CORPORATE ASSETS COMPOSITION AND FIRM VALUE: THE MODERATING ROLE OF THE CORPORATE BOARD FROM LISTED MANUFACTURING FIRMS IN THE NIGERIA EXCHANGE GROUP

Agbomah Dennis James¹ and Ofor, T. Nkechi²

¹Accountancy Department, Delta State Polytechnic, Otefe Oghara
²Accountancy Department, Chukwuemeke Odemegwu University, Igbariam Campus

Abstract
The study evaluated the role of corporate board in moderating the relationship between corporate assets composition and value among manufacturing firms quoted in Nigeria Stock Exchanges. The study adopted ex-post facto design and used panel data collected from the financial reports of twenty-two manufacturing firms in Nigeria between 2011 and 2020. Four specific objectives and hypotheses were formulated and tested using ordinary least square regression analysis. Some preliminary analysis such as descriptive statistics, normality test, correlation analysis, variance inflator factor, and check for the presence of multi-collinearity in the data collected and analyzed for the study. The study finds that the moderating role of corporate board on property, plant and equipment, current assets, financial assets have positive and significant effect of value of manufacturing companies in Nigeria. The moderating role of corporate board on intangible assets has positive but insignificant effects on the value of manufacturing companies quoted in the Nigeria stock exchanges. The study recommends that management of manufacturing companies should increase the moderating role of corporate board on current assets as this will enhance the corporate value of manufacturing companies quoted on the stock exchanges of Nigeria.

Keyword: Assets composition, current assets, financial assets, intangible assets, firm value, noncurrent asset

1. Introduction
The advent of advancement of technology no doubt has enhanced production, distribution and changed the taste of consumers. It laid the foundation for the transition to knowledge-service based economy where tangible assets play less role in production especially among the top global firms (Ifurueze & Odesa, 2013). The transition as observed by Ifurueze and Odesa, (2013) altered firms’ investments in productive assets. As investment in intangible witness a surge in most firms and in some industries. According to Riyanto, (2013), the proportion/structure of assets of a firm shows the amount of funds allocated to each components part and future direction of the firm. Delcoure (2006) believed that a firm asset structure can relatively reveal the size of the firm, especially its tangible assets, it indicates the ability of the firm to increase its operating capacity.

According to Brigham and Houston (2006), asset structure is the summation of all assets owned and used by the company in its business operations. According to Oliver, Ugbor, and Chukwuani (2017), firm resources/assets can be classified into; tangible resources, intangible resources,
human resources, and organizational resources. Among all, tangible resources are given much attention in the financial statement. Since their value and estimation can be easily ascertained and is less controversial. Other resources like human resources (intelligence, experience, judgment, and relationships among staff and customer) and organizational resources (internal structure, controlling and coordinating systems etc) are considered as intangible assets/resources.

The composition of assets can be of importance in leverage financing. For instance, firms with more tangible assets are more likely to secure larger loans using them as collaterals, as the lender has confidence in that his loan is secure compared to firms with low level of tangible assets. Similarly, Frank and Goyal (2003) believe that the higher the tangible assets that can be pledged as collateral, the higher the leverage financing of the firm. The study of Vo and Ellis (2017) indicates that larger tangible assets reveal the borrowing capacity and stability of the firms, those factors impact positively on the value of the firm.

Assets as organizational resources are held and controlled by management to achieve the wealth maximization objective of the firm. They are used to in the production process, generate inflow and can be used to secure favorable funding. Excess investment in noncurrent assets can tie down investable capital, affect working capital, lead to high depreciation and impairment cost, and high maintenance costs. While the inadequate investment in noncurrent assets can lead to low production output, these, no doubt can lead to low firm value. Having the appropriate mix of those assets can enable the management to achieve a competitive edge, better performance and value by a firm. However, what constitutes the appropriate mix and the extent of the impact on the value of manufacturing firms has not been exhaustively researched in recent times.

The decisions to invest in assets are subject to the approval of the board due to the huge capital outlay involved visa vice the wealth maximization objective of the firm. Most previous studies conducted in this area where did not evaluate the contribution of the board in the decision on assets composition of quoted manufacturing firm in developing like Nigeria.

The main objective of this study is to evaluate the effect of assets composition on the value of manufacturing firms: the moderating role of the board. The specific objectives are to:

1. Ascertain the moderating role of the board on property, plant, and equipment acquisition on the value of manufacturing firms in Nigeria.
2. Investigate the moderating role of the Board on intangible assets acquisition on the value of manufacturing firms in Nigeria.
3. Evaluate the moderating role of the Board on financial assets on the value of manufacturing firms in Nigeria.
4. Ascertain the moderating role of the Board on current assets on value of manufacturing firms in Nigeria.

1.1 Research hypotheses
The following are the null hypotheses formulated for the study:

**H01:** The moderating role of the Board on Property, plant and equipment acquisition has no significant effect on value of manufacturing firms in Nigeria.

**H02:** The moderating role of the Board on Intangible assets acquisition has no significant effect on value of manufacturing firms in Nigeria.

**H03:** The moderating role of the Board on Financial assets has no significant effect on the value of manufacturing firms in Nigeria.

**H04:** The moderating role of the Board on Current assets has no significant effect on value of manufacturing firms in Nigeria.

The findings of this study would be of importance to stakeholders like: managers, investors, policy makers and researchers.

*Periodic scope:* This study covers the period of 10 years between 2011 and 2020. *Content Scope:* The variables to be used are: property, plant, and equipment, intangible assets, financial assets current assets, corporate board, and firm value. *Company scope:* the study uses companies quoted under the manufacturing sector of the Nigeria Stock Exchange. *Geographical scope:* The geographical coverage of this study is Nigeria in West region of Africa.

### 2. Literature Review

#### 2.1 Conceptual Framework

**Assets Composition/Structure:** According to Peterson (2002) assets are those resources purchase today that will bring future benefits. Assets are defined in International Accounting Standards (IAS) 16 as a resource held by a specific entity as a result of previous transactions or events from which future economic advantages flow to the company. Assets are items that a corporation owns and uses to generate revenue. The assets structure in this study is a combination of noncurrent assets and current assets possessed and used by manufacturing businesses. The asset structure is critical for a variety of reasons.

**Company Value:** According to Saleh (2018), firm value is the amount paid by the investor if the firm is sold. Firm value reveals the firm’s management success in meeting stakeholder’s demand. The value of firms can be influenced by the ability of the firm to meet its shareholders expectation. The study of Saleh, Priyawan and Ratnawati (2015) observed that there are other factors that influence the value of the firm, factors like: asset structure, performance, firm size, firm growth, and investment decision. The firm's value is a reflection of the investor's beliefs about the firm's current performance and future prospects.

Tobin's Q: this is used to calculate a company's market value. The model connects investment to the firm's stock valuation, which is intended to reflect the current discounted worth of projected future earnings. The tobin q model is assumed the stock company valuation would capture all important information about projected future profitability, and coefficients on cash-flow information about present expectations.

#### 2.2 Theoretical Framework
This study was anchored on the Resource-based theory. However, there are other theories that may be relevant to the study, like the competence-based theory, stakeholders’ theory etc. Resource Based Theory: The resource-based theory propounded by Barney (1991) holds that the strategy adopted by an entity depends on the resource. The theory believes that internal resources like assets, capabilities, and competencies if identified and utilized effectively would give firm competitive advantages. Hence for an entity to achieve competitive edge, it must identify those unique, valuable, rare, imperfectly imitable resources and exploit them. In order to exploit the internal resource, corporate organisations adopt strategies that can ensure effective and efficient utilization of those unique, rare, firm-specific, and not substitutable internal resources to gain competitive advantage, maximize profit and firm value. The resource-based theory provides the theoretical framework which evaluates the nexus that exist between assets composition and its contribution to corporate performance and value.

2.2.1 Theoretical Exposition
The relationship between each of the dependent variables and firm value.

2.2.3 Assets Structure and Firm value
The various proportion of various assets own and used by the firm in its production process (Saleh, 2018). Assets used in firms can be classified into fixed and current assets, intangible and tangible assets based on the convertibility and their physical substance (Riyanto, 2013). The structure consists of tangible and intangible assets, current and fixed assets that make up the total assets of the firm. It reveals the investment pattern, future survival, size and ability of the firm to increase its operating capacity and earn more. According to Oliver, Ugbor, and Chukwuani (2017), assets structure comprises of tangible and intangible assets.

The goal of every investor is to maximize wealth through increased performance which give positive impression of the firm to the investors. A firm with the right mix of assets has several benefits ranging from low borrowing cost, customer confidence, lender confidence, appropriate liquidity ratio. Having the required assets can enable the firm to meet its production requirement, meeting lender/debt serving requirement and achieve better performance. According to Campello and Giambona (2013), the quantity and quality of the assets and nature of the assets used as collateral. Having the right noncurrent enables the firms borrow using the asset as collateral in obtaining the loan facility’s which is used to meet operational and investment requirement. Using assets as collateral gives the lender the hope of recovering its resources even at the liquidation of the firm. This gives the lender the assurance; hence the lender tends to issue out the facility at favorable terms. The access to the loan facility increases the debt profile of the firm and enhances the firm value if the debt facilities are employed in investment with positive net present value.

The study of Alipour, Mohammadi and Derakhshan (2015), opine that tangible asset determine firm’s productive capability. Therefore, there is an effect of asset structure on firm value.
Investing in the two basic classes that make up the assets structure (noncurrent and current assets) require a great investment which determines the future of the company. According to Campello and Giambona (2013), the firm held investments in fixed and current assets with the aim of recovering the cash invested in such assets. According to Van Horne (2013), operational managers who employ diverse assets bear the majority of the duty for asset management.

2.3 Empirical review
The recent study of Murat and Derya (2019) on the impact of intangible assets, sustainable growth on value of quoted Turkey firm. Using Ordinary least square and Heckman two-stage estimation in analyzing the panel data of innovative property, and economic competence from sample of 1,353 between 2005 and 2013. The study finds that the cumulative value of intangible assets has positive impact on the growth rates. The study further shows that computerized database, and economic competence impact on the growth rates and value of firms quoted Turkey.

Zaher (2019) evaluates the relationship between firm size, asset structure, and firm value. The impact firm size, and asset structure has on the value of firms. Descriptive research design and adopted the ordinary least square regression in analyzing the data collected from mining and extraction firms between 2010 and 2018. The finding shows that the combination firm size and asset structure has positive significant impact on value of mining and extraction industry.

Similarly, Mwanik and Job (2018) evaluated the effect of asset structure on value of firms quoted under the manufacturing sector of Nairobi securities exchange Kenya. Asset structure was proxied using Property, Plants and Equipment to total assets, current assets to total assets while firm value was measured using market to book value. Data collected from 11 manufacturing firms between 2012 to 2016 were analysed using ordinary least square regression analysis. They found that asset structure has positive significant effect on value of firm. Property, Plants and Equipment, and long-term investments have significant effect on firm value, while current assets and intangible assets have insignificance effect on firm value.

In A similar study by Irungu, Muturi, Nasieku and Ngumi (2018) on asset tangibility and performance of quoted companies in the Nairobi Securities Exchange Kenya. The panel data were collected from the financial statements and were analysed using dynamic panel data regression model while analysis of variance. The finding shows positive significant relationship exists between asset tangibility and financial performance. Also, tangibles have positive and significant impact on performance, while intangible assets have negative insignificant impact on the performance of quoted companies in the Nairobi Securities Exchange Kenya.

Glova and Mrázková (2018) evaluates the impact of intangibles assets on the value of firm. Descriptive design, ordinary least square regression was adopted, and data collated from 1520 between 2011 and 2015 fiscal years. Intangible assets were proxy using research and development. The finding shows that research and development has positive significant impact
on the value of firms. The finding reveals that research and development is a driver of firm’s market value.

Nabil (2018) investigates the influence of fixed assets on the profitability of firms in Pakistan's textile, cement, and sugar industries. Data were collated from sample of three industries (sugar, cement, and textiles) from 2010 to 2017 and use regression analysis to demonstrate the influence of fixed assets on business profitability. The findings indicate a substantial connection between the dependent variable (Net profit) and the independent factors (fixed assets).

3. Methodology
3.1 Research Design
This study adopts the **ex-post facto** research design as it deals with event that had taken place and secondary data were readily available for collection.

**Source of Data Collection:** Data for this study were collated from the manufacturing companies financial report and stock exchange fact book for between 2011 and 2020.

**Method of Data Analysis:** This study used descriptive statistics, correlation matrix and ordinary least squares (OLS) linear regression model in testing the hypothesis of the study. E-view 9.0 econometric statistical software package was used for the analysis.

The variables and their proxy were operationalized as follows.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Tobin’s Q</th>
<th>Tobin q is measured as ratio of market value to book value of the company share. Inspirations were drawn from prior studies like Saleh (2018).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variables</td>
<td>Property, Plant and Equipment/ Sales. Inspirations were drawn from prior studies like Mwaniki and Job (2017).</td>
<td></td>
</tr>
<tr>
<td>Intangible assets</td>
<td>Intangible Asset (patent right+ copy right+ goodwill+ trade market) / Total Assets. Inspirations were drawn from prior studies like Saleh (2018).</td>
<td></td>
</tr>
<tr>
<td>Financial assets</td>
<td>Financial assets/ Total assets. Inspirations were drawn from prior studies like Mwaniki and Omagwa (2017).</td>
<td></td>
</tr>
<tr>
<td>Current assets</td>
<td>Current Assets (inventory + account receivables) \ Total Assets. Inspirations were drawn from prior studies like Anas and Mohammad (2015) and Saleh (2018).</td>
<td></td>
</tr>
<tr>
<td>Board effectiveness</td>
<td>Number of board meeting held within the periods. Inspirations were drawn from prior studies like, Richard (2014) and Allam Adel and Sameh (2013).</td>
<td></td>
</tr>
</tbody>
</table>

3.2 Model Specification
The study adopts the model of Saleh (2018) examines the effect of tangible and intangible assets investments on firm value. The model establishes the relationship between the dependent firm
value and independent variables: tangible fixed assets, intangible fixed assets. Saleh’s model is 
\[ \text{STR} = \text{TANG}, \text{INTANG}, \text{CR} \]
The model was modified to suit the variables selected for this study, as follows
\[ \text{Tobin Q} = f(\text{INTA}, \text{LTIN}, \text{CURA}, \text{PPE}) \]

**Moderating model**
\[ \text{Tobin Q} = f[\text{BODE}*(\text{INTA}, \text{LTIN}, \text{CURA}, \text{PPE})] \]

Where: \( \text{TobinQ} = \) firm value; \( \text{CURA} = \) Current Assets; \( \text{LTIN} = \) Financial assets; \( \text{INTA} = \) Intangible Assets; \( \text{BODE} = \) Board Effectiveness; \( \text{PPE} = \) Property, Plan, and Equipment; \( C_0 \) and \( \beta_0 = \) Constant; \( C_1, \ldots C_4, = \) is the coefficient of the regression equation. \( \varepsilon = \) Error term; \( i= \) is the cross section of firms used; \( t = \) is years.

4. Results and Discussion

4.1 Data Analysis

The ordinary least square regressions analysis was used in the study to determine the involvement of the corporate board in the causal effects connection that exists between asset composition and business value. Other preliminary analysis such as descriptive statistics, normality test, correlation analysis, variance inflator factor, and check for the presence of multicollinearity in the data collected and analyzed for the study.

**Descriptive Statistics:** The descriptive statistics result displays the average value for each variable, as well as its maximum and lowest values, standard deviation, and normality test.

**Table 1 Descriptive Statistics**

<table>
<thead>
<tr>
<th></th>
<th>TOBINQ</th>
<th>BODE</th>
<th>INTA</th>
<th>LTIN</th>
<th>CURA</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.972543</td>
<td>4.178616</td>
<td>0.094503</td>
<td>0.039635</td>
<td>0.412566</td>
<td>0.420478</td>
</tr>
<tr>
<td>Median</td>
<td>0.763000</td>
<td>4.000000</td>
<td>0.100000</td>
<td>0.030000</td>
<td>0.410000</td>
<td>0.430000</td>
</tr>
<tr>
<td>Maximum</td>
<td>12.02000</td>
<td>7.000000</td>
<td>1.000000</td>
<td>0.170000</td>
<td>0.580000</td>
<td>0.640000</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.070000</td>
<td>2.000000</td>
<td>0.010000</td>
<td>0.000000</td>
<td>0.240000</td>
<td>0.260000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.905433</td>
<td>0.850719</td>
<td>0.066031</td>
<td>0.032211</td>
<td>0.067391</td>
<td>0.095243</td>
</tr>
<tr>
<td>Skewness</td>
<td>12.15533</td>
<td>0.756429</td>
<td>7.740870</td>
<td>0.748110</td>
<td>0.418130</td>
<td>2.810102</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>248.0230</td>
<td>4.240135</td>
<td>94.20926</td>
<td>2.856970</td>
<td>3.656159</td>
<td>25.25129</td>
</tr>
</tbody>
</table>

Jarque-Bera 2008278. 126.7587 283510.7 74.83371 37.42718 17447.16

Probability 0.000000 0.000000 0.000000 0.000000 0.000000

Source: Descriptive Statistics Result

The descriptive statistics result shows that on the average, manufacturing companies used in the study has positive value of 0.972, maximum value of 12.02 and minimum value of 0.07 within the period under study. The positive average value reveals that manufacturing companies have positive value within the period under review. The result shows that manufacturing companies in Nigeria, holds about 42 percent of their total assets in the form of property, plant and equipment while some maintain as high as 64 percent.
The result of the intangible assets reveals that on the average, manufacturing companies maintain about 9 percent of their assets in intangible form, while some companies maintain other minimum intangible assets of 1 percent. The result of the financial assets reveals some firms maintain high level of financial assets when compared with other class of assets, some maintain minimum level.

The result of the current assets reveals that on the average, manufacturing companies maintain about 41.3 percent of their assets as current assets, while some companies maintain maximum current assets of 58 percent other maintain minimum current assets of about 24 percent of total assets. This shows the level of liquidity of manufacturing firms across Nigeria.

Normality Test

Table 2: Normality test:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>W</th>
<th>V</th>
<th>z</th>
<th>Prob&gt;z</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOBINQ</td>
<td>200</td>
<td>0.7714</td>
<td>464.08</td>
<td>61.505</td>
<td>0.0000</td>
</tr>
<tr>
<td>PPE</td>
<td>200</td>
<td>0.6526</td>
<td>434.23</td>
<td>52.345</td>
<td>0.0000</td>
</tr>
<tr>
<td>BODE</td>
<td>200</td>
<td>0.7576</td>
<td>451.76</td>
<td>59.186</td>
<td>0.0000</td>
</tr>
<tr>
<td>INTA</td>
<td>200</td>
<td>0.5437</td>
<td>425.93</td>
<td>52.038</td>
<td>0.0000</td>
</tr>
<tr>
<td>LTIN</td>
<td>200</td>
<td>0.3452</td>
<td>557.85</td>
<td>36.524</td>
<td>0.0000</td>
</tr>
<tr>
<td>CURA</td>
<td>200</td>
<td>0.6605</td>
<td>431.06</td>
<td>51.563</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Shapiro wilk normality test

The Shapiro wilk normality test result reveals that all the variables used are normally distributed at 1%. This indicates that the result of the analysis can be relied upon in making generalization and in policy formulation. The result of the Shapiro normality test is like the normality test result produce by the Jarque-Bera statistics probability.

4.2 Correlation Analysis.

In examining the relationship that exist among the variables and check for multi-collinearity, the study employed the spearman rank correlation, and the results are presented in table 3

Table 3 Pearson Correlation coefficient analysis

<table>
<thead>
<tr>
<th></th>
<th>TOBINQ</th>
<th>PPE</th>
<th>INTA</th>
<th>LTIN</th>
<th>CURA</th>
<th>BODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOBINQ</td>
<td>1.000000</td>
<td>0.032509</td>
<td>0.015030</td>
<td>0.051788</td>
<td>0.004480</td>
<td>0.073424</td>
</tr>
<tr>
<td>PPE</td>
<td>0.032509</td>
<td>1.000000</td>
<td>0.595782</td>
<td>0.257551</td>
<td>0.612104</td>
<td>0.174058</td>
</tr>
<tr>
<td>INTA</td>
<td>0.015030</td>
<td>0.595782</td>
<td>1.000000</td>
<td>0.065607</td>
<td>0.028073</td>
<td>0.074298</td>
</tr>
<tr>
<td>LTIN</td>
<td>0.051788</td>
<td>0.257551</td>
<td>0.065607</td>
<td>1.000000</td>
<td>0.074298</td>
<td>0.110390</td>
</tr>
<tr>
<td>CURA</td>
<td>0.004480</td>
<td>0.612104</td>
<td>0.028073</td>
<td>0.074298</td>
<td>1.000000</td>
<td>0.192564</td>
</tr>
<tr>
<td>BODE</td>
<td>0.073424</td>
<td>0.174058</td>
<td>0.004272</td>
<td>0.110390</td>
<td>0.192564</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

Source: Correlation analysis result.

The result shows that company value (TOBINQ) is positively associated with property, plant and machinery (0.0325), the result reveals that an increase in property, plant and machinery, intangible assets, financial assets, current assets and board effectiveness would lead to increase
in the value of manufacturing firms. However, the increase can occur if the property, plant and equipment is effectively utilized in the production process.

Using the 75 percent association criterion, the study discovered that no two variables were completely linked. This demonstrates that there is no multi-collinearity among the variables utilized in the study.

**Variance Inflation Factor test**

In checking for multi-collinearity among the variables used, the study carried out the variance inflation factor (VIF) test. The VIF result is presented below:

**Table 4: Variance Inflation Factor test:**

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOBIN</td>
<td>1.02</td>
<td>0.9803</td>
</tr>
<tr>
<td>PPE</td>
<td>1.01</td>
<td>0.9901</td>
</tr>
<tr>
<td>BODE</td>
<td>1.01</td>
<td>0.9901</td>
</tr>
<tr>
<td>INTA</td>
<td>1.02</td>
<td>0.9803</td>
</tr>
<tr>
<td>LTIN</td>
<td>1.02</td>
<td>0.9803</td>
</tr>
<tr>
<td>CURA</td>
<td>1.04</td>
<td>0.9615</td>
</tr>
</tbody>
</table>

**Mean VIF** | 1.028

The variance inflation factor test result table above shows the mean value of 1.028. The mean value (1.028) is less than 10 rejection benchmarks. The mean value indicates the absence of multi-collinearity in our model. This result (Variance inflation factor test result) confirms the finding from the correlation analysis which shows the absence of multi-collinearity using 75 percent acceptance region in determining the level of association among the variables used.

**4.3 Moderating Effect of Corporate Board**

**Table 5 Correlated Random Effect – Hausman Test**

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>2.908307</td>
<td>5</td>
<td>0.7141</td>
</tr>
</tbody>
</table>

The Hausman effect test result shows a chi-square statistic value of 2.908 and probability value 0.714, this chi-square probability value is above 10 percent. Based on the result, the random effect is accepted, and the fixed effect is rejected. The study therefore used the random effect to correct the problem of heterogeneity in the data used for the study. Table 6 below is the regression result adjusted for random effect (detail of the result is presented in table 6 under the appendix).
Table 6 TOBIN Q Test Result
Dependent Variable: TOBINQ
Date: 01/22/22  Time: 00:22
Sample: 2011 2020
Periods included: 10
Cross-sections included: 20

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.131868</td>
<td>0.359967</td>
<td>3.144367</td>
<td>0.0017</td>
</tr>
<tr>
<td>BODE*PPE</td>
<td>0.113764</td>
<td>0.068742</td>
<td>1.654942</td>
<td>0.0719</td>
</tr>
<tr>
<td>BODE*INTA</td>
<td>0.163087</td>
<td>0.006999</td>
<td>23.30147</td>
<td>0.9658</td>
</tr>
<tr>
<td>BODE*LTIN</td>
<td>0.368812</td>
<td>0.092810</td>
<td>3.973839</td>
<td>0.0000</td>
</tr>
<tr>
<td>BODE*CURA</td>
<td>0.112541</td>
<td>0.019011</td>
<td>5.919783</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Effects Specification
Cross-section fixed (dummy variables)

| R-squared     | 0.605893    | Mean dependent var | 0.972543 |
| Adjusted R-squared | 0.535604    | S.D. dependent var | 0.905433 |
| S.E. of regression | 0.738023    | Akaike info criterion | 2.331075 |
| Sum squared resid | 386.7209    | Schwarz criterion | 2.831275 |
| Log likelihood  | -841.6022   | Hannan-Quinn criter. | 2.523286 |
| F-statistic     | 5.774652    | Durbin-Watson stat | 2.101101 |
| Prob(F-statistic) | 0.000000    |                 |          |

The analysis result of the firm value model shows an R-sq of 0.606 and R-sq (adj) 0.536 respectively. The R-squared adjusted value of 0.536 (53.6%) indicates that assets composition can explain about 53.6 percent of changes in the level of firm value among manufacturing companies in Nigeria. That is, about 53.6% changes in firm value among manufacturing companies in Nigeria can be attributable to their asset’s composition. The F-statistics value of 5.775, and its probability value of 0.000, show that the regression model used is well specified and the specification is statistically significant at 1% levels.

H01: The moderating role of the board on property, plant and equipment acquisition has no significant effect on value of manufacturing firms in Nigeria.

The analysis result of the moderating role of Board on the effect of Property, plant and equipment acquisition on company value (market value) shows coefficient value of 0.1137 and probability value of 0.07. This indicates that property, plant and equipment positive and significant effect on value of manufacturing companies quoted in Nigeria Stock Exchanges at 10percent level. The finding is in line with the finding from the study of Mwanik and Job (2018 - Kenya) who evaluates the effect of asset structure on value of firms quoted under the manufacturing sector of Nairobi securities exchange Kenya and finds positive significant effect on value but contrary to the finding from the study of Grace and Mwangi (2018) whose finding
shows a negative but insignificant relationship between tangible noncurrent assets and firm value.

**H02: The moderating role of the board on intangible assets acquisition has no significant effect on value of manufacturing firms in Nigeria.**

The analysis result of the moderating role of board on the effect of Intangible assets acquisition on value of manufacturing firms in Nigeria shows coefficient value of 0.163 and probability value of 0.96. The coefficient value indicates that intangible assets positively affect value of quoted manufacturing companies in Nigeria Stock Exchanges. The probability value of 0.96 shows that the positive effect of asset intangible on is insignificant on the value of manufacturing companies quoted in Nigeria. The finding from the study is in line with the finding from similar study carried out in Egypt by Mehdi, Pajoohi, and Mohammad (2012) and Mwanik and Job (2018) in Kenya, on the nexus intangible assets and market value of firms under the metals industry of Egyptian stock exchange. But contrary to the finding from the study of Ocak, and Fındık (2019) Glova and Mrázková (2018) on the impact the components of intangible assets has on the value of firms quoted in Turkey stock exchange who found significant impact of intangible assets on value of firms.

**H03: The moderating role of the board on financial assets has no significant effect on the value of manufacturing firms in Nigeria.**

The analysis result shows positive coefficient value of 0.369 and probability value of 0.00. The coefficient value indicates that the moderating role of corporate board on financial assets positively affects the value of quoted manufacturing companies in Nigeria Stock Exchanges. The probability value of 0.00 showed that the positive moderating role of Board on the effect of financial assets on the value of manufacturing companies in Nigeria is significant. This shows that increasing the financial assets of manufacturing companies can significantly drive value of manufacturing companies in Nigeria. This reveals that increasing the investment in financial assets can significantly improve the market value of companies in Nigeria. The finding is in line with the finding from the study of Mwanik and Job (2018) and Mwaniki and Omagwa (2017) carried out in Kenya.

**H04: The moderating role of the board on current assets has no significant effect on value of manufacturing firms in Nigeria.**

The analysis result shows positive coefficient value of 0.1125 and probability value of 0.00. The probability value of 0.00 showed that the positive moderating role of Board on the effect of current assets on the value of manufacturing companies in Nigeria is significant. This means that increasing the current assets of manufacturing companies can significantly drive value of manufacturing companies in Nigeria. The finding from the study is in line with the findings from similar study carried out in Kenya by Nyamasege, Okibo, Nyang’au, Sang’ania, Omosa, and Momanyi, (2014) on the nexus capital structure, assets structure and firm value among manufacturing quoted in Nairobi Stock exchange. But the finding was contrary to that of Mwanik and Job (2018) and Mwaniki and Omagwa (2017) in Kenya, on the effect of asset
structure on the firm value of firms quoted under the manufacturing sector of Nairobi securities exchange Kenya.

5. Summary and Conclusion
The study recommends that management of manufacturing companies in the Nigeria should formulate policy that will enhance the moderating role of the over the investment in property plant and equipment as this will increase the market value of their companies and achieve shareholders wealth maximization objective.

The study recommends that management of manufacturing companies in their effort to enhance the value of manufacturing companies should increase the level of the moderating role of corporate board on intangible assets. Increasing the moderating role of the board on intangible assets would lead to high market value and capital gain for shareholders.

The study recommends that management of manufacturing companies should consider increasing the moderating role of corporate board on financial assets, this will enhance the market value of manufacturing companies quoted on the stock exchanges of Nigeria.

The study recommends that management of manufacturing companies should increase the moderating role of corporate board on current assets as this will enhance the corporate value of manufacturing companies quoted on the stock exchanges of Nigeria.

References


Murat O. & Derya F. (2019). The Impact of Intangible Assets and Sub-Components of intangible assets on sustainable growth and firm value: Evidence from Turkish Listed Firms. Sustainability Article


Ocak, N. & Fındık, E. (2019). Impact of Intangible Assets on firm value of Hong Kong Listed Information Technology Companies: Macrothink institute: Hong Kong


