manufacturing output in the third quarter of the year, amidst relative exchange rate stability, revealed that the fundamental challenges facing the manufacturing sector transcended the unavailability of foreign exchange.

The abysmal performance of the manufacturing industries in Nigeria is attributable to inadequate electricity supply, smuggling of foreign products into the country, trade liberalisation, globalisation, infrastructural decay, inadequate financial support and other exogenous variables which has resulted in the reduction in capacity utilization, gross fixed capital formation and economic growth of the economy (Tomola, et al, 2012). The manufacturing sector is further bogged down by internal environment constraints. Aside factors from the internal business environment such as lack of capital (inadequate capitalization), inefficient management, unprofitable expansion (premature expansion), mode of appointment of chief executives, fraud and audit failures –internal or external that may affect corporate performance. Chude and Chude (2015) added that external influences, such as corporate income tax levied on companies might affect the performance of business firms in Nigeria.

Corporate income tax remains a germane fiscal instrument across the globe. The highest corporate tax rate among the 120 countries surveyed by KPMG is recorded in the United Arab Emirates, where corporations pay 55 per cent of their operating profit as a tax. However, this tax is only enforced on foreign oil companies. The US takes the second position with a top tax rate of 40 per cent that is 16 percentage points higher than the average for all 120 countries. In contrast, Montenegro and Hungary have the lowest rate in the world of 9 per cent, while the only major industrialised nation among the bottom 20 countries is Ireland, which is known for its low rate of 12.5 per cent (Ivan, 2018). The Companies Income Tax rate is currently pegged at 30 per cent in Nigeria since 1996, assessed on a preceding year basis (i.e. tax is charged on profits for the accounting year ending in the year preceding assessment). Lower rate of 20 per cent rate applies to manufacturing companies.

Chude and Chude (2015) noted that companies, such as banks and manufacturing companies that contribute largely to the nation’s gross domestic product, generate a lot of revenue for the government through tax receipt. In 2016, the revenue target for Companies Income Tax is N1.877 trillion, representing approximately 40 per cent of the total projected tax revenue of N4.957 trillion for the year (Adekunle and Disu, 2018). Governments derive enormous benefits in terms of taxes payable by manufacturing firms. Revenues from the corporate tax rate are an important source of financing infrastructural development, which remain a prerequisite for transforming the manufacturing sector.

Nigeria is currently ranked 181 out of the 189 countries rated globally with respect to the “Ease of Paying Taxes” on the World Bank Ease of Doing Business Index. In addition to continuing scant electricity supply, multiple-taxation is one of the major impediments to doing business in Nigeria (FIAS, 2008, DFID, 2008). Multiple taxation is a front burner challenge in Nigeria. As a result, tax revenue collection is significantly higher compared to other countries with more unified systems of tax collection. Available evidence shows that many investors have left Nigeria because of burdensome taxes that stifle business, with those that have remained confining themselves to tax evasion and avoidance. This is compounded by the corrupt tendencies of tax officials who envisage this as a leeway to embezzle public funds via charges on tax defaulters.

Against this backdrop, the objective of this paper is to examine the impact of corporate income tax on the performances of the Nigerian manufacturing sector. Although a number of studies have been carried out in the past on this subject, the review of these studies revealed the existence of a research gap, which this study attempts to fill. The rest of this paper is structured as follows. Section 2 provides the review of conceptual issues and related empirical literature, while Section 3 deals with the study methodology. The findings of the study and discussion are presented in Section 4, while Section 5 provides the conclusion and proffered recommendations.
2.1 Conceptual Issues

Taxes are levied on individuals, groups, business or corporate bodies, by constituted authorities for raising funds used by the state in the maintenance of peace, security, economic growth and development and social engineering among others for the benefit of the citizenry. According to Appah (2004), taxation is a compulsory levy imposed on a subject or upon his property by the government to provide security, social amenities and create conditions for the economic well-being of the society. Taxation, in a simple language is a compulsory non-quid-pro-quo withdrawal of resources from the private sector of the economy (Nwosu, 2000). Also Bhartia (2009) argues that a tax is a compulsory levy payable by an economic unit to the government without any corresponding entitlement to receive a definite and direct quid pro quo from the government. Invariably, taxation does not represent a price paid by the tax payer for any definite service rendered or a public good provided by the government. A tax is not levied in return for any specific service rendered by the government to the taxpayer. A tax payer cannot demand for special benefits from the government in return for tax payment.

Nwezeaku (2005) stated that taxation is the compulsory transfer or payment (or occasionally of goods and services) from private individuals, institutions or groups to the government. Similarly, Jhingan (2004), Nzotta (2007), Ola (2001), Osiegbu et al. (2010), Bhartia (2009), and Musgrave and Musgrave (2004), defined taxation as: “a compulsory contribution imposed by a public authority, irrespective of the exact amount of service rendered to the taxpayer in return”. “A compulsory contribution from a person to the government to defray the expenses incurred in the common interest of all, without references to special benefits conferred”. These definitions point towards three characteristics of taxation:

It is a compulsory contribution imposed by the government on the people residing in the country. Since it is a compulsory payment, a person who refuses to pay tax is liable to punishment. But a tax is to be paid only by those who come under its jurisdiction. Similarly, persons who buy a commodity which carries a tax on it, pay the tax while others do not. A tax is a payment made by the taxpayers which is used by the government for the benefit of all the citizens. The state uses the revenue collected from taxes for providing hospitals, schools, public utility services, etc. which benefit all people. The main forms of tax collected are direct and indirect taxes (Abata, 2014). For the direct taxes, it is levied on individuals, and factors of productions e.g. Company Income tax (CIT), Personal Income Tax (PIT), Capital Gain Tax (CGT). However, indirect taxes are levied on goods and services e.g. import and export duties. Thus, the consumers bear the ultimate burden. Company income tax (CIT) is charged on the profits generated by companies, public corporations and unincorporated associations such as industrial and provident societies, clubs and trade associations. CIT was created by the Companies Income Tax Act (CITA) 1979 and has its root from the Income Tax Management Act of 1961. It is one of the taxes administered and collected by the Federal Inland Revenue Service (‘FIRS’ or ‘the Service’). Companies Income Tax (CIT) is a tax chargeable on all resident and non-resident companies (other than those engaged in petroleum operations) incorporated in Nigeria. Also known as corporate tax, the CIT rate is 30% of the profit earned in the year preceding assessment. Resident companies are liable to CIT on their worldwide income (profits accruing in, derived from, brought into, or received in Nigeria) while non-residents are subject to CIT on the income derived from their Nigerian operations. A non-resident company with a fixed base in Nigeria is taxable on the profits attributable to that fixed base. Any WHT deducted at source from its Nigeria-source income is available as offset against the CIT liability.

Company performance (or corporate performance) is a concept that describes the corporate health and stability of a firm (Altman, 2004). For firms in the manufacturing industry, Chude and Chude (2015) noted that company performance is either measured using the input or output approach. The input approach relies on indices that show quality asset, liquidity, managerial quality and quality of staff among others while output approach relies on indices that show manufacturing or production outcomes such as: profit turnover, return on asset (ROA), return on equity (ROE), net income, return on investment (ROI), average manufacturing capacity utilization, manufacturing efficiency index (MEI) among others.

2.2 Empirical Literature

Several studies have been carried out to investigate the nexus between corporate taxation and performance of firms in Nigeria. Ezejiyor et al. (2015) assessed whether tax as a fiscal policy tool affected the performance of the selected manufacturing companies in Nigeria. To achieve this, descriptive statistics was adopted and data were collected through the use of six years financial accounts of the selected companies. The hypothesis formulated for the study was tested with the ANOVA, using the Statistical Package for Social Sciences (SPSS) version 20.0 software package. The study found that taxation, as a fiscal policy instrument, had a significant effect on the performance of Nigerian
manufacturing companies.

Chude and Chude (2015) investigated the impact of taxation on the profitability of companies in Nigeria. Employing secondary data with error correction model to test the variables that most likely to impact the profitability of companies in Nigeria, the study revealed that the level of company tax had significant effect on profitability. They concluded that the positive and significant relation between the profitability and the taxation explanatory variables indicated that policy measures to expand tax, through more effective tax administration, would impact positively on the growth of company’s profitability.

Lyndon and Paymaster (2016) examined the impact of companies’ income tax, value-added tax on economic growth (proxy by gross domestic product) in Nigeria. Secondary time series panel data was collected for the period 2005 to 2014 from the Statistical Bulletin of the Central Bank of Nigeria (CBN). The study employed ordinary least squares (OLS) technique based on the computer software Windows SPSS 20 version for the analysis of data, where gross domestic product (GDP), was regressed on company income tax (CIT) and value-added tax (VAT). The results showed that both company income tax and value-added tax had positive and significant impact on economic growth.

Chandrasekharan (2012) conducted a study using 87 firms out of the population of 216 firms listed on the Nigeria stock exchange for a period of five years (2007-2011) from static trade-off, agency and pecking order theory point of view. He employed the panel multiple regression analysis and the study reveals that for the Nigerian listed firms; firms’ size, growth and age are significant with the debt ratio of the firm, whereas, profitability and tangibility are not significant with the debt ratio of the firm. Bassey, Aniekan, Ikpe and Udo (2013), using a sample of 60 unquoted agro-based firms in Nigeria within a period of six years (2005-2010) from the agency cost theory point of view. They employed the Ordinary Least Square regression and descriptive statistics and revealed that only growth and educational level of firms owners were significant determinants of both long and short term debt ratios, assets structure, age of the firms, gender of owners and export status impacted significantly on long term debt ratios, while business risk, size and profitability of firms were major determinants of short term debt ratio for the firms under investigation.

Anyanwu (1997), in a study of the effects of taxes on Nigeria’s GDP/economic growth (1981-1996) reveals that companies’ income tax positively and significantly affects GDP, just as do customs and excise duties. However, petroleum profit tax is positively but insignificantly affects Nigeria’s GDP. The same is true of other direct taxes (capital gains and stamp duties). However, all direct taxes positively and significantly affect Nigeria’s GDP.

Khalaf (2013) using a sample of 45 manufacturing companies listed on the Amman Stock Exchange were used for this study which covers a period of five (5) years from 2005-2009. Multiple regression analysis was applied on performance indicators such as return on asset (ROA) and profit margin (PM) as well as short-term debt to total assets (STDTA), long term debt to total assets (LTDTA) and total debt to equity (TDE) as capital structure variables. The results show that there is a negative and insignificant relationship between STDTA and LTDTA, and ROA and PM; while TDE is positively related to ROA and negatively related with PM. STDTA is significant using ROA while LTDTA is significant using PM. The study concludes that statistically, capital structure is not a major determinant of firm performance. It recommends that managers of manufacturing companies should exercise caution while choosing the amount of debt to use in their capital structure as it affects their performance negatively.

3.0 Research Methodology

The ex-post facto research design was adopted for this study. The population of this study covered all the 23 registered manufacturing firms dealing with consumable foods in Nigeria (Online data from Nigerian facts, 2018). The sample of five manufacturing firms, dealing with consumable foods in Nigeria was selected for the study. The purposive sampling technique was adopted to select only eight quoted manufacturing firms. The data employed were secondary data, obtained from various issues of annual financial statement of five selected manufacturing firms in Nigeria, namely: Dangote Sugar Refinery Plc; Cadbury Nigeria Plc; Guinness Nigeria Plc; Unilever Nigeria Plc and Nestle Nigeria Plc.

This research made use of the fixed and random effect model in analysing the impact of corporate income tax on the performance of the manufacturing sector in Nigeria. According to Salvatore and Reagle (2002), the fixed and random effect model is a technique used to fit the best straight line to the sample of observation in a panel dataset. The cross section components were the individual manufacturing firms which possessed individual heterogeneity of operational qualities while the time component represented the time coverage for the period 2013 to 2017. To determine the model that is appropriate between the fixed and random effect model, the Hausman test was used. This test helped to determine the model of best fit in a panel data analysis.
The empirical model of Neghină and Vintilă (2013) was adapted for this study. In their study, they measured determinants (predictors) of corporate performance of manufacturing firm in Luxembourg. They stated corporate performance was measured with return on assets (ROA) and return on equity (ROE) while the predictor variables were: effective tax rate (ETR); firm size (FM); relative increase in total assets (RTA); financial leverage (LF) and effective interest rate (EIR). The model was adapted and modified by replacing ROA with net income (a proxy for corporate performance). Secondly, to capture tax impact, effective tax rate (ETR) was replaced with corporate income tax (CIT), while firm size was proxied with net asset (NETA).

### Model 1

\[ \text{NETIN} = f (\text{CIT}, \text{NETA}, \text{EPS}) \]  
(1)

Taking the natural logarithm to both sides of the equation, equation (1) in econometric form is stated as:

\[ \log \text{NETIN}_i = \alpha_0 + \alpha_1 \log \text{CIT}_i + \alpha_2 \log \text{NETA}_i + \alpha_3 \log \text{EPS}_i + \varepsilon_i \]  
(2)

\[ \alpha_0 > 0, \; \alpha_1 > 0, \; \alpha_2 > 0, \; \alpha_3 < 0 \]

### Model 2

\[ \text{ROE} = f (\text{CIT}, \text{NETA}, \text{EPS}) \]  
(3)

Taking the natural logarithm to both sides of the equation, equation (3) in econometric form is stated as:

\[ \log \text{ROE}_i = \beta_0 + \beta_1 \log \text{CIT}_i + \beta_2 \log \text{NETA}_i + \beta_3 \log \text{EPS}_i + \varepsilon_i \]  
(4)

\[ \beta_0 > 0, \beta_1 > 0, \beta_2 > 0, \beta_3 > 0 \]

The specified variables are defined as follows: NETIN is Net income; ROE is Return on equity (%); (ratio of Net asset to shareholders fund divided by 100%); CIT is Company income tax; NETA is Net asset; EPS is Earnings per share; \( \alpha_0 \) and \( \beta_0 \) are constants while \( \alpha_1 \) and \( \beta_1 \), \( \alpha_2 \) and \( \beta_2 \), \( \alpha_3 \) and \( \beta_3 \) are all parameters to be estimated; \( e_i \); represents Cross sectional components (individual firms); \( t \); connotes the time period covered and \( e_i \) is the error term.

### 4.0 Data Presentation, Analysis and Discussion of Results

To test for the stationary of the series, the three panel unit root tests were carried out. These tests included a) Levi, Lin & Chu test; b) Augmented Dickey Fuller (ADF) Fisher Chi square; and c) Philip Perron Fisher Chi-square.

<table>
<thead>
<tr>
<th>Series</th>
<th>Panel Unit root tests</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>NETIN</td>
<td>ADF-Fisher Chi square</td>
<td>PP-Fisher Chi-square</td>
</tr>
<tr>
<td>-12.9589</td>
<td>20.5453</td>
<td>21.0341</td>
</tr>
<tr>
<td>-7.6968</td>
<td>19.7349</td>
<td>23.2023</td>
</tr>
<tr>
<td>-47.0861</td>
<td>31.0710</td>
<td>33.7798</td>
</tr>
<tr>
<td>-267.052</td>
<td>20.4393</td>
<td>20.2809</td>
</tr>
<tr>
<td>-5.54596</td>
<td>16.2990</td>
<td>20.3699</td>
</tr>
</tbody>
</table>

Table 1: Panel Unit Root test on the Variables

**Note:** Series is significant at 0.01 level of significance (p<0.01)

* Series is significant at 0.05 level of significance (p<0.05)

Results from Table 1 on the indicated that NETIN was stationary at level i.e integrated at order zero (I(0)) while NETIN, ROE, CIT and EPS were stationary at first differencing i.e or integrated at order one (I(1)). The stationary status of the series made it possible to estimate the regression equation, using three regression techniques, namely: Pooled Ordinary Least Square (OLS), Fixed Effect (FE) and Random Effect (RE) regression model. The results of the models were presented in Table 2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pooled OLS</th>
<th>Fixed effect model</th>
<th>Random effect model</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-1.16</td>
<td>0.16</td>
<td>0.83</td>
</tr>
<tr>
<td></td>
<td>(0.22)</td>
<td>(0.86)</td>
<td>(0.26)</td>
</tr>
<tr>
<td>CIT</td>
<td>0.60**</td>
<td>0.33**</td>
<td>0.50**</td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>NETA</td>
<td>0.55**</td>
<td>0.50**</td>
<td>0.57**</td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>EPS</td>
<td>-0.02</td>
<td>0.6216**</td>
<td>0.1230*</td>
</tr>
<tr>
<td></td>
<td>(0.67)</td>
<td>(0.00)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>R²</td>
<td>0.28</td>
<td>0.95</td>
<td>0.72</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.79</td>
<td>0.94</td>
<td>0.69</td>
</tr>
<tr>
<td>F-statistics</td>
<td>32.78</td>
<td>57.68</td>
<td>18.86</td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Durbin-Watson (DW) statistics</td>
<td>1.82</td>
<td>2.04</td>
<td>1.47</td>
</tr>
</tbody>
</table>

Table 2: Regression Analysis on Model 1

**Note:** ** Estimate is significant at 0.01 level of significance (p<0.01)

* Estimate is significant at 0.05 level of significance (p<0.05)

p-value of each parameter in parenthesis

Source: Regression result from (E-view version 7)
From the pooled OLS model, results in Table 2 showed that CIT and NETA had direct significant impact on net income. The adjusted coefficient of determination ($R^2$) and coefficient of determination ($R^2$) in the pooled OLS model showed that the predictors (CIT, NETA and EPS) jointly explained 79.8 to 82.4 per cent variations in net income, respectively. In the fixed effect model, the entire predictors (CIT, NETA and EPS) had direct significant impact on net income (NETIN) while the adjusted coefficient of determination ($R^2$) and coefficient of determination ($R^2$) showed that the predictors (CIT, NETA and EPS) jointly accounted for 95.9 to 94.3 per cent variations in net income. Lastly, the random effect model also showed that the entire predictors (CIT, NETA and EPS) had direct significant impact on net income (NETIN) while the adjusted coefficient of determination ($R^2$) and coefficient of determination ($R^2$) indicated that the predictors (CIT, NETA and EPS) jointly explained 69.6 to 72.9 per cent variations in net income, respectively.

The F-statistics for the pooled OLS ($F = 32.78$), fixed effect model ($F=57.68$) and random effect model ($F=18.86$) showed that the estimates are jointly significant, with $p=0.0000$. Furthermore, the Durbin Watson (DW) statistics for the pooled OLS, fixed and random effect models were 1.82, 2.04 and 1.47, respectively. Since, the DW value for the pooled OLS and fixed effect model were approximately equal to 2, the results indicated that there is no presence of serial autocorrelation among the variables.

To ascertain the model of best fit for estimation, prediction and forecasting, the Hausman test was carried out as shown in Table 3. With the null hypothesis, that the random effect model was most appropriate for the regression estimate, the test rejected the null hypothesis, which implied that the fixed effect model was appropriate. Hence, the model that best explains net income is the fixed effect model.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pooled OLS</th>
<th>Fixed effect model</th>
<th>Random effect model</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-0.84</td>
<td>3.57</td>
<td>-0.83</td>
</tr>
<tr>
<td></td>
<td>(0.59)</td>
<td>(0.07)</td>
<td>(0.41)</td>
</tr>
<tr>
<td>CIT</td>
<td>0.48</td>
<td>0.09</td>
<td>0.48**</td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>0.63</td>
<td>(0.00)</td>
</tr>
<tr>
<td>NETA</td>
<td>-0.09</td>
<td>-0.50</td>
<td>-0.09</td>
</tr>
<tr>
<td></td>
<td>(0.72)</td>
<td>(0.08)</td>
<td>(0.59)</td>
</tr>
<tr>
<td>EPS</td>
<td>0.07</td>
<td>1.08**</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>(0.49)</td>
<td>(0.00)</td>
<td>(0.29)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.26</td>
<td>0.75</td>
<td>0.26</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.15</td>
<td>0.64</td>
<td>0.15</td>
</tr>
<tr>
<td>F-statistics</td>
<td>2.46</td>
<td>7.34</td>
<td>2.46</td>
</tr>
<tr>
<td>Durbin–Watson statistics</td>
<td>1.47</td>
<td>1.07</td>
<td>1.47</td>
</tr>
<tr>
<td>Hausman test</td>
<td>=33.26</td>
<td>-</td>
<td>(0.00)</td>
</tr>
</tbody>
</table>

**Dependent variable: Return on Equity (ROE)**

**Note:** **Estimate is significant at 0.01 level of significance ($p<0.01$)**

* **Estimate is significant at 0.05 level of significance ($p<0.05$)**

$p$-value of each parameter in parenthesis

**Source:** Regression result from (E-view version 7)

From the pooled OLS model, results in Table 3 showed that CIT had direct significant impact on the dependent variable (return on equity). The adjusted coefficient of determination ($R^2$) and coefficient of determination ($R^2$) in the pooled OLS model showed that the predictors (CIT, NETA and EPS) jointly explain 15.5 to 26 per cent variations in return on equity. In the fixed effect model, only EPS had direct and significant impact on net income (NETIN). The rest of the estimates (CIT and NETA) were not significant while the adjusted coefficient of determination ($R^2$) and coefficient of determination ($R^2$) showed that the predictors (CIT, NETA and EPS) jointly explained 64.9 to 75.2 per cent variations in return on equity. Lastly, the random effect model also showed that only CIT had direct and statistically significant impact on return on equity. The adjusted coefficient of determination ($R^2$) and coefficient of determination ($R^2$) in the random effect variables showed that the predictors (CIT, NETA and EPS) jointly explained 15.5 to 26.0 per cent variations in return on equity respectively.

The F-statistics from the pooled OLS and random effect models ($F = 2.46$ and 2.46) showed that the estimates were not jointly significant ($p>0.05$) while the F-statistic from the fixed effect model showed that estimates (coefficient of CIT, NETA and EPS) were jointly significant ($p<0.05$). Furthermore, the Durbin
Watson (DW) statistics for the pooled OLS, fixed and random effect models were 1.47, 1.07 and 1.47, respectively. Since, the DW value for the pooled OLS, random and fixed effect model were approximately equal to 2. This shows that there was presence of serial autocorrelation among the variables in the three models; following the rule of thumb (1.8 ≥ D.W ≤ 2.2).

To ascertain the model of best fit for estimation, prediction and forecasting, the Hausman test was carried out. The Hausman test has the null hypothesis that random effect model is most appropriate for the regression estimate. Hence, the rejection of the null hypothesis implied that the fixed effect model was appropriate. From Table 3, the Hausman test coefficient (33.26) was statistically significant (p=0.00). Hence, the null hypothesis was rejected. Hence, the model that best explained return on equity was the fixed effect model. The results have important policy implication for macroeconomic policy direction, especially with respect to taxation in Nigeria. This indicates that corporate income tax can be used to stabilise the economy as an instrument of fiscal policy. In other words, the Nigerian government can use corporate tax to influence performance in the manufacturing sector and thereby boost economic growth.

5.0 Conclusion

Company income tax is a type of direct tax that is levied on corporate bodies. Based on findings, it is concluded that company income tax has direct significant impact on net income and return on equity of manufacturing companies in Nigeria. Although, increase in corporate tax reduced the earning of a company, the result clearly indicates that increasing corporate taxes influence performance in the manufacturing sector in Nigeria, significantly. Perhaps, this may be due to the expansionary impact of tax receipt in the promotion of socio-economic infrastructure for individuals and corporate bodies in the nation.

5.1 Recommendations

The following recommendations were proffered:

1) Company income tax receipt should be channelled by the government into judicious use such as the provision of social amenities like electricity and good road network. This would help to reduce cost of production and ease the distribution of goods and services produced. Hence, it would promote corporate performance.

2) There should be constant training and re-training of tax administrators through seminars, conference to keep them abreast with modern trends in tax administration to ensure efficiency in the collection of corporate tax revenue.

3) Government, through Federal Inland Revenue Service, should create an effective and reliable data base for every viable company to minimise (if not eliminate) the incidence of corporate tax evasion. In addition, government should ensure that the manufacturer sector is not stifled by multiple taxes.

References


Figure 1: Nigeria’s Manufacturing GDP Growth

Source: National Bureau of Statistics and NESG Research

Figure 2: Share of Nigeria’s Manufacturing GDP in 2017

Source: National Bureau of Statistics and NESG Research