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Manufacturing Economic Value Creation and Economic Development

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Abstracts
In Nigeria, firms specifically manufacturing firms lack sufficient ability to innovate in order to create value and add value to expand their operation to bring about expansion and economic progress because there is no conducive environment for them to operate. Against this background, this study examined manufacturing economic value creation and economic development in Nigeria. The study specifically, analyses the trend of manufacturing economic value creation, estimates the relationship between manufacturing economic value creation and economic development and analyse the direction of causality relationship between manufacturing economic value creation and economic development in Nigeria. The secondary data for the analysis were collected from World Bank Development Index (WDI). The data were analysed using the Fully Modified Ordinary Least Squares (FMOLS) method and Granger causality test while normality test, correlation analysis and unit root test were conducted as a preliminary evaluation of the data collected. The result of the fully modified OLS indicates that value creation (β =0.629402, t=10.27719 & p<0.05) and greenhouse gas emission (β=0.114513, t=3.108018 & p<0.05) exert a significant positive effect on economic development in Nigeria while the coefficient of manufacturing capacity utilisation (β=0.064705, t=1.054548, p>0.05) indicates that manufacturing capacity utilisation does not have a significant effect on economic development in NigeriaThe study concluded that value creation has a significant positive effect on economic development in Nigeria. among others, the study recommends the need for government to ensure that policy or programmes on manufacturing should be aimed at improving their capacity to create value by providing a conducive environment that help to improve performance in the Nigerian manufacturing industry

Keywords: Economic Development, Manufacturing sector, Value Creation, Value added, Fully Modified OLS

1.Introduction

Value creation is critical to a society's economic success and development because it provides the foundation for market systems and social institutions to evolve effectively through time in response to people's ever-changing preferences (Gregorio, 2013). The development of strategic

resources is frequently required to create value. It occurs when a company's operational efficiency improves, resulting in more money for its stockholders (Oladele, 2013). (Pandey, 2002) defined value creation as the growth in the financial worth of shareholders produced by the performance of a company, as measured by the ratio of market value to book value of shares. Meanwhile, value refers to the feature that makes anything appealing, valuable, or helpful, as well as the quantity of money required to acquire something and what must be given, done, or endured in order to achieve it. When a company creates value, it raises or improves the value of its stakeholders. To the stakeholder, this might entail more appreciation, more power, or a stronger political connection, as well as an improvement in social position or happiness (Oladele, 2013).

The connection value, or the total of the values generated by the customer and supplier in a relationship, may come from a variety of places. It might come from the supplier's or buyer's resources and talents that benefit the other. However, value may be generated by both sides working together, which is usually done via cooperation (Tescari & Brito, 2016). Among the many ways of increasing value creation are the growth of relational and intellectual capital, supply chain and customer relationship management, trust, and commitment (Barcelo-Valenzuela et al., 2008). The share of value produced by the supplier-customer relationship that is captured by the customer is represented by the wedge between the customer's willingness to pay and the price charged by the provider (buyer). As a result, raising the customer's willingness to pay or lowering the price charged, or both, increases the value gained by the buyer, sometimes at the cost of the provider. If the opposite movements occur, this part of value may also be lowered (Tescari & Brito, 2016)

Of course, creating and developing value for consumers takes a lot of effort and long-term expenditures. They are the ultimate source, or at the very least a crucial driver, of strategic success (Verdin & Tackx, 2015). Profitability, dividend policy, and finance policy, according to (Naceur & Goaied, 2011), are three determinants of value generation. Banks will be able to dramatically enhance their market capitalization if they can add growth to their profitability. The "bird-in-hand" hypothesis states that the market price of a share is a function of the present value of the estimated cash flows realisable from the shares, i.e., the estimated cash dividends payable during the ownership term and the market price realisable upon the shares' disposition. Splitting a firm's net operational cash flows into fixed cash flows for debt and residual cash flows, on the other hand, has no influence on the firm's value in the absence of taxes, agency expenses, or information irregularities.

For ongoing excellent performance, value generation is a required but insufficient requirement. It is insufficient to just provide a useful product or service. In order to capture enough value, price and cost structures will need to be adjusted. For its stockholders, the service must create enough income and profit. The service will not be sustainable in the long run if the value provided by a private firm is not adequately captured. The firm's worth evolves throughout time, owing mostly to the firm's inventions and advancements. Value creation is increased when these innovations raise the consumer's willingness to pay (for example, when the product's quality improves) or lower the cost of supply (for example, via the use of alternative distribution channels such as the Internet) (Lieberman & Balasubramanian, 2007). As the gains of advancement are passed on to consumers, communities, rivals, and others, the benefits garnered by the originator sometimes fade swiftly (Gregorio, 2013). Because there is no suitable climate in the economy to function, enterprises in Nigeria, particularly manufacturing firms, lack the capacity to innovate in order to produce value and add value in order to extend their operations and bring about expansion and economic success. They struggle to get financial resources, particularly from commercial banks, which limits their potential to produce value (Hernita et al., 2021).

On the basis of the relevance of buyer-supplier interactions to firm competitiveness and economic development, various studies have been undertaken to highlight the importance of value creation in company growth and performance, as well as how value creation promotes shareholder wealth. However, since most studies concentrate on either the buyer or the supplier, they automatically equate value creation with value obtained by the party under investigation, the study of value creation in these interactions has various problems and offers a variety of methodologies (Pitelis Dr., 2009). Furthermore, the majority of the research focused on established and developing market economies, with little or no attention paid to African nations, including Nigeria. Furthermore, no empirical work has been done utilising quantitative data to determine the influence of manufacturing enterprises' economic value on economic development. In light of this, the overall goal of this research was to look at manufacturing economic value production and Nigerian economic growth. The research looks at the trajectory of manufacturing economic value production in Nigeria, as well as the link between manufacturing economic value creation and economic development and the direction of causation between manufacturing economic value creation and economic development. This research is necessary since the notion of value creation is important to the subject of strategic management, as a company or society that does not produce value will not be able to increase in profit, expand, or improve economically.

This study conducts an extensive literature review and consults relevant research articles published in a variety of academic journals and conference proceedings in order to provide answers to the stated objectives, and uses both the Fully Modified OLS technique and the Granger causality test on annual time series data from secondary sources. Manufacturing capacity utilisation and greenhouse gas emissions were independent factors in the model, whilst economic development was the dependent variable. Because both value added and value produced are represented in a firm's profit level, which is captured by manufacturing value added for manufacturing businesses, this research uses manufacturing value added as the measure of value creation to estimate its impact on economic development. As a measure of economic advancement, the GDP per capita was utilised. Following this introductory section, the second half of the study focuses on a literature review with the goal of clarifying the idea of value creation, providing a theoretical framework for the concepts, and exploring the current state of knowledge on the topic. The third part defines and examines the research technique, including how to obtain information for the study and how to analyse the data. The results and conclusion section of the study is the final section.

2. Review of the Literature

The conceptual review, theoretical expositions, and assessment of current investigations make up the three sections of this study. On a conceptual level, the term "value" refers to something's worth or significance. Simply said, it is the characteristic that makes anything attractive, valuable, or helpful; the amount of money required to acquire something; or what must be given, done, or endured in order to gain something (Oladele, 2013). Value encompasses not just achieved utility as shown by monetary returns or pleasure (e.g., consumer surplus, shareholder returns, management rents), but also the potential for future usefulness inherent in value that has not yet been appropriated (Gregorio, 2013). The perceived advantage to the client is what value creation is all about (Verdin & Tackx, 2015). It is also described as a growth in the financial worth of shareholders resulting from an organization's success, as measured by the ratio of market value to book value of shares (Pandey, 2002). The development of strategic

resources is frequently required to create value. It occurs when a company's operational efficiency improves, resulting in more money for its stockholders (Oladele, 2013). Value creation is defined by economic theories as the difference between the value of the final product (the benefit received by the end user) and the value necessary to manufacture the product (the cost to the producer) (David Besanko et al., 1996). On the other hand, economic development refers to a consistent course of action that improves an economy's productive and fruitful potential through time, resulting in higher levels of national production and wealth (Todaro & Smith, 2005). Economic development, according to (Aliber & Kindleberger, 2008), is defined as increased output from increased input and efficiency. Economic development, according to (Snowden, 1986), is a long-term increase in the ability to deliver more diversified economic commodities to the people, based on advances in technology as well as institutional and ideological changes.

Sen's capacity theory and interactive social-economic development model give a theoretical foundation for this research. The capacity hypothesis is based on the premise that the most important human need is to seek happiness, which is not synonymous with wealth maximisation. Person capacities are used to define well-being, implying genuine chances to be and accomplish what is most important to each individual (Sen, 1979). Functions and capacities are the two basic foundations of Sen's philosophy. The so-called "beings and doings," or everything a person can perform, is classified as a function. Being educated, fed, and a member of a community are examples of "beings," while "doings" include things like playing football, travelling, reading, and utilising energy resources. They are all part of a human's operating system. The number of accessible functions is related to one's sense of well-being. Sen refers to this as "well-being freedom," which is the foundation for one's own happiness (Sen, 1979). The interactive Model of Self-Reliant Socioeconomic Development is designed to supplement the model of entrepreneurial development in order to produce technical innovation and result-oriented entrepreneurs with practical experience in key industrial areas. The double headed arrows are the most important institutions for progress. In the school system, ascending arrows represent academic career advancement, while descending arrows stress the function of higher education in providing instruction to match classroom learning with actual job experience in industry. Workers in the business will also guarantee that education and research are tailored to the country's requirements (Ogundele, 2005). Several studies have been undertaken against an empirical backdrop to highlight the relevance of value creation in corporate development and performance, as well as how value creation increases shareholder wealth. Whatever the case may be, the bulk of these research focused on established and developing market economies, with just a handful mentioning African nations, including Nigeria. Furthermore, previous research focused on how innovation activities translate to value creation, the magnitude of economic value creation and how it is distributed among a firm's stakeholders, value creation and capture in buyer-supplier relationships, and entrepreneurial intensity and shareholder value creation. (Figueiredo, 2011), for example, investigated value creation via innovation in mid-range developing markets such as Ecuador and Colombia. These markets are especially important since they have advanced swiftly from typical emerging economies but are not yet designated newly developed economies. The value creation activities at SMEs in the Ecuadorian market are the subject of this research. The author's results show that SMEs in mid-range developing economies build strategies to produce value for clients from emerging markets, and that they utilise partnerships to get access to the essential materials, such as natural resources and goods. (Lieberman & Balasubramanian, 2013) established a broad technique for estimating the quantity of economic value generation and its distribution across a firm's stakeholders using publicly accessible data in a separate research. Data from General Motors and Toyota was used to demonstrate the process. The findings revealed that GM's value

generation and distribution structure differs dramatically from Toyota's. In general, the Japanese automobile sector has outperformed the US industry in recent decades, therefore the discrepancies in value creation and distribution seen in these statistics might be due to variances between the two countries.

(Paulo, 2016), for example, creates and tests a novel model for value generation and capture in buyer-supplier partnerships. Value production is unravelled by the identification of its sources, both intrinsic and relational, in addition to encompassing both value creation and capture in the same model. A survey of 127 duos was used to evaluate the concept (buyer and supplier). Both parties gain from the entire value produced by the partnership, according to the findings, although the degree of value capture differs. The supplier sees a higher value in the connection than the customer does, which motivates the former to put in even more effort to keep the relationship going. (Cezanne & Saglietto, 2016) also look at how human capital-intensive businesses create symbolic value. Examine how the inalienable and unique character of particular human capital necessitates a rethinking of the firm's function and limitations in light of critical resource theory. They illustrate that the company tries to coordinate the specialisation of its major partners within the constraints of its economic borders in order to maximise its value potential over time. As a result, the firm's worth is determined by how well it manages all of its resources. After that, they concentrate on how HCIF may produce various values. According to the author, the firm's competitive edge is based on several types of values, particularly the symbolic value embedded in human capital. They contend that the business is the value creator, and that the consumer recognises and receives value from whatever the firm offers. (Erasmus & Scheepers, 2008) looked at the link between entrepreneurial energy and the value provided by a firm for its shareholders. The market adjusted total share return (TSR) and the value based financial performance metric Economic Value Added are used to quantify shareholder value generation, while an adapted corporate entrepreneurship (CE) measuring instrument is used to gauge entrepreneurial intensity (EVA). For the year 2003-2005, the research was carried out on a sample of companies listed on the Johannesburg Securities Exchange (JSE) in the industrial sector. The findings show that EI and the change in an enterprise's EVA from 2003 to 2005 have a statistically significant association. Over time, it seems that businesses with a greater level of entrepreneurship contribute more economic value. Excess profits for shareholders seem to be generated by organisations with greater levels of entrepreneurship.

3. Methodology

Survey research was used in this study. The study design isn't only for gathering facts; it may also lead to the development of essential knowledge principles and the resolution of critical issues (Kerlinger, 1969). As a result, this strategy was chosen for this study since it allowed the researcher to get cross-referencing data as well as independent data validation. The unit of analysis in this research is a business whose workers (L) use the firm's capital (K) to turn materials and other acquired inputs (M) into valuable outputs, as described by (Lieberman & Balasubramanian, 2007). (Y). The amount of payments to "stakeholders" who contribute required elements of production to the business must match the firm's total revenues at any point in time. This identity may be stated as: defining Y as the firm's actual production and assuming just three stakeholders (labour, capital, and materials suppliers).

$$pY \equiv wL+rK+mM \quad (1)$$

Where: p is the price of the output, Y is the total output (measured in *real* or price-adjusted terms), L is the quantity of labor (total number of labour force), K is the amount of capital employed by the firm, M is the quantity of materials and other purchased inputs, w is the wage rate, r is the rate of return on capital, and m is the price of purchased materials (Lieberman & Balasubramanian, 2007). The equation denotes that the firm's revenues must equal its factor payments. Meanwhile, a proportional change in all prices (e.g., a doubling of p, w, r and m) leaves the relationship constant. When these variables change in such a way that, $p+\Delta p$, $Y+\Delta Y$ and so on. Assuming that the changes are small relative to the initial values, for the subsequent period, equation 2 can be written as:

$$p\Delta Y+Y\Delta p = w\Delta L+L\Delta w+r\Delta K+K\Delta r+m\Delta M+M\Delta m \quad (2)$$

Dividing by pY, noting that the shares of labour, capital and material in the revenues are $sL=(wL/pY)$, $sk=(rK/pY)$ and $sM=(mM/pY)$ and re-arranging Equation 2, we can write:

$$(\Delta Y/Y)-sL(\Delta L/L)-sK(\Delta K/K)-sM(\Delta M/M) = sL(\Delta w/w) + sk(\Delta r/r) + sm(\Delta m/m) – (\Delta p/p) \quad (3)$$

This formula represents the fact that the incremental value created by the firm in each period must equal the incremental value distributed. Based on the left hand side of Equation 3 and define R such that:

$$R = (\Delta Y/Y) - sL(\Delta L/L) - sK(\Delta K/K) - sM(\Delta M/M) \quad (4)$$

Hence, the firm's revenue is assumed to be paid out to those who provide the firm with labor, capital and materials; hence the factor shares sum to unity ($sL + sK + sM = 1$). In the economics literature on productivity, Equation (4) is the Total Factor Productivity (TFP) residual (Domingos & Hulten, 2000).

In line with the above framework as conceptualised from productivity literature, the study modeled the relationship between value creation and economic development where value creation as proxy by manufacturing value added, manufacturing capacity utilisation and greenhouse gas emission were the independent variables while economic development was measured by GDP per capita was the dependent variable. The functional relationship of the model is stated as follows:

Model 1: Value Creation and Economic Development Model

$$\mathbf{GDPc} = \boldsymbol{\beta_0} + \boldsymbol{\beta_1}\ \mathbf{VC} + \boldsymbol{\beta_2}\mathbf{MC} + \boldsymbol{\beta_3}\ \mathbf{GG} + \boldsymbol{\varepsilon} \quad \textbf{(5)}$$

Where;

GDPc = Economic Development (Gross Domestic Product Per Capita)

VC= Value Creation (Manufacturing Value Added)

MC = Manufacturing Capacity Utilisation

GG = Greenhouse Gas Emission

$\boldsymbol{\beta_1}$-$\boldsymbol{\beta_5}$ = Regression Coefficient for each independent Term

$\boldsymbol{\beta_0}$ = Constant Term

$\boldsymbol{\varepsilon}$ = Random or Stochastic Term

Model 2: Value Creation Cause and Effect Model

As stated in equation 5 above the model for the relationship is stated as: $GDPc = \beta_0 + \beta_1\ VC + \beta_2 MC + \beta_3\ GG + \varepsilon_t$. The Multivariate Granger system for the relationship between value creation and economic development is specified in general form as follows.

$$\begin{pmatrix} \mathrm{GDPc}_{1t} \\ \mathrm{GDPc}_{2t} \end{pmatrix} = CD_t + \sum_{t=1}^{p} \begin{pmatrix} \beta_{11} & \beta_{12} \\ \beta_{21} & \beta_{22} \end{pmatrix} \begin{pmatrix} \mathrm{GDPc}_{1t-1} \\ \mathrm{GDPc}_{2t-1} \end{pmatrix} + \begin{pmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \end{pmatrix}$$

In the model set up, y_{1t} does not Granger cause y_{2t} if and only if

α_{2i} =0, i = 1, 2, ----p GDPc

Based on economic theory, value creation and manufacturing capacity utilisation are expected to have positive effect on economic development but the effect greenhouse gas emission on economic development is expected to be negative. In the model, since both value added and value created is reflected by the growth in the profit level of the firm which is captured by manufacturing value added for manufacturing firms, this study makes use of manufacturing value added as the measure for value creation to determine its effect on economic development. The GDP per capital was used as proxy for economic development. The secondary data for this study were collected from World Bank Development Index (WDI). The data set in this group was entirely quantitative in nature and measured on the ratio scale. The data were analysed using the *Fully Modified* Ordinary Least Squares (FMOLS) method. This technique is an alternative approach to OLS, as proposed by (Phillips & Hansen, 1990) to provide optimal estimates of cointegrating regressions. The method modifies least squares to account for serial correlation effects and for the endogeneity in the repressors that result from the existence of a cointegrating relationship.

4. Results and Conclusion

i. Preliminary Results

In the analysis of data collected, the dynamic OLS and granger causality test are applied on the empirical data collected on the Nigerian economy on the subject matter. Meanwhile, before the empirical result is estimated, preliminary tests that informed the selection of the actual estimation techniques which include normality test, correlation and trend analysis, lag order selection and unit root test are presented as follows:

Table 1: Descriptive statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.	Jarque-Bera	Prob
GDPC	309111.1	324500.0	383000.0	193000.0	68817.65	1.936620	0.379724
VC	4.22E+12	3.90E+12	6.83E+12	1.82E+12	1.83E+12	1.656400	0.436835
MC	53.15500	54.32000	59.31000	36.10000	5.349267	30.53298	0.000000
GG	3067.222	4540.000	4600.000	1200.000	1718.576	3.000993	0.223019

Source: Author, 2019

The Jarque-Bera statistics revealed that manufacturing capacity utilisation is normally distributed, as its p-value is statistically significant at the 5% level of significance, whereas economic development, value creation, and greenhouse gas emissions are all positive. This finding shows that the stationarity test and the use of estimate methods that account for the problem of normalcy in the data set should be used to rectify the issue of normality in the data set.

Table 2: Correlation Matrix

	GDPC	VC	MC	GG
GDPC	1.000000	0.918982	0.561951	-0.806717
VC	0.918982	1.000000	0.478726	-0.905350
MC	0.561951	0.478726	1.000000	-0.359189
GG	-0.806717	-0.905350	-0.359189	1.000000

Source: Author, 2019

Table 2 shows the connection between the explanatory factors as a test of multicollinear distortions. The correlation coefficients are not very strong in general. Table 2's Pearson correlation coefficients for value creation have the greatest absolute value of 0.91. One may argue that, although most values deviate considerably from zero, this is unimportant given the low strength of the values. Furthermore, no evidence of multicollinear distortions was found in trials that included eliminating variables in a pseudo stepwise approach.

Table 3: Lag-Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	31.48288	NA	4.64e-07	-3.233279	-3.037229	-3.213792
1	80.18095	68.75023*	1.06e-08*	-7.080112*	-6.099861*	-6.982673*

LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Source: Author, 2019

Based on the result in table 3 a maximum of 1 lag as suggested by sequential modified LR test, Final prediction error, Akaike information criterion (AIC) and Hannan-Quinn information criterion (HQ) was used in the analysis

Table 4: Unit root test results.

Variables		**ADF Test (Value)**		**Order of Integration**
		Level	**First Diff**	
GDPc		2.400308	-2.686255	I(1)
VC		1.458846	-5.018800	I(1)
MC		0.449041	-2.306669	I(1)
GG		-1.318056	-3.373140	I(1)
Critical Value @	1%	-2.708094	-2.717511	
	5%	-1.962813	-1.964418	
	10%	-1.606129	-1.605603	

Source: Author, 2019

The unit root test utilising the Augmented Dickey Fuller (ADF) test revealed that all of the variables in the data set are stationary at the first difference at a significance level of 5%. As a consequence, the ADF test revealed that all variables are stationary only at the first difference [I(1)] at a level of significance of 5%.

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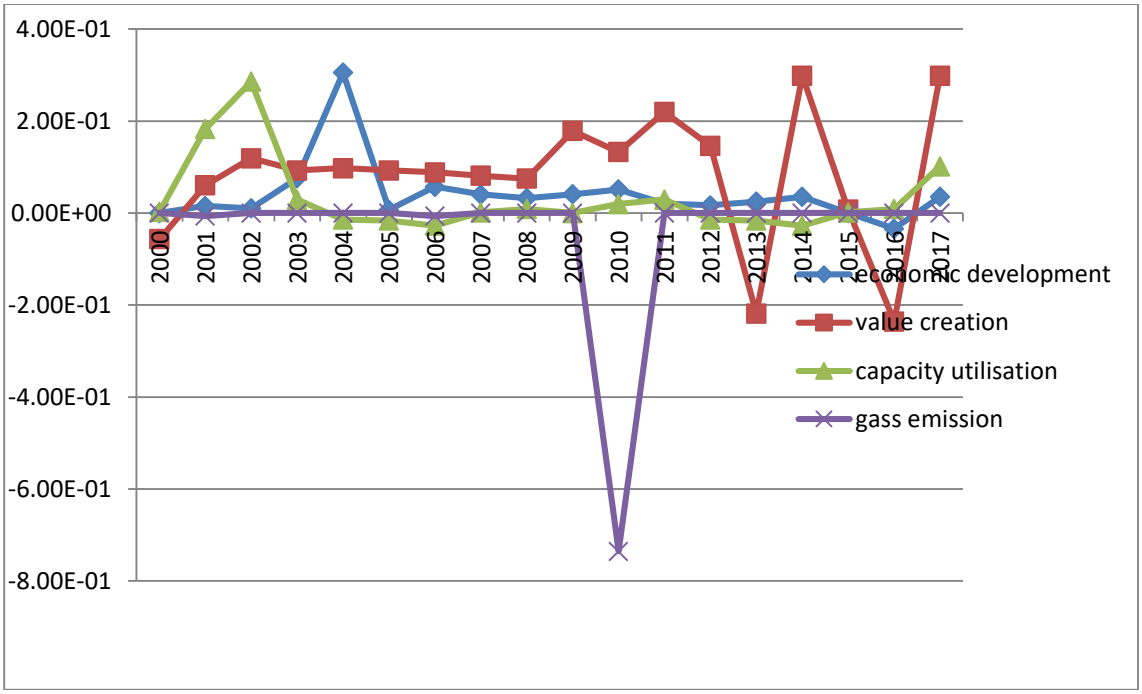
ii. Trend Analysis

The trend of economic development and value creation is presented with the aid of line graph as follows:

Figure 2: Trend of Economic Development and Value Creation in Nigeria from 1984-2015



Source: Author, 2019

Figure 1 depicts the pattern of economic growth, which reveals that the rate of economic development has been extremely slow and rather unsteady throughout the time. However, between 2002 and 2005, the rate of economic growth accelerated dramatically. Throughout the era, value creation has been quite variable. Although the trend of value creation remained constant and modest between 2002 and 2008, there was a substantial contraction in the trend of value production between 2012 and 2014, as well as between 2014 and 2017. Although the trend of industrial capacity utilisation was low and unpredictable throughout the period, it grew dramatically between 2000 and 2003. The trend in gas emissions has been fairly modest throughout the years, but it spiked dramatically between 2009 and 2011.

iii. Empirical Results

Table 5: Fully Modified OLS Estimate

Dependent variable: GDPc				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
VC	0.629402	0.061243	10.27719	0.0000
MC	0.088716	0.193847	0.457663	0.6548
GG	0.114513	0.036844	3.108018	0.0083
C	-6.868293	1.912186	-3.591854	0.0033
Long-run variance	0.002120			
R-squared	0.894183			
Adjusted R-squared	0.869764			

Source: Author, 2019.

The calculated model shows that value creation (=0.629402, t=10.27719, p0.05) and greenhouse gas emissions (=0.114513, t=3.108018, p0.05) have a considerable beneficial impact on Nigerian economic growth. According to the findings, a unit increase in value creation leads to a 63 percent rise in economic growth, whereas a unit increase in greenhouse gas emissions leads to an 11 percent increase in economic growth. However, the manufacturing capacity utilisation coefficient (=0.064705, t=1.054548, p>0.05) reveals that manufacturing capacity utilisation has no meaningful influence on Nigerian economic growth. The country's recent focus on sustainable development, with a particular emphasis on environmental preservation, may have had a favourable influence on greenhouse gas emissions and economic growth. Given the high level of unemployment and insufficient training and development of workers in the nation, the minimal impact of industrial capacity utilisation should come as no surprise.

Table 6: Granger Causality Test

Hypothesis	F-Statistics	Prob.
Panel A: **Causality from other variables to GDPC**		
VC →GDPc	4.02280	0.0011
MC →GDPc	2.76962	0.0072
GG → GDPc	0.11504	0.7395
Panel B: **Causality from GDPC to other variables**		
GDPc → VC	0.81915	0.3731
GDPc → MC	3.51182	0.0243
GDPc → GG	3.29123	0.0911

Source: Author, 2019

Value creation and industrial capacity utilisation granger produce economic progress, as seen in Table 6. Economic growth was also shown to increase industrial capacity utilisation by 5%. According to the findings, there is a unidirectional causation between economic development and value creation, which runs at a 5% significant level from value creation to economic development. There was also a bi-causality between economic growth and manufacturing capacity utilisation, which runs at a 5% significant level on both sides.

5. Conclusion and Recommendations

The fully modified OLS indicates that value creation (=0.629402, t=10.27719 & p0.05) and greenhouse gas emission (=0.114513, t=3.108018 & p0.05) have a significant positive effect on economic development in Nigeria, however manufacturing capacity utilisation (=0.064705, t=1.054548, p>0.05) does not. The granger causality test revealed a unidirectional causality between economic development and value creation, which runs from value creation to economic development, as well as a bi-causality relationship between economic development and manufacturing capacity utilisation, which runs from both sides at a 5% significant level. According to the findings, value creation has a considerable beneficial impact on Nigerian economic growth. As a result, increased value production contributes to Nigerian economic progress. The results of a research done by (Paulo, 2016), who developed and tested a novel model for value generation and capture in buyer-supplier partnerships, confirm this conclusion. The findings showed that both parties gain from the relationship's overall value creation, although the degree of value capture differs. The supplier's worth is larger than the buyer's, which drives the former to increase its efforts even more to guarantee that the partnership continues. (Erasmus & Scheepers, 2008) research on the link between entrepreneurial intensity and the value provided by a firm for its shareholders backed up this conclusion. The findings show a statistically significant link between entrepreneurial desire and the change in an enterprise's EVA level from 2003 to 2005. Over time, it seems that businesses with greater levels of entrepreneurship contribute more economic value. Companies with greater levels of entrepreneurship seem to provide surplus returns for shareholders above market returns.

Based on the facts above, government policies or programmes on manufacturing should attempt to strengthen their ability to produce value by creating a favourable atmosphere that aids in the improvement of performance in the Nigerian manufacturing sector. In addition, policymakers, industry regulators, and practitioners should support the pursuit of the profitability goal and do more to create regulations around other performance improvement indicators than profit. Future policies should emphasise development, expansion, and performance improvement initiatives that prepare the manufacturing sector for competition and other problems in the nation.

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APPENDIXES

Year	**GDPc**	***VC***	***MC***	***GG***
2000	1.93E+05	1.8236E+12	36.1	4.60E+03
2001	1.96E+05	1.9268E+12	42.7	4.57E+03
2002	1.98E+05	2.1561E+12	54.9	4.57E+03
2003	2.13E+05	2.36335E+12	56.5	4.57E+03
2004	2.78E+05	2.5853E+12	55.7	4.57E+03
2005	2.80E+05	2.83263E+12	54.80	4.57E+03
2006	2.96E+05	3.08458E+12	53.30	4.54E+03
2007	3.08E+05	3.32687E+12	53.38	4.54E+03
2008	3.18E+05	3.57864E+12	53.84	4.54E+03
2009	3.31E+05	4.21619E+12	53.84	4.54E+03
2010	3.48E+05	4.78366E+12	54.9	1.20E+03
2011	3.55E+05	5.82636E+12	56.5	1.20E+03
2012	3.61E+05	6.68422E+12	55.7	1.20E+03
2013	3.70E+05	5.21619E+12	54.80	1.20E+03
2014	3.83E+05	6.78366E+12	53.30	1.20E+03
2015	3.83E+05	6.82636E+12	53.38	1.20E+03
2016	3.70E+05	5.21619E+12	53.84	1.20E+03
2017	3.83E+05	6.78366E+12	59.31	1.20E+03

Dependent Variable: LOG(GDPC)
Method: Fully Modified Least Squares (FMOLS)
Date: 01/03/19 Time: 10:59
Sample (adjusted): 2001 2017
Included observations: 17 after adjustments
Cointegrating equation deterministics: C
Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth
= 3.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(VC)	0.629402	0.061243	10.27719	0.0000
LOG(MC)	0.088716	0.193847	0.457663	0.6548
LOG(GG)	0.114513	0.036844	3.108018	0.0083
C	-6.868293	1.912186	-3.591854	0.0033

R-squared	0.894183	Mean dependent var	12.64064
Adjusted R-squared	0.869764	S.D. dependent var	0.228147
S.E. of regression	0.082334	Sum squared resid	0.088126
Long-run variance	0.002120		

VAR Lag Order Selection Criteria

Endogenous variables: LOG(GDPC) LOG(VC) LOG(MC) LOG(GG)
Exogenous variables: C
Date: 01/03/19 Time: 11:47
Sample: 2000 2017
Included observations: 17

Lag	LogL	LR	FPE	AIC	SC	HQ
0	31.48288	NA	4.64e-07	-3.233279	-3.037229	-3.213792
1	80.18095	68.75023*	1.06e-08*	-7.080112*	-6.099861*	-6.982673*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Pairwise Granger Causality Tests
Date: 01/03/19 Time: 13:02
Sample: 2000 2017
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
VC does not Granger Cause GDPC	17	0.14797	0.7063
GDPC does not Granger Cause VC		6.18724	0.0261
MC does not Granger Cause GDPC	17	7.80543	0.0144
GDPC does not Granger Cause MC		0.11301	0.7417
GG does not Granger Cause GDPC	17	0.11504	0.7395
GDPC does not Granger Cause GG		3.29123	0.0911
MC does not Granger Cause VC	17	0.47742	0.5009
VC does not Granger Cause MC		0.04122	0.8420
GG does not Granger Cause VC	17	3.51081	0.0820
VC does not Granger Cause GG		4.19044	0.0599
GG does not Granger Cause MC	17	0.13469	0.7191
MC does not Granger Cause GG		0.19375	0.6665