

**THE CONCEPT OF VALUE CHAINS IN AGRICULTURE, CLIMATE ACTION
AND ENVIRONMENTAL RESOURCES**

GLOBAL ISSUES & LOCAL PERSPECTIVES

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Preface

This book adopts an exegetical approach as well as a pedagogic model, making it attractive agriculture and environmental economics teachers, professional practitioners and scholars. It eschews pedantry and lays bare the issues in such clarity that conduces to learning. The book elaborates on contemporaneous *The Concept of Value Chains in Agriculture, Climate Action and Environmental Resources* issues of global significance and at the same time, is mindful of local or national perspectives making it appealing both to international and national interests. The book explores the ways in which climate change, food security, national security and environmental resources issues are and should be presented to increase the public's stock of knowledge, increase awareness about burning issues and empower the scholars and public to engage in the participatory dialogue climate change, food security, national security and environmental resources necessary in policy making process that will stimulate increase in food production and environmental sustainability.

The Concept of Value Chains in Agriculture, Climate Action and Environmental Resources: Global issues and Local Perspectives is organized in three parts. Part One deals with The Concept of Value Chains in Agriculture, Part Two is concerned with The Concept of Climate Actions and Part Three deals with the Concept of Value Chains and Environmental Resources.

Eteyen Nyong/ Ignatius Onimawo

April 2025

Chapter Nineteen

Examination of Manufacturing Sector on Economic Growth in Nigeria from 1970 – 2015

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INTRO DUTION

The introduction of structural adjustment programme (SAP) IN 1985, the Nigeria economy became open for the production of goods and services because of the economic policy which sought among others to strengthen the agricultural sector and attract foreign investors. However, Scallan (2002) opined that the basis for manufacturing can be trace back as far as 4000BC to 500 BC. In the same view, Eze and Ogiji(2003) held that the manufacturing industry encompass the key industries in an economy. That motivates conversion of raw materials into finished goods .

According to Ogundipe (2022), manufacturing sector of a country is used to gauge its economic efficiency .Okon and Osesie (2017) also, asserted that manufacturing is a subset of industrial sector. In another view by Maddission,2001&2007), the creation of modern manufacturing had led to dramatic changes in the structure of the world economy and sustained increase in the growth of labour productivity and economic welfare.Again, Ogundipe (2022)

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OBJECTIVES OF THE STUDY

The main objective of the study is to investigate the effect of manufacturing sector on Nigeria's economic growth

The specific objectives include:

- (1). Examine the impact of manufacturing on economic growth of Nigeria from 1970-2015.
- (2). Examine the trend in manufacturing sector on economic growth in Nigeria from 1970-2015.

RESEARCH QUESTIONS

- (1) Is there an impact of manufacturing sector on Nigeria economic growth from 1970-2015?
- (2) What is the trend of manufacturing sector and economic growth in Nigeria from 1970-2015?

2.0 LITERATURE REVIEW

There exist a plethora of literatures on manufacturing and economic growth since the manufacturing sector contributes to export and foreign direct investment. Aluko, Akinola and Fatokun(2004) reported that Nigeria limited manufacturing sector is evident when factors like trade flows are considered.

Economic growth

Economic growth refers to an increase in a country's production of goods and services. It also refers to an improvement in real gross domestic product Gdp. The indicators of economic growth

are reflected in per capita income, savings, improved human capital development and improve investment

EMPIRICAL REVIEW

Okon and Osesie (2017) carried out a study on Hazards of manufacturing sector and economic growth in Nigeria examined the impact of manufacturing sector on economic growth in Nigeria from 1981- 2015. The study used secondary method of data collection and analyzed data using the ordinary least square method. The findings from the study revealed that a significant positive relationship exists between manufacturing output economic growth in Nigeria. The study further recommended that Nigeria government intensify effort at improving physical infrastructure in power supply and make it more accessible to manufacturers.

Another study by Nwago(2020) examined the effect of manufacturing sector on economic growth in Nigeria from 1981-2018. The study used ordinary least square regression . Findings from the study indicates that the manufacturing output had a positive significant relationship with increase in gross domestic product indicating a positive impact on economic growth . The study concluded that the link between capital and gdp is also positive and the manufacturing sector in Nigeria is the country's driving force in economic growth.

Kyarem, Richard and Zubair(2021) also, conducted a study on the role of manufacturing sector in Economic Diversification of Nigeria from 1986-2016. The study used the ARDL technique to analyze data . The study found manufacturing capacity utilization(MCU)and

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manufacturing value added (MVA) to be insignificant . On the other hand, the study found that Foreign Direct Investment and real effective exchange rate to be positively correlated. The study further recommended protection of infant industries and local sourcing of raw materials to enhance the productivity of the Nigerian manufacturing sector

Theoretical Framework

This study is anchored on the endogenous growth theory. The endogenous growth theory also known as Schumpeterian theory, holds the concept that economic growth is due to factors that are internal to the economy and not from external ones. The theory is primarily built on the idea that improvements in innovation, knowledge, and human capital lead to increased productivity, positively affecting economic progress positively.

METHODOLOGY

The Study Area:

Nigeria occupies 923,769km² of 13,000 square kilometers. Nigeria has a total of thirty six (36) states and Abuja as the Federal Capital Territory (FCT). The country has four (4) geographical zones namely; South, East, West, and North. The population of Nigeria according to National Population Commission (NPC) in 2016, is estimated at 170 million .

The major languages spoken in Nigeria are Igbo, Hausa and Yoruba.

Sources of Data

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This study sourced data from the World Development Indicators . Data was analyzed using descriptive statistics and ARDL technique method. Findings from the results are presented below.

MODEL Specification

$$GDP= F(MANGDP,EXR, INFL) \dots\dots\dots(1)$$

Where:

MANGDP=Manufacturing output

EXR= Exchange Rate

INFL= Inflation

The linear function of equation (1) is given below as

$$GDP= \beta_0+ \beta_1MAN+ \beta_2 EXC + \beta_3 INFL \dots\dots\dots(2)$$

RESULTS AND DISCUSSION

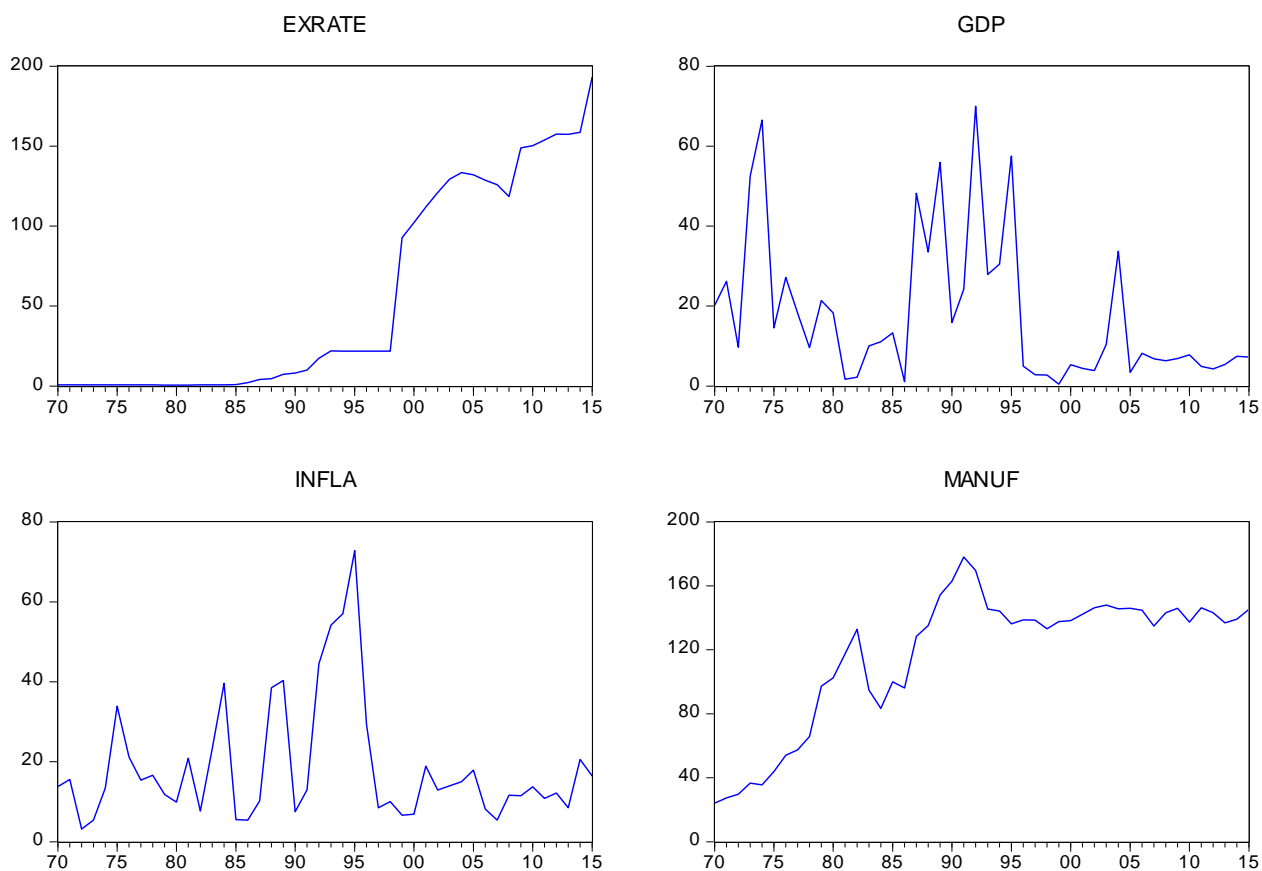


Table 1: Summary of ADF Unit Root Test Results

<i>AT LEVEL</i>					
		<i>GDP</i>	<i>EXRate</i>	<i>INFLA</i>	<i>MANUF</i>
<i>With Constant</i>	<i>t-stat.</i>	<i>-4.4827</i>	<i>0.9480</i>	<i>-3.4335</i>	<i>-2.2033</i>
	<i>Prob.</i>	<i>0.0008</i>	<i>0.9953</i>	<i>0.0148</i>	<i>0.2080</i>
		<i>***</i>	<i>no</i>	<i>**</i>	<i>No</i>

<i>With constant & Trend</i>	<i>t-stat.</i>	-5.0018	-1.5307	-3.4100	-1.6618
	<i>Prob.</i>	0.0010	0.8039	0.0627	0.7516
		***	no	*	no
<i>Without Constant & Trend</i>	<i>t-stat.</i>	-1.3069	2.1893	-2.007	0.6839
	<i>Prob.</i>	0.1738	0.9923	0.0439	0.8599
		no	no	**	no
AT FIRST DIFFERENCE					
<i>With Constant</i>	<i>t-stat.</i>	-8.4058	-5.7878	-6.6395	-5.8577
	<i>Prob.</i>	0.0000	0.0000	0.0000	0.0000
		***	***	***	***
<i>With constant & Trend</i>	<i>t-stat.</i>	-8.3209	-6.1572	-6.5852	-6.0579
	<i>Prob.</i>	0.0000	0.0000	0.0000	0.0000
		***	***	***	***

Source: Author's Computation using E-views 9.0, 2023

Based on the result of the Augmented –Dickey Fuller Unit root test results summarized in Table 4.1, the variables modelled were all found to be non-stationary at level except Gross Domestic Product (GDP) and Inflation (INFLA) which were stationary at level. However, at first difference, all the variables became station at 5% level of significance. Therefore because of the unit root problem, it becomes necessary to conduct a co-integration test (ARDL Bounds test) among the variables to find out if they have a long-run relationship.

Table 2: ARDL Bounds test of Co-integration

Test Statistic	Value	K
F-statistic	6.557120	3

Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.37	3.2
5%	2.79	3.67
2.5%	3.15	4.08
1%	3.65	4.66

Source: Author's Computation using E-views 9.0, 2023

Based on the result of the ARDL Bounds test presented in table 2, the value of the F-statistics being 6.55 is greater than the I(1) bounds statistics at 1%, 2.5%, 5% and 10% level of significance. Therefore there is a long run equilibrium relationship among the variables modelled.

Table 3: ARDL Short-Run and Long Run Estimation Results

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MANUF)	0.325057	0.188810	1.721610	0.0933
D(INFLA)	0.751699	0.165644	4.538037	0.0001
D(EXRATE)	-0.099635	0.170234	-0.585280	0.5618
CointEq(-1)	-0.902654	0.150525	-5.996701	0.0000

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$$\text{Cointeq} = \text{GDP} - (-0.0278 \cdot \text{MANUF} + 0.4351 \cdot \text{INFLA} - 0.0715 \cdot \text{EXRATE} + 15.9100)$$

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
MANUF	-0.027792	0.080432	-0.345528	0.7316
INFLA	0.435080	0.226421	1.921552	0.0622
EXRATE	-0.071507	0.052454	-1.363224	0.1808
C	15.909985	8.443916	1.884195	0.0672

Source: Author's Computation using E-views 9.0, 2023

The result of the short run ARDL estimation presented in table 3 suggests that manufacturing sector output and inflation both have positive impact on economic growth GDP, while Exchange rate has a negative impact on economic growth in the short run over the period of study. The coefficient of manufacturing output being 0.32 suggests that a 1 unit increase in manufacturing output will increase GDP by 0.32 units, and it is statistically significant at 10% level of significance. The coefficient of inflation rate being 0.75 suggests that a 1 unit increase in manufacturing output will increase GDP by 0.75 units, and it is statistically significant at 1% level of significance. On the other hand, the coefficient of exchange rate (EXRate) being -0.09 suggest that a 1 unit increase in Exchange rate will lead to a 0.09 units decrease in economic growth (GDP), however, it is not statistically significant.

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The error correction term is normally expected to be negative, less than 1 and statistically significant. The coefficient of the error correction term in this model has met the requirement of being negative, less than 1 and significant since it is -0.90.

Summary, Conclusion and Recommendation

The study examined the impact of manufacturing sector on economic growth in Nigeria from 1970 -2015. The study sourced data from the world development indicators and data was analyze using the descriptive statistics and the regression technique method.

Literatures from the study showed that manufacturing sector is the sector which produces goods for consumption and export and concludes that the manufacturing sector is important for economic growth in every country.

Findings from the ARDL estimation shows that manufacturing sector output and inflation both have positive impact on economic growth GDP, while Exchange rate has a negative impact on economic growth in the short run over the period of study. The coefficient of manufacturing output being 0.32 suggests that a 1 unit increase in manufacturing output will increase GDP by 0.32 units, and it is statistically significant at 10% level of significance.

Finally, the study recommends that the Nigeria government should improve on the erratic power supply to manufacturing industries. The study further recommends credit facilities to

infant manufacturing industries to boost production which will in -turn favor economic growth in Nigeria

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