Trade Liberalization and Sectoral Performance in Nigeria.

Adewale Olajide OGUNNAIKE
LCU/PG/002616

Being a Thesis Presented to the Department of Economics and Development Studies, Faculty of Management and Social Sciences, Lead City University, Ibadan, Oyo State, Nigeria.

In Partial Fulfillment of the Requirement for the Award of Master of Science Degree (M.Sc.) in Economics

2023.

Chapter One

Introduction

1.1. Background to the Study

Trade liberalization is the process of eliminating or decreasing barriers to commerce. This may entail the lowering or eliminating of tariffs, the elimination or expansion of import quotas, the removal of multiple exchange rates, and the elimination of the need for administrative approvals for imports or foreign exchange allotments. Trade liberalization has been a key strategy embraced by many countries worldwide to foster economic growth and development. By removing trade restrictions and barriers, nations aim to increase international competitiveness, attract foreign investment, and stimulate domestic industries.[1]

Trade which is refers to as the buying and selling of goods and services is classified into two categories; Domestic or internal trade and foreign or external trade. Domestic trade is the exchange of goods and services within a country's geographical boundaries. It provides economical goods, less competitive, elimination of trade barriers, low transportation cost, mobility of factors, etc. On the other hand, foreign trade is the trade between one country and other countries of the world.

In Nigeria and many emerging nations, trade is a key driver of growth. This is founded on the underlying assumption that trade increases income for both individuals and governments by generating jobs, opening up new markets, facilitating competition, and disseminating knowledge. While exports may result in increased national output and serve as a growth engine, foreign commerce expands the market for a country's products. The variables that cause various nations to develop at varying rates and reach various levels of affluence have attracted the attention of economists. Trade liberalization is one of these reasons. Over the course of many centuries,

international trade has brought together distant regions of the world and many civilizations; it has aided in the better dissemination of knowledge and ideas and molded the development of regions and countries[2].

Nigeria, as the largest economy in Africa, has been actively engaged in trade liberalization efforts over the years. The country embarked on economic liberalization policies in the 1980s, transitioning from a state-controlled economy to one that promotes privatization, deregulation, and open trade. These reforms were implemented in response to the country's declining oil revenue and the need for economic diversification.

Nigeria's commitment to trade liberalization is evident through its active involvement in regional and international trade agreements. The country is a member of the World Trade Organization (WTO) and has been a signatory to various trade agreements, including the Economic Community of West African States (ECOWAS) and African Continental Free Trade Area (AfCFTA). These agreements aim to eliminate trade barriers, increase market access, and promote regional integration[3].

Prior to the commercial discovery of oil in Nigeria, the agricultural sector was the main engine powering the country's economy. It provided the majority of the country with food and jobs, as well as the raw materials needed by the industrial sector. It also produced the majority of the government's tax revenue and foreign exchange earnings, which had a positive ripple effect on other sectors. Nigeria, though, went from having a largely successful agrarian economy to becoming a significant exporter of petroleum products during the oil boom of the 1970s. Due to policy makers' almost complete disregard for agricultural development as a result of the oil industry's discovery and subsequent quick expansion of urban-biased activity, the sector

experienced a relative fall[1]. In early 1980s, there was a slump in the price of petroleum products and this greatly affected the Nation's GDP and export earnings.

The approval of the IMF Structural Adjustment Programme (SAP) in 1986, whose main objective was to reorganize and diversify the productive sector, gave rise to the phrase "trade liberalization" in Nigeria. Additionally, the SAP was created to develop a viable and realistic exchange rate for the Naira through commercialization, privatization, tariff changes, and trade and payment liberalization.

In addition, SAP was introduced to reduce the nation's over reliance on crude oil, due to the collapse in oil price in the world market, with greater emphasis on the non oil and tradable sector of agriculture. After the introduction of SAP, several policies have been implemented by the country to reduce barriers to trade and open the economy to international environment.

Trade liberalization has received plaudits for its positive effects on productivity across the economy, the use of better technology, and the promotion of investment, all of which are tools for promoting economic growth. Additionally, trade liberalization may result in considerable gains that accelerate an economy's development in a nation. This implies that commerce promotes lower import costs for goods and services and prevents price increases, which in turn discourage monopolies[4,5].

The Nigerian economy is made up of multiple sectors such as; Agriculture, Industry and Services. Agriculture is one of the dominant sectors of the Nigerian economy. The sector includes crops, livestock, fishing and forestry [6, 7]. It involves cultivating land, rearing and of animal for human consumption, animals feed and industrial raw materials. This is critical for increasing employment opportunities, reducing poverty and increasing income contribution to accelerated industrialization[8,9]. In Nigeria, Service sector comprises of trade; accommodation

and food services; transportation and storage; information and communication; arts, entertainment and recreation; financial and insurance ;real estate; science, professional and technological services; administrative and support services; public administration; education; health care and support services for human beings; and other services[10].

The industrial sector comprises of the crude petroleum and natural gas, solid mineral and the manufacturing industries. Industrial sector contributes to economic growth by increasing industrial output, innovation promotion and the uses of resources for optimal production[11]. Scholars believe that the industrial sector is a growth driver due to the multifaceted benefits it has provided to growth and development[12].

The expansion process in the agricultural, service and industrial sectors leads to a targeted growth rate[13]. A number of fiscal and monetary policies together with institutional reform measures have been undertaken since independence. Right from the first national development plan (1962-1968) to the fourth national development plan (1981-1985) rapid industrialization received priority in Nigeria's development objectives. In essence, government seeks to facilitate both output generation by ensuring the promotion of finance and distribution of the goods produced. Also, since the economy may not have capacity to produce all it needs by itself, as well as providing all the funds by itself. The government embarks on opening up its economy for the flow of both trade and finance.

In many developing countries in which Nigeria is inclusive, trade is considered to be an important aspect of growth. It is widely believed that trade creates jobs. expands market, promotes competition; transfer knowledge and increases income among individuals, company and government. Foreign trade expands the market of a country's output while export can lead to an increase in a country's output, which can be an engine of growth. In many countries,

international trade has brings together remote parts of the world and different civilization; it helps to improve the dissemination knowledge and ideas, shapes regional and national processes. Furthermore, it helps to stimulate production, improve efficiency and reduce production costs thereby enhancing international confidence in an economy's market mechanism[14].

Trade liberalization has been used as a key component by most countries in their development agenda as well as stimulating economic growth and overall economic well-being. In the last two decades, researching on the relationship between trade openness and economic growth has long been a major subject of concern for most trade economists. Proponent of the trade liberalization concept argue that liberalization brings in new technology and attracts Foreign Direct Investment (FDD) resulting in efficient resource allocation and increased consumer welfare. Some scholars observed that trade liberalization can help to boost economic growth by supporting nations to specialize in the production of goods in which they have comparative advantage and transferring resources across different nations[15]. Research carried out by International Monetary Fund (IMF) in 2015 also pointed to the fact that further trade liberalization can help developing countries to benefit from technology transfer as well as integrating them into the global value chains system, which can create more jobs in the economy. Other scholars submitted that trade allows countries to have access to contemporary technology and supports foreign direct investment flows, which lead to development of clean industries[11]

Trade restrictions such as hike in import and export tariffs, import substitution, licensing rules and quota have proved to hinder improvement in industrial productivity and economic growth. Based on this, the trade barriers of developed and developing countries are also falling rapidly. and the liberalization of trade is increasingly pushing world production to the frontier of universal production. Therefore, countries can increase production levels by importing modern

technology, competitively price raw material and efficient labour. The analysis of international trade have received several attention in economic literature[16,17,18]

1.2. Statement of the Problem

Economic openness was proposed by the World Bank (WB) to correct the ongoing balance of payment deficit of the developing countries and to promote trade. It was expected that a liberalized trade regime would expands agricultural and other sectors output and as well enhance a better performance of the economy. Scholars argued that free trade promotes efficiency, the more countries embrace open trade, the higher the growth rate and their national income increases[4]. It was observed that over the years, Nigeria government has implemented considerable trade and financial measures including reductions in the average tariff rates and effective rates of protection as a means of stimulating sectoral output. This has arise from the needs to promote a diversified economy which relying on crude oil alone and portends a great risk to the economy[2].

Theoretically, it has been established that trade liberalization increases the performance of the economy. This is because in a market where there is competition, prices decline and the range of available goods increases, allowing for consumers experience a surplus. Gains from efficiency and specialization are further benefits of trade openness. Therefore, it makes sense that economies want to be as open as possible to trade.

Since independence, Nigeria has undergone major economic reforms to eliminate or significantly decrease market failures caused mostly by government involvement in the promotion of economic growth. Their ability to achieve success depends on the governmental resolve to let private sector companies play their part as the country's economic growth engine, but only after the private sector has received the required attention and support to assure growth, sustainability,

and the capacity for exporting. Programs for reform stand in stark contrast to the economic policies that have been in place since independence. There are various institutions that are needed to support the successful implementation of trade liberalization, but they are either not available or are not sufficiently equipped to do so. Corruption has eaten deep into the nation's economy, as there are no institutions that are free from corruption.

International trade is predicted to benefit participants (in the form of lower prices, a wider variety of products, etc.) as well as firms and businesses Similarly, opening up economies will allow nations to learn from one another and increase output and production, which is the main goal of trade liberalization.

In the case of Nigeria, trade liberalization has left our industry in a comma-like condition as domestically-based startups are killed by competition from already-established foreign businesses without leading to the emergence of brand-new ones. Thus, all of these factors, together with a lack of financial and monetary discipline, have caused the situation to change in recent years. Similarly, for fear of dominance, the majority of wealthy nations are not eager to divulge their manufacturing processes and technological advancements.

Thus, commerce is only liberalized in name and not in practice. As a result of this, Nigeria is one of the developing nations that learn almost nothing about more efficient methods of doing things. Instead, other nations dump their goods in the country. From the foregoing, this study seeks to evaluate the effect of trade liberalization on the performance of manufacturing sector, agricultural sector and service in Nigeria.

1.3 Research Questions

The extent to which trade liberalization affects the Nigerian economy remain unclear and forms part of the problem this research intends to study considering the following questions

1. To what extent does trade liberalization affect the performance of the manufacturing sector in Nigeria?
2. What is the effect of trade liberalization on agricultural sector performance in Nigeria?
3. How does trade liberalization affect the performance of the service sector in Nigeria?

1.4 Objectives of the Study

The broad objective of this study is to examine the relationship among trade liberalization, agricultural sector performance, manufacturing sector performance and service sector performance in Nigeria. The specific objectives are to:

i. examine the effect of trade liberalization on manufacturing sector performance in Nigeria.
ii. analyze the effect of trade liberalization on agricultural sector performance in Nigeria.
iii. determine the effect of trade liberalization on service sector performance in Nigeria.

1.5 Research Hypothesis

In carrying out this study, the following hypotheses will be tested.

H01: There is no significant relationship between trade liberalization and the manufacturing sector performance in Nigeria..

H02: There is no significant relationship between trade liberalization and the agricultural sector performance in Nigeria.

H03: There is no significant relationship between trade liberalization and service sector performance in Nigeria.

1.6 Significance of Study.

Trade liberalization is one of the most controversial policies in international economics and finance. Copious of arguments have been put forward about if free trade and reduction of trade barriers will help the economy or not. This study will contribute to understanding the justification for trade liberalization and how it has affected the manufacturing, agriculture and service sectors of the Nigerian economy. A cursory look at the content of the literature reviewed so far suggests that most of the works on Nigeria examined the implication of trade liberalization on the manufacturing sub-sector as a whole without any specific extension to the other sectoral groups. It is the attempt to fill this gap that necessitated the present study.

Additionally, it would demonstrate the flow of policy in a way that would improve the efficiency of all sectors. It will increase our awareness of global trade policy and how Nigeria is affected by it. It also helps to evaluate the government initiatives that have been implemented to boost sectoral performance in Nigeria.

The study will be beneficial to policy makers because they will be more accountable and receptive to the needs of the public regarding trade policy since they will be aware of the level of intervention required to quickly progress the trade and commercial sector.

1.7 Scope of the Study.

The focus of this study is the Nigerian economy, and it will only examine how trade policy has affected the country's manufacturing, agricultural and service sector performance. This study spans a 35-year period, from 1986 to 2021. Secondary data, specifically time series data, will be employed for the purpose of this study. The Adoption of SAP in 1986 brought about the emergence of trade liberalization which was accompanied by the elimination of foreign exchange

control to reflect economic realities, removal of price control and disbandment of commodity boards. The research examines the relationship between trade liberalization and sectoral performance with evidence from the agricultural sector, manufacturing sector and service sector. The policy thrust of SAP in Nigeria was to create an environment conducive to enhance increased capital inflows, transfers, exchange rate, adoption of appropriate technologies and increase the share of trade revenue to government as another means of reducing the total reliance of the economy on crude oil revenue.

1.8 Limitations of the Study.

The decision of the period considered in this study depends on the accessibility of data. Its of the view that this research is in no way shape or form a comprehensive treatment of the link between economic openness and growth of sectoral output in Nigeria. Although, the endeavors made in bringing together the macroeconomic variables, some may at present be overlooked. The study will likewise be constrained by the disparities in data from different local and international sources, and this may as well constrain the discoveries.

1.9 Operational Definition of Terms

Trade Liberalization: Trade Liberalization can simply be defined as the removal or reduction of restrictions or barriers on the free exchange of goods between nations. This includes the removal or reduction of both tariff (duties and surcharges) and non-tariff obstacles (like licensing rules, quotas and other requirements).

Trade: The exchange of goods and services within a country (domestic or internal trade or

between countries (international or foreign trade).

Economic Growth: Economic Growth is an increase in the capacity of an economy to produce goods and services, compared from one period of time to another.

Foreign Direct Investment: A foreign direct investment (FDI) is a controlling ownership in a business enterprise in one country by an entity based in another country.

Trade Policy: A commercial policy (also referred to as a trade policy or international trade policy) is a set of rules and regulations that are intended to change international trade flows, particularly to restrict imports.

Industrialization: Industrialization or industrialization is the period of social and economic change that transforms a human group from an agrarian society into an industrial one, involving the extensive re-organisation of an economy for the purpose of manufacturing.

Foreign Trade: This is a trade between two or more countries. It is also referred to as international trade or external trade. It is a trade outside the national boundaries of a country. Foreign trade could be bilateral trade, which is trade between two countries or multilateral trade, which is trade between more than two countries.

Economic Openness. This refers to as the degree to which non domestic transactions (import and export) take place and affect the size and growth of a national economy

Exports: These are goods or services sold from a domestic country to other countries;

Imports: These are goods or services imported by a domestic country from other countries.

Agricultural Sector: The sector comprise establishments primarily engaged in growing crops, raising animals and harvesting fish and other animals from a farm, ranch or their natural habitats.

Manufacturing Sector: This comprises any industry, business, or establishment operated for the purpose of preparing, producing, making, altering, repairing, finishing, processing,

inspecting, handling, assembling, wrapping, bottling, or packaging goods, articles, or commodities, in whole or in part.

Service Sector: This refers to as the tertiary sector of the economy. It consists of the production of services instead of end products. Service sector also involves the provision of services to other businesses as well as final consumers.

ENDNOTES

1. A.F. Adenikinju, *Trade Liberalization, Investment Climate, and Sectoral Performance in Nigeria*, African Economic Research Consortium. 2003.

2. World Bank, Nigeria – Overview, 2020. Available online: http://www.worldbank.org/en/country/nigeria/overview.http://www.worldbank.org/en/country/nigeria/overview.
3. United United Nations Economic Commission for Africa, *Trade Liberalization in Africa: ExperiencesandCurrentChallenges*,2015. https://www.uneca.org/sites/default/files/PublicationFiles/trade_liberalisation_in_africa_en.pdf
4. S.O. Anyanwu, , U.S, Offor, O.M, Adesope, & U.C Ibekwe , *Structure and Growth of the Gross Domestic Product (1960-2008): Implications for Small-Scale Enterprises in Nigeria*, **Global Advanced Research Journal of Management and Business Studies**, 2(6), 2013, 342-348.
5. S. Bawa, & J.A Mohammed, *Natural Resource Abundance and Economic Growth in Nigeria,* **Central Bank of Nigeria Economic Review**, 45(3), 2007, 25-32.

6. U. J Ekaette,, *Development Challenges in the Niger Delta and the implications for the Nigeria Economy*, Port Harcourt: PANAM Nigeria Publishers, 2009

7. G.E. Kenneth,. & P. Onyedikachi, *Short Term Modeling of the Nigerian Naira/United States Dollar Exchange Rate Using ARIMA Model*, **Sch J Phys Math Stat,** 1, 2021, 8-13.

8. G.A. Osuji, M. Obubu, & C.A Nwosu, *Stock Investment Decision in Nigeria*; *A PC Approach*, **World Journal of Multidisciplinary and Contemporary Research,** 2(1), 2016, 1-11.

9. C Nwokike,., C Offorha, B., Maxwell, O., Uche-Ikönne, O., and C Onwucgbulam, *CARIMA Modeling of neonatal Mortality in Abia State of Nigeria*. **Asian Journal o Probability and Statistics**, 2020,54-62.
10. Central Bank of Nigeria. Statistical Bulletin: 2019
11. N. Anwar & E.E. Khalid. *Examine the Relationship between Energy Consumption Economic Growth and Environmental Degradation in Indonesia: Do Capital and Trade Openness Matter?* **International Journal of Renewable Energy Development.** 10, 20 769-78.
12. K. Arjun; S.A. Sankaran & D. Mousumi. *An Endogenous Growth Approach on the I of Energy, Human Caiptal, Finance and Technology in Explaining Manufacturing Va Added: A Multi-Country Analysis*. **Hellyson** 6, 2020.
13. M.S Alam R.R. Mustafa; M.T. Mohammed & A. Joji. *Banks' Performance Economic Growth in India: A Panel Cointegration Analysis*. **Economies** 2021,
14. M. Iyoha & L. Oriakhi, *'Explained African Economic Growth Performance: The c Nigeria'*. African Economic Research Consortium, Nairobi. 2012
15. M. Belloumi & A, Atef. *The Impact of International Trade on Sustainable Development in Saudi Arabia*. **Sustainability** 12, 2020, 5421 (Google Scholar) (CrossRef)
16. P. Zahonogo. *Trade and economic growth in developing countries: 3 evidence from Sub-Saharan Africa*. **Journal of African Trade**, 2017.
17. Huchet-Bourdon; C. Le Mouel & M. Virjil. *The Relationship between Trade Openness and Economic Growth: Some new insights on the openness measurement issue:* **The World Economy,** 41(1), 2018, 59-76. Retrieved from https://hal.atchieves ouvertes.fr/hal-01987393/document
18. A.A.Gabriel & A.O. David. *Effect of Trade Openness and Financial Openness on the Economic Growth in Sub-Saharan African Countries*. **African Journal of Economic Review**, 9, 2021, 109-130

Chapter Two

Literature Review

This section reviews literature on concepts, theories and empirical literature on trade liberalization and sectoral performance. The theoretical framework for this study is also discussed in this section.

2.1. Conceptual Review

2.1.1 Trade Liberalization

Trade liberalization refers to the extent to which a country or economy allows or engages in trade with other countries or economies. The trade activities which includes import and export, foreign direct investment (FDI), borrowing and lending and repatriation of funds abroad. In the global economic theory, it is generally accepted that trade opening may assist to improve economic growth quality[1]. The protection of economic transactions is a primary condition for creating enabling trade and investment environment[2]. The issue has gained traction in the recent periods due to the large disparity in the economic performance of countries majorly emerging nations as a result of global integration[3].

Trade liberalization involves removing barrier to trade between different countries and encouraging free trade[4]. . Trade Liberalization was referred to as the increasing integration of international market for goods, trade able services and financial assets. In the real sense it also referred as the increasing integration of markets for major inputs to production (not only mobile physical capital) but also labour in its various forms: basic labour, skilled labour and other professional services[5]. Trade liberalization is thus a multidimensional concept and may be viewed as the forging of multiplicity of linkages and interconnectedness between States and the societies which make up the modern World called the global village. It is also a process by which occurrences, decision and activities in one part of the World come to have significant

consequence on individual and communities in quite distant part of the globe.

Trade liberalization involves:

- Reducing tariffs
- Reducing / eliminating quotas
- Reducing non-tariff barriers.

Non-tariff barriers are factors that make trade difficult and expensive. For example having specific regulations on imported goods can give an unfair advantage to domestic producers. Harmonizing environmental and safety legislation makes it easier for international trade.

Trade liberalization on the other hand has a lot of benefits. It allows countries to specialize in producing the goods and services where they have a comparative advantage (produce at lowest opportunity cost). This enables a net gain in economic welfare. Also, the removal of tariff barriers can lead to lower prices for consumers. For example removing food tariffs in the West would help reduce the global price of agricultural commodities. This would translate to benefit for countries who are importers of food.

In addition, it help to Increase competition. This simply means firms will face greater competition from abroad. This should act as a spur to increase efficiency and cut costs or it may act as an incentive for an economy to shift resources into new industries where they can maintain a competitive advantage. For example, Trade Liberalization has been a factor in encouraging the United Kingdom (UK) to concentrate less on manufacturing and more on the service sector.

Lastly, through Economies of scale, Trade liberalization enables greater specialization. It helps Economies to concentrate on producing particular goods. This can enable big efficiency savings from economies of scale[6].

Problems of Trade Liberalization

Some of the problems of trade liberalization include:

1. Trade liberalization often leads to a shift in the balance of an economy. Some industries grow, some decline. Therefore there may often be structural unemployment from certain industries winding up. Trade liberalization can often be painful in the short run as some industries and workers suffer from the decline in uncompetitive firms.
2. Trade liberalization could lead to greater exploitation of the environment e.g. greater production of raw materials and trading toxic waste to countries with lower environmental laws.
3. Trade liberalization may be damaging for developing economies that cannot compete against free trade. The infant industry argument suggests that trade protection is justified to help developing economies diversify and develop new industries. Most economies had a period of trade protectionism. It is unfair to insist that developing economies cannot use some tariff protectionism.
4. Given this assumption some argue that trade liberalization often benefits developed countries more than developing countries.

Importance of Trade Liberalization

1. Economic growth: Trade liberalization promotes economic growth by opening up markets and increasing competition. It allows countries to specialize in producing goods and services that they are most efficient at, leading to increased productivity, innovation, and overall economic output.

2. Consumer benefits: When trade barriers are reduced, consumers benefit from greater choices and lower prices. Trade liberalization allows access to a wider variety of goods and services, often at more competitive prices, improving the quality of life for consumers.

3. Job creation: Trade liberalization can lead to increased employment opportunities. As countries open their markets to trade, domestic industries may face increased competition. However, this can also stimulate the creation of new industries and job opportunities in sectors where a country has a comparative advantage.

4. Foreign investment: Trade liberalization attracts foreign investment, as it provides foreign firms with access to larger markets and reduces the risks associated with trade. Foreign direct investment can bring in new technologies, know-how, and capital, contributing to economic development and job creation.

5. Poverty reduction: Trade liberalization can help alleviate poverty by providing access to new markets for low-income countries. Opening up trade can enable these countries to export their products and stimulate economic growth, leading to increased incomes and reduced poverty levels.

6. Global peace and stability: Trade liberalization fosters economic interdependence among countries, reducing the likelihood of conflict. Countries that engage in trade are less likely to engage in warfare, as they have a mutual interest in maintaining peaceful relations to protect their trade relationships.

However, it is important to note that trade liberalization may also have some negative effects, such as potential job displacement or negative environmental impacts. Therefore, it is important for governments to implement policies and measures to mitigate these potential drawbacks while maximizing the benefits of trade liberalization.

2.1.2 Trade Policies in Nigeria.

Since 1986, Nigeria has adopted several trade policies to guide its international trade activities. Here is a list of trade policies adopted in Nigeria since 1986 till date:

1. Structural Adjustment Program (SAP) (1986-1994):

SAP was implemented as a response to the economic crisis in Nigeria. It aimed to diversify the economy, reduce import dependency, and encourage local production through trade liberalization and currency devaluation.

2. Trade Liberalization Policy (1991):

This policy aimed to reduce barriers to international trade by removing import restrictions, simplifying customs processes, and promoting free trade. The objective was to enhance efficiency, competitiveness, and attract foreign investment.

3. National Economic Empowerment and Development Strategy (NEEDS) (2004-2007):

NEEDS emphasized trade policies that would promote economic growth, reduce poverty, and improve social welfare. It focused on sectors like agriculture, manufacturing, and services to encourage export-oriented growth.

4. **Vision 20:2020 (2009):**

This policy blueprint aimed to make Nigeria one of the top 20 economies globally by 2020. It focused on diversifying the economy, promoting export-oriented industries, and attracting foreign direct investment (FDI) through trade facilitation measures.

5. Economic Recovery and Growth Plan (ERGP) (2017-2020):

ERGP aimed to restore economic growth and stability. It emphasized trade policies that promoted diversification, encouraged export-oriented manufacturing, and attracted FDI through reforms in the business environment.

6. African Continental Free Trade Agreement (AFCFTA) (2019-PRESENT):

Nigeria signed the AfCFTA in 2019, which aims to create a single market for goods and services in Africa. The trade policy supports regional integration, increased intra-African trade, and promotes the diversification of the Nigerian economy.

It's important to note that these policies have evolved over time, and specific trade measures and strategies have been implemented to address changing economic circumstances and government priorities in Nigeria. Additionally, the policies may have been revised or supplemented by newer policies since this list was compiled[7].

2.1.3 Nigeria's Agricultural Sector

Nigeria is one of the largest countries in Africa, with a total geographical area of 923,768 square kilometers and an estimated population of about 250 million (2019 estimate). It lies wholly within the tropics along the Gulf of Guinea on the western coast of Africa. Nigeria has a highly diversified agro-ecological condition, which makes possible the production of a wide range of agricultural products. Hence, agriculture constitutes one of the most important sectors of the economy. The sector is particularly important in terms of its employment generation and its contribution to Gross Domestic Product (GDP) and export revenue earnings.

Agriculture is an important sector of the economy with a high potentials for employment generation, food security and poverty reduction. However, these potentials has remained largely tapped which has led to the dwindling performance of the agricultural sector both domestically and in the international trade over years. As at 1961, Nigeria was the leading exporter of groundnut with a world's share of 42%. The country also had 27% of the world's palm oil export, 18% of cocoa and 1.4% of cotton as the major West African cotton exporter. It has been

a sector where more than 60% of the country's population and the proportion of the Gross Domestic Product (GDP) attributed to agriculture holds about 40%[7]. .In Nigeria, the non-oil sectors drive the growth with 2.0% increase, while the oil sector output grew by 1.1%. The services, agricultural, industrial and construction sectors contributed 1.1%, 0.5%, 0.3% and 0.1% respectively to GDP growth, while the trade sector contributed negative growth of -0.1%.[8].

This shows that, the agricultural sector contributed significantly to recent growth in the nation's economy beside the services sector, where the growth in output was attributed to sustained implementation of the Anchor Borrowers Programme and fiscal stimulus which led to increased infrastructural spending following sustained implementation of the Economic Recovery and Growth Plan. The sector's contribution to the growth of the Nigerian economy in 2012 was 39.21% and 41.93% improvement in the third quarter of 2013. This is because the sector's output continued to experience improved production in 2013. The sector recorded growth rate of 3.83% in the fourth quarter of 2012 as against 5.68% in the fourth quarter of 2011. Also, output in the third quarter of 2013 stood at 5.08%%up from the 3.89% recorded in the corresponding period of 2012 and also higher than the4.52% recorded during the second quarter of 2013 with a low level of employment generation to education, financial intermediation among others[9]. The sectoral GDP growth of the major real sectors of Nigerian economy indicates clearly that, the agricultural sector grew with 2.9%, 4.3%, 3.5%, 4.1% and 3.4% of the year 2013, 2014, 2015, 2016 and second quarter of 2017 respectively[8]. This indicates that, agricultural sector has not recorded any negative growth in comparison with industrial sector that recorded -0.1%. -3.8%, and -9.4% of year 2013, 2015 and 2016 successively[8].

Several arguments have been made on the impact of agriculture in industrialization, most especially in developing economies[10,11,12]. In some quarters, it is believed that improved

agriculture will provide the necessary raw materials for industries to strive[13]. However, other sides of the debate views increased agricultural productivity as a result of technical progress driven by industrial innovation[14]. Either way, agriculture and industrialization seem to be strongly interdependent on one another. The link between rural income through agriculture and the demand for manufactured goods in Africa account for why increases in agricultural labour productivity could lead to positive changes in employment in agro-based manufacturing[10,11]. Suffice to say that agriculture provides the raw material for the industrial sector, while industrial machines are needed for extraction which imbues a bi-directional causality on the relationship between the sectors. The process of agro-industrialization leads to employment generations, improvement in income generation and increased earning for farmers. Thus make it possible for the employed to purchase necessary food items and increase available food for the economy. Furthermore, as agricultural productivity increases, export increases thereby improving the balance of payment, increasing foreign reserve and stabilizing the exchange rate[15]. But this can only be achieved with the provision of necessary infrastructure that supports the development of the sector such as good road system, transportation and communication, provision of water, credit, rural electrification and a competitive market structure coupled with the human capacity which includes policy makers, researchers, farmers, entrepreneurs and extension workers. Neglection of the agriculture sector in favour of the industrial sector will only lead to slow economic growth and inequality in income distribution. Despite the fact that agriculture may not be able to transform an economy single-handedly, the sector's still remain necessary and sufficient condition in kick-starting industrialization in the early stages of development.

Agricultural Sector and Economic Growth in Nigeria

Economic growth refers to an economy that is getting bigger, not necessarily one that is getting

better. Economic growth is defined as an increase in the production and consumption of goods and services[16].It is indicated by increasing gross domestic product (GDP). Economic growth occurs whenever people take resources and rearrange them in ways that make them more valuable. To grow, an economy requires more natural capital, including soil, water, minerals and energy sources. When the economy grows rapidly or get too big, this natural capital is depleted. The agricultural sector has been among the important sectors propelling the growth of Nigerian economy.

Agriculture is an important sector of the economy with a high potentials for employment generation, food security and poverty reduction. However, these potentials has remained largely untapped which has led to the dwindling performance of the agricultural sector both domestically and in the international trade over years. As at 1961, Nigeria was the leading exporter of groundnut with a world's share of 42%. The country also had 27% of the world's palm oil export, 18% of cocoa and 1.4% of cotton as the major West African cotton exporter. Agriculture, the second sector after oil, fell from 48% of GDP in 1970 to 20.6% in 1980 and was only 23.3% of GDP in 2005[17]. The sector's contribution to the growth of the Nigerian economy in 2012 stood at 39.21% and 41.93% improvement in the third quarter of 2013. This is because agricultural output continued to experience improved production in 2013.

The sector recorded growth rate of 3.83% in the fourth quarter of 2012 as against5.68% in the fourth quarter of 2011. Likewise, output in the third quarter of 2013 stood at 5.08% up from the 3.89% recorded in the corresponding period of 2012 and also higher than the 4.52% recorded during the second quarter of 2013 with a low level of job creation as compared to education, financial intermediation, among others[18]. However, the Gross Domestic Product (GDP) measured at constant basic prices, grew by 1.9% in 2018, compared to 0.8% in 2017. The non-oil

sectors drive the growth with 2.0% increase, while oil sector output grew by 1.1%.

The services, agricultural, industrial and construction sectors contributed 1.1%, 0.5%, 0.3% and 0.1%, respectively, to GDP growth, while the trade sector contributed negative growth of -0.1%[8]. This clearly shows that, the agricultural sector significantly contributed to recent growth in Nigerian economy apart from services sector, where the growth in output (agricultural sector output) was attributed to: sustained implementation of the Anchor Borrowers' Programme, fiscal stimulus which led to increased infrastructural spending following sustained implementation of the Economic Recovery and Growth Plan as well as the Agricultural Transformation Agenda of 2011 by president Goodluck Ebele Jonathan with the aim of growing the Nigeria's agricultural sector. Moreover, the sectorial GDP growth (%) of the major real sectors of Nigerian economy as shown clearly indicates that, the agricultural sector grew with 2.9%, 4.3%, 3.5%, 4.1%, and 3.4% of year 2013, 2014, 2015, 2016 and second quarter of 2017, respectively. This shows that, the sector has not recorded any negative growth in comparison with industrial sector that recorded -0.1%, -3.8% and -9.4% of year 2013, 2015 and 2016, successively. Similarly, the construction, trade and services sectors also recorded negative growth through 2015 and 2016, 2016 and second quarter of 2017, and year2016 and second quarter of 2017 respectfully[17].

2.1.4. Agricultural Policies in Nigeria (POST-INDEPENDENCE ERA):

1. National Accelerated Food Production Programme (NAFPP) (1972-1973)

The NAFPP, initiated in 1972 and expanded in 1973 across eight states—Benue, Kano, Plateau, Anambra, Imo, Oyo, Ogun, and Ondo—focused on accelerating food production. The program's distinctive features included organized crop-based research and extension efforts, direct farmer involvement in selecting improved seed varieties and cultural practices, intensive training of extension workers in crop production techniques, and transferring the supply of production inputs to

the producer.

The NAFPP comprised three phases: Mini-kit, Production-kit, and Mass Adoption. Eleven major innovations were recommended to participating farmers, encompassing the use of high-yielding seed varieties, chemical seed dressing, and fertilizer. Other innovations included recommendations related to planting time, plant spacing, weeding time, planting position, harvesting time, the use of hired tractor service, and the utilization of modern farming processing facilities.Notably, the program facilitated direct and immediate feedback from farmers by involving them in crucial phases, especially the production kit and mass adoption phase. This approach ensured that farmers' preferences and acceptance of innovations were considered integral to the program's success. [18,19,20].

2. Agricultural Development Programme (ADP) (1974- 1986)

The Agricultural Development Programme (ADP) had its origins in Malawi and was conceived to address rural poverty. The concept was introduced to Nigeria in 1974, with the establishment of the initial three enclave projects in the Northern part of the country—specifically, Funtua, Gusau, and Gombe Agricultural Development Programmes. The program's early success led to its expansion in 1989 to cover all nineteen states of the Federation.

The ADP demonstrated positive outcomes, as average yields for major crops in Nigeria increased compared to the period before its establishment. Notably, data from various Agricultural Development Programmes revealed improved yields in millet, cassava, and cotton in Bauchi State, rice in Kaduna, cassava in Ilorin, and yam and cowpeas in Ondo.

However, challenges arose during the project's execution, including a lack of funds due to declining oil prices from 1982 onwards. This financial constraint resulted in delays in recruiting competent staff and in providing or purchasing necessary materials and facilities for the project. Consequently, the implementation of the ADP took longer than anticipated. Another challenge was the program's

emphasis on modern/high-input technology, such as sole cropping, which differed from the prevalent practice of mixed/relay cropping among the majority of farmers[20]. There were also delays in the supply of subsidized inputs for the program.

Other hurdles included a high frequency of labor mobility, limited involvement of input agencies, difficulties in funding policies and counterpart funding, and complexities in technology transfer. Despite these challenges, the ADP played a significant role in enhancing agricultural yields and addressing rural poverty during its implementation period[21,22].

3. River Basin-Development Authorities (RBDAS) (1976-2020)

The River Basin Development Authorities (RBDAs) are legally mandated to develop, supply, and manage Nigeria's basin water resources, as outlined in the River Basin Development Authority (RBDA) Act CAP 396 LFN 1990, Section 1 (1) [23]. Established in 1976, the RBDAs were entrusted with a broad spectrum of functions, including irrigation, flood control, watershed management, pollution control, fisheries, navigation, and activities beyond water resources like seed multiplication, livestock breeding, and food processing. Their mandate also involved shared responsibilities with state agencies, such as agricultural services and rural electrification[20,23].

The RBDAs were envisioned to serve comprehensive economic and social functions, bridging rural-urban gaps and discouraging migration from rural to urban areas[24]. These goals were to be achieved by constructing dams to facilitate year-round farming activities. However, challenges emerged, including some authorities growing disproportionately and experiencing extensive political interference. Additionally, public funds were misused in attempts to streamline the size and functions of RBDAs through the sale of non-water assets. Despite nearly four decades of existence, the RBDAs fell short of expectations, failing to effectively leverage the country's water resources to enhance

agricultural development through irrigation farming[25].

4. Operation Feed The Nation (OFN) (1976–1980):

Operation Feed the Nation was a government initiative aimed at popularizing agriculture, improving the lives of rural dwellers, and fostering nationwide food self-sufficiency. Launched in 1976, it served as a national agricultural extension and mobilization program, encouraging self-sufficiency in food crop production and motivating a return to farming[26]. The government directed the Nigerian Agriculture and Cooperative Bank to increase lending to farmers, initiating an agricultural credit scheme. Government involvement extended to extension services, subsidized fertilizer distribution, aerial pesticide spraying, distribution of poultry chicks to farmers, and the acquisition of large tracts of land for agricultural estates.

Despite its aim to raise awareness and boost agricultural production and living standards in rural areas, OFN faced criticism. The initial increase in aggregate food production was not sustained beyond the first year, and a significant percentage of farmers in Oyo State expressed dissatisfaction with the program's planning. The initiative's potential impact on both agricultural production and the quality of life for rural Nigerians was not fully realized from the outset[27]

5. **Green Revolution Programme (GRP) (1981–1983):**

Launched in April 1980, the Green Revolution Program (GRP) aimed to boost food and raw material production, ensuring food security and self-sufficiency in basic staples[28]. Additionally, the program sought to increase livestock and fish production to meet both domestic and export demands, diversify foreign exchange earnings through export crop production, and enhance processing.

Considered part of a series of pro-poor policy reforms, the GRP involved interventionist policies for agricultural intensification, with a focus on advanced plant technology. The federal government played a key role in the program's success by providing agrochemicals, improved seeds, irrigation

systems, mechanization, credit facilities, improved marketing, and favorable pricing for agricultural products. However, the program faced challenges such as project delays, lack of monitoring and evaluation, and the failure to achieve its goal of increasing food supply[29].

6. **. Agricultural Transformation Agenda (2011-2015):**

The Federal Republic of Nigeria initiated the National Economic Transformation Agenda to shift the economy away from oil dependence, ensure food security, and create jobs, especially for the youth. As part of this agenda, the Federal Ministry of Agriculture and Rural Development implemented the Agricultural Transformation Agenda (ATA). The ATA aimed to foster agribusiness, attract private sector investment in agriculture, reduce post-harvest losses, add value to local agricultural produce, develop rural infrastructure, and enhance farmers' access to financial services and markets. The ATA operated from 2011 to 2015[30].

However, the ATA encountered several challenges, including poor implementation of policies and initiatives to boost the agricultural sector, lack of coordination among agencies responsible for agricultural development, difficulties for rural smallholder farmers in obtaining financing for productivity-boosting technology packages, and inadequate rural infrastructure, such as poor roads and electricity. The program also faced challenges related to the limited focus and exit strategy of the Growth Enhancement Support (GES), resulting in increased indebtedness and leakages in the system.

7. **Growth Enhancement Support Schemes (GESS 2012):**

Introduced in July 2012, the federal government implemented the Growth Enhancement Support (GES) scheme, designed to deliver government-subsidized farm inputs directly to farmers via GSM phones[31]. The scheme targeted farmers based on a nationwide farmer registration exercise, aiming to transition subsistence farmers into a commercialized system that facilitates trade and competitiveness. Operated by Cellulant, an electronic distribution channel, the GES scheme provided registered

farmers with eWallet vouchers to redeem fertilizers, seeds, and other agricultural inputs from agro-dealers at half the cost, with the other half subsidized by the federal and state governments. The goals of GES included targeting five million farmers annually for four years, providing direct support for farmers to procure affordable agricultural inputs, increasing productivity through increased fertilizer use, and transforming the government's role in the fertilizer value chain.

8. Anchor Borrowers' Program (2015):

Introduced in November 2015, the Anchor Borrowers' Program (ABP) was a key government initiative for promoting agriculture. Developed by the Central Bank of Nigeria (CBN), the program aimed to provide agricultural inputs to farmers in both cash and kind. It included plans to link farmers with buyers offering fair prices and provided credit support ahead of each season, with farmers expected to repay the debt with their crops.

The ABP aimed to boost farmer productivity and growth by encouraging repayment through crop production. However, challenges such as high rates of farmer repayment default and improper targeting of beneficiaries were identified. While the program led to significant growth in rice production, its impact on regional wheat output was limited. The CBN later launched The Brown Revolution to address challenges and enhance the impact of agricultural initiatives[32].

9. The Presidential Fertilizer Initiative (2016):

The Presidential Fertilizer Initiative was a significant effort to make NPK fertilizer more widely accessible and affordable. It aimed to revive fertilizer blending facilities across the nation, producing one million metric tons of fertilizer annually at a fixed cost of N5,500 per 50kg bag. President Buhari actively supported its implementation.

The initiative successfully revitalized dormant fertilizer firms by sourcing raw materials like potash from Russia and phosphate from Morocco. However, the Russia-Ukraine war disrupted the supply

chain globally, impacting fertilizer prices. The recent commissioning of the Dangote Fertilizer Limited facility further boosted the UREA fertilizer market. Dangote emerged as a major player, intending to compete in the export market based on world market pricing. Despite concerns about local market benefits, Dangote's focus on dollar receivables aligned with the government's need to strengthen foreign reserves. With fertilizer prices soaring due to the war, the government plans to prioritize locally produced fertilizer to meet the agricultural demands of Nigerian farmers[33].

10. The National Livestock Transformation Plan (2019):

To address conflicts between farmers and herders, the National Livestock Transformation Plan (NLTP) was introduced, aiming to increase cattle farming by providing herders with land for ranching. The plan aims to prevent pastoralist nomads from encroaching on crop fields, educate nomads, and promote proper animal management. The federal government funds the plan's execution, urging interested state governments to contribute land. Despite being in its early stages, the NLTP is seen as having long-term benefits.

11. The Agriculture Promotion Policy (2016 – 2020):

The Agriculture Promotion Policy (APP) focused on eliminating constraints affecting agricultural productivity in Nigeria. Addressing the inability to meet domestic food demand and ensuring quality yield for export were key priorities. The APP aimed to accelerate Nigeria's agricultural potential, setting targets for increased production, quality export expansion, and improved infrastructure and farm inputs for all farmers[34].

The policy specifically addressed challenges faced by smallholder farmers, particularly women, committing to resolve issues such as gender discrimination in land ownership. It provided an opportunity for groups or associations of smallholder female farmers to challenge socio-cultural practices disadvantaging women in terms of land ownership[35].

Additionally, the APP aimed to improve soil nutrients by addressing constraints in the distribution and accessibility of farm inputs like fertilizers. It focused on delivering cost-effective fertilizers to farmers and educating them on soil enhancement mechanisms and climate-adaptive farming methods [36.,37].

2.1.5 **Manufacturing Sector Performance In Nigeria**

The manufacturing industries in Nigeria is an economic sector that brings approximately 10 percent of total GDP (Gross Domestic Product) each year. Manufacturing activity is concentrated in large cities like Lagos, Port Harcourt, and Ibadan, in the south of the country. Millions of people are involved in producing household goods, consumer products, automobiles, agriculture, mining, cement and building materials etc. The Nigerian manufacturing sector is dominated by the production of cement and building materials, food and beverages, tobacco, chemicals and fertilizers, wood, and textiles. Out of all only 3 subsectors (food & beverage, cement, and textile) account for 77% of manufacturing output generating the greatest value. Also, breweries and flour mills contribute well in the manufacturing sector[38]

Manufacturing has generally been described and accepted as a catalyst for economic growth and development all over the world, industrialization under industrial sector is widely conceived as a critical tool for accelerating economic growth and development. The manufacturing sector provides medium to produce goods and services, facilitate good jobs, and also earn the economic agents' handsome rewards[38]. Manufacturing is viewed as the production of merchandise for sale or use through the application of tools, machine, labour, chemical and biological formulation. It involves both handicraft of human activities and high tech by transforming of unfinished goods to finished goods[39].

In modern economy today, the development of industries (industrialization) is extensively based

on technological development of productive strategies. This simply implies a transformation of an economy from traditional low production system into modern mass production system, which involves more efficient and automated system through sustained and deliberate combination and application management techniques, suitable technology and other resources that promote high tech production techniques[40]. It has been argued that the fastest channel by which rapid sustainable growth and development is achieved in any economy is via industrial capacity, technological innovation and enterprise development, rather than vast human resources and level of endowed material resources[41]. More so, Industrial development deals with the application of modern equipment, machines and technology in the production of goods and services as well as to alleviate human suffering and ensure welfare improvement in a society[42]. Hence, modern manufacturing processes involve the development of managerial and entrepreneurial skills as well as high technological innovations that often promote large scale productivity and improved living conditions. In spite of the nation's numerous and vast natural resources, the world Bank figures indicate that greater number of Nigerians are suffering from abject poverty, living on less than $2 a day. Similarly, Nigeria was also ranked 156 out of 179 in Human Development Index (HDI), representing a major decline in its ranking in recent times. Consequently, the nation has been placed amongst the 47th poorest countries of the world[24]. The nature of its economic system- mono-cultural economy and gross underutilization of its natural resources is the bane of the nation's economy. The economy suffered series of problems ranging from excessive dependence on imports for consumption and input materials, socio-economic infrastructure decay, capacity under-utilization in the industrial sector, poor management strategies and institutional framework, and agricultural sector neglect that used to be the economic base of the Nigerian economy.

Manufacturing Sector and Economic Growth In Nigeria

It has been suggested that the fastest way for a country to achieve sustainable economic growth and development is through technological innovation, enterprise development, and industrial capacity, rather than its endowed material resources or vast human resources. For example, despite its limited natural resources and the challenges posed by chronic inflation in the 1920s, Germany has successfully exploited the manufacturing sector and risen to become Europe's and the world's fourth largest economy.

Nigeria's manufacturing sector has largely been left out of the growth process, given its low contribution to GDP and employment. Over the years, Nigeria's high import of manufactured products and weak export of processed goods are evidences of the inherent weakness of the sector.

Meanwhile, the weak performance of the manufacturing sector is also reflected in the low share of non-oil exports to total exports earnings as well as the high share of manufactured goods in total imports. Data from the National Bureau of Statistics (NBS) show that non-oil exports as a percentage of total exports averaged 7% in the past three years, while the manufactured and processed products as a share of total imports increased from 31% in 2014 to 38% in 2017. Prior to 2015, Nigeria's manufacturing sector experienced rapid growth for over a decade led by few sub-sectors. Between 2005 and 2014, for instance, the sector grew by an annual average of 12%, fuelled largely by increasing consumer demand and the GDP rebasing exercise, which expanded the scope of manufacturing to include 13 subsectors. Growth in the sector was led by only few c sub-sectors such as Cement and Food, Beverages & Tobacco. Despite the sector's rapid expansion, increases in non-oil/manufactured goods export were only marginal even as Nigeria experienced sharp growth in imported food items and manufactured products. As a matter of fact,

imports remained the dominant source of inputs into food, beverages and tobacco in Nigeria, accounting for more than 70% of all raw materials[43].

The end of the oil boom era ushered a "new normal" situation for the country where foreign exchange rationing and exchange rate depreciation was prevalent. The exchange rate crisis that followed in 2016 showed clearly the inherent weakness of Nigeria's manufacturing sector, which also suffered from foreign exchange scarcity that resulted in declining outputs, higher operating costs and input shortages. As a result, the manufacturing sector experienced contraction, with an annual growth rate of -4.3% in 2016. But beyond foreign exchange, structural challenges still affect manufacturing output. Foreign exchange stability occasioned by increased crude oil price in 2017 was largely responsible for the positive growth in manufacturing output in the first half of the year. However, the decline of manufacturing output in the third quarter of the year amidst exchange

rate stability revealed that the challenges facing the sector are not limited to the unavailability of foreign exchange. 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% in 2017 and its share in GDP remained at 9%. The decline in manufacturing output was led by Oil Refining (- 28%), Motor Vehicle and Assembly (-22%), Other manufacturing (-7%) and Cement (-2%). Key issues relating to infrastructure, power shortages, multiple taxes and the influx of imported goods continue to limit growth of the sector.

Backward Integration remains a challenge for most manufacturing firms in Nigeria. A host of supply issues affect the quality, quantity and availability of local inputs, thereby further dis-incentivising downstream processors from procuring local inputs and establishing backward linkages in Nigeria. These include low productivity in manufacturing, lack of local capacity (in

many different areas), limited options for sourcing locally, limited access to technology and a lack of technological know-how, poor infrastructure, fragmented local supplier bases and poor coordination between suppliers and downstream purchasers, financial constraints, inconsistent policies and poor implementation of existing policies[43]

A Weak Manufacturing Sector has Several Implications for the Economy The high concentration of the sector underscores the urgent need for the Nigerian government to pursue widespread growth of the subsectors within manufacturing given their strategic importance in job creation and import substitution. With Nigeria's strategic role in West Africa and its abundant mineral resources, the country cannot afford to have a weak manufacturing sector. The neglect of this sector comes at a social and economic cost, with the following implications: • Despite positive GDP growth, the Nigerian economy is highly vulnerable to oil price shocks. Nigeria's GDP growth or decline is fuelled by the oil sector. In 2017 for instance, oil sector GDP growth of 5% was enough to pull the economy out of recession. With a weak manufacturing sector, a fall in oil price and output will have negative effects on GDP growth and external reserves and result in foreign exchange challenges. • Importation of consumer goods is on the rise. Imported goods and by-products increased by 43% to N3.5 trillion in 2017Q2. With declining manufacturing output, increase in importation of consumer goods is inevitable. This will lead to increased demand for foreign exchange and exert pressure on the external reserves if oil price declines. The decline in manufacturing dampens the prospect of improving the already poor contribution of non-oil exports to total exports and foreign exchange earnings.

The Importance of the Manufacturing Sector

Manufacturing operations have a large effect on a country's economy. For example, in developed economies, they account for a large portion of total economic activities; in Nigeria,

the subsector accounts for around 10% of total GDP annually. Manufacturing operations recruit roughly 12% of the total workforce in the formal economy. Manufacturing encompasses a wide range of activities, from light agro-based businesses to heavy iron and steel firms. In a developed economy, the manufacturing sector is a leading sector in a different way: it is a way of growing goods related to import substitution and growth, generating foreign exchange earnings and per capita income, and causing distinct consumption trends[40]. However, manufacturing companies' effectiveness is dependent on the availability of capital, such as raw materials and financial resources, to meet demand; this necessitates the financial sector in Nigeria investing a significant amount in developing the subsector of the economy. As a result, manufacturing entails converting raw materials into finished consumer products, as well as intermediate and producer goods. Manufacturing, like other manufacturing operations, generates jobs, helps to improve agriculture, and diversifies the economy, all while growing the country's foreign exchange earnings and allowing local workers to learn skills. Furthermore, it reduces the risk of overdependence on international trade and promotes the most efficient use of available capital.

Strategies of Industrialization in Nigeria

Nigeria and other West African countries have implemented a variety of industrialization policies as part of their growth efforts.

The following industrialization strategies were implemented in Nigeria:

(a) Import Substitution Strategy,

(b) Export Promotion Strategy,

(c) Balanced Development Strategy,

(d) Local resource-based Strategy.

Import Substitution Strategy:

Following independence, Nigeria moved its policy from importing primary goods from colonial masters to manufacturing those items that were originally imported. The key goal was to reduce overdependence on foreign trade while also conserving foreign exchange. However, rather than manufacturing, it turned out to be a simple assemblage of those products. Since almost every item needed by the so-called industries was imported, the original argument was refuted.

Export Promotion Strategy:

Nigeria added an export promotion policy after recognizing the apparent drawbacks of the import substitution strategy. This includes the development and exportation of new goods as well as those that were previously imported. The Nigerian Export Promotion Board (NEPB) was formed to promote and enforce this policy. This policy failed due to a lack of rewards and raw materials. Since 1986, export promotion incentives have placed a renewed emphasis on this strategy.

Balanced Development Strategy

This policy was adopted as a result of the lopsided development of the industrial sector. The main of balanced development of all industries is promoted greater linkages and inter-sectional linkages so that the intra-industry transaction could increase.

Local resource-based Strategy:

Due to declining oil revenues and foreign exchange for the importation of raw materials and spare parts, the government agreed to focus on an industrialization policy based on local raw material sourcing. As a result, industries are urged to seek out local substitutes or alternatives for their raw materials. Breweries, for example, are now growing and using local millet and maize, and the prohibition on wheat has necessitated the baking of cornbread. This policy would aid in the most

efficient use of local resources as well as the conservation of foreign exchange, among other benefits.

2.1.6 Manufacturing Policies in Nigeria.

Since 1986, Nigeria has implemented various manufacturing policies to promote industrial development and economic diversification. Here are some key policies that have been introduced:

1. **Structural Adjustment Program (SAP) (1986-1993):** SAP was launched as a result of Nigeria's economic crisis in the mid-1980s. It aimed to liberalize the economy, reduce government control, and promote private sector participation in manufacturing and other sectors.
2. **Industrial Development (Income Tax Relief) Act (1990):** This policy provided tax incentives to encourage and promote investment in industrial development, including manufacturing.
3. **National Automotive Policy (1993):** Introduced to stimulate domestic production and assembly of automobiles, this policy aimed to reduce the importation of fully assembled vehicles and encourage local manufacturing and employment in the automotive industry.
4. **Trade And Financial Liberalisation Policy (1989) :** This policy was a follow up of structural adjustment programme. It was an industrial policy embarked upon to foster competition and efficiency in the financial sector with the following aims and objectives:

a) To foster competition among the domestic firms and between domestic import-competing firms and foreign firms with view to promote efficiency,

b) Reduction of levels of both tariff and non-tariff barriers;

c) Scraping of commodity marketing boards; and

d) Making determination of exchange rate as well as deregulation of interest rate meant to foster efficiency and productivity.

5. **Bank of Industry Policy (BOI, 2000).**

The failure of the above policies saw in 2000 the Introduction of Bank for Industry as an institution to accelerate industrial development through the provision of term loans, equity finances and technical assistance to industrial enterprises. The bank has the combination of the following Institutions: Nigeria Industrial Development Bank (NDB); Nigerian Bank for Commerce and Industry (NBCI); Industrial and Insurance Brokers (IDIB); and Leasing Company of Nigeria (LECON), Other aims and objectives of the Bank Included:

a. Making a considerable impact in terms of long term loans;

b. To assist in employment generation.

c. Industrial dispersal and promotion of indigenous- entrepreneurship.

(e) **Small And Medium Industries Equity Investment Scheme (Smieis,2000)**

The main rationale of industrial policy we know is to accelerate industrial development by radically increasing value-added at the value chain (Duru, 2002). This was why SMIEIS in 2000 was introduced to correct the failures. The policy meant in coordinating the scheme with a guideline that 60% of the SMIEIS fund should be used for core real sector, 30% to services, and 10% to micro enterprises through NGOs. The objectives of the SMIEIS were as follow:

1. Increasing per capita income/ output and initiating/ constituting changes in the structure of business and the society through growth, increased output and employment

opportunities;

2. Enhancement of regional/ economic balance through industrial diffusion; moderating rural/urban migration; easily adapted to local technology; and promotion of effective resources utilization.

(f) **Industrial Revolution Plan (2014**): This initiative aimed to revamp and modernize Nigeria's industrial sector through policies that promote local content, enhance competitiveness, and support Small and Medium Enterprises.

(g) **Recovery and Growth Plan (ERGP) (2017-2020):** The ERGP aimed to drive economic recovery, sustainable growth, and industrial development. It identified key sectors, including manufacturing, where the government aimed to support investments and reposition Nigeria as a global manufacturing hub.

(h) **Nigerian Automotive Industry Development Plan (2020):** Introduced to incentivize local manufacturing of vehicles and boost the automotive industry, this plan focuses on lowering import duties and establishing special automotive industrial parks.

Challenges Facing The Nigerian Manufacturing Sector.

The manufacturing sector in Nigeria faces several challenges that impact its growth and development. Here are some key challenges with references to support them

1. Inadequate infrastructure: Nigeria's manufacturing sector is hindered by poor infrastructure, including inadequate electricity supply, bad road networks, and limited access to ports. This increases the cost of doing business and reduces competitiveness[45].

2. High cost of production: The manufacturing sector in Nigeria faces high production costs due to factors such as expensive raw materials, high energy costs, and multiple taxation. These factors decrease profit margins and make Nigerian products less competitive in the global

market[46,47].

3. Limited access to finance: Access to affordable financing is a major challenge for Nigerian manufacturers. Most manufacturing firms struggle to access loans due to high interest rates, lack of collateral, and limited financial support from the government. This restricts their ability to invest

in modern technologies, expand production capacity, and undertake research and development48,49

4. Policy inconsistency: Frequent policy changes, inconsistent regulations, and a lack of policy coordination negatively affect the manufacturing sector in Nigeria. This uncertainty hampers long-term planning and investment decisions by manufacturers[50].

5. Inadequate skilled labor force: The manufacturing sector in Nigeria often faces a shortage of skilled labor. The education system does not consistently provide graduates with the necessary technical and vocational skills required by the industry. This skills gap makes it difficult for manufacturers to find qualified workers, affecting productivity and efficiency[51,52].

2.1.7. Service Sector in Nigeria

This is a sector of an economy where businesses, companies, enterprises and organization provide services and employment. Some scholars have earlier developed the model of three sectors in which the model classified the economic activities into primary, secondary and tertiary. Under primary production, economic activities such as agriculture and mining were the leading economic activities, while the secondary component comprises of manufacturing and construction. The tertiary production involves economic activities like transportation, trade, government, communication and personal services[53].

A service is any activity or benefit that one party can offer to another, which is essentially

intangible and does not result in the ownership of anything. The production may be or not attached to a physical production[54], Service sector is View as an economic activities that create value and provide benefits for customers at a specific period and place as a result of bringing about a desired change in or on behalf of the recipient of the service. The sector provides a service such as; education, health, transportation, communication, government, finance, etc, that satisfied a need. Unlike the agricultural and industrial sector that produce tangible goods, the service sector produce intangible goods. It rendered services which is much needed globally for a rapid economic development[55].

In Nigeria, the service sector consists of electricity, water, building and construction, road, rail, ocean and air transport; communication; wholesale and retailing business; hotel and restaurants financial services; real estate; housing (dwelling); private charitable activities, as well as repairs and other services[56]. The service sector makes a direct and significant contribution to Gross Domestic Product (GDP) and employment generation, and provides crucial inputs for the rest of the economy, thus having an important impact on the overall climate of investment, which is key to economy growth and development[57]. In Nigeria, there have been improvements in some service components like accommodation and food services along with human health and social services[58].

The service sector in Nigeria has experienced notable growth and transformation since 1986. During this period, Nigeria embarked on economic reforms and liberalization policies, which helped attract foreign investment and stimulate the service sector. Prior to 1986, Nigeria's economy was heavily dependent on the oil sector, but the government recognized the need to diversify the economy and reduce its dependence on oil revenues. As a result, various policies and initiatives were introduced to promote and develop the service sector.

The telecommunications industry has been a major driver of growth in the service sector. Since the liberalization of the telecom market in 2001, there has been a significant increase in the number of telecom operators, improved access to mobile and internet services, and increased competition. This has contributed to the expansion of telecommunication services throughout the country, boosting economic activities and creating job opportunities.

The banking and financial services sector has also witnessed significant growth over the years. Reforms in the banking sector, such as the recapitalization exercise in 2005, led to increased competition, improved services, and enhanced stability. This, in turn, stimulated economic growth and facilitated financial inclusion. Other segments of the service sector, such as hospitality, transportation, healthcare, and information technology, have also shown positive growth trends. The government's focus on infrastructure development, investment in healthcare facilities, and support for the ICT sector have helped in the expansion and improvement of services in these areas.

It is important to note that the COVID-19 pandemic, which began in 2020, had a significant impact on the service sector, as it did globally. Lockdowns, travel restrictions, and reduced consumer spending affected various service industries, such as tourism and hospitality. However, the sector has shown resilience and adaptability, and with the easing of restrictions, there is expected to be a gradual recovery.

Contribution and Importance of Service Sector to GDP in Nigeria.

The service sector plays a significant role in Nigeria's economy and contributes to its Gross Domestic Product (GDP). Over the years, the service sector has experienced robust growth, driven by various subsectors such as telecommunications, banking and financial services, transport and logistics, tourism, real estate, and entertainment.

The service sector accounted for approximately 53% of Nigeria's GDP in 2020. This represents a steady increase from previous years, illustrating the growing importance of the sector in the country's economic development. One of the key contributors to the service sector's growth is the telecommunications industry. Nigeria has one of the largest telecom markets in Africa, with increasing mobile and internet penetration rates. This has led to the expansion of various telecom

services, including voice and data communication, mobile banking, and e-commerce, contributing significantly to the sector's GDP contribution[59].

The banking and financial services sector is also a major contributor to the service sector's GDP contribution. Nigeria's financial sector has witnessed significant growth in recent years, with a focus on innovations such as mobile banking, fintech services, and digital payments. These developments have enhanced financial inclusion and facilitated economic activities, thus boosting the GDP contribution of the sector.

Additionally, the transport and logistics subsector plays a vital role in Nigeria's economy by facilitating the movement of goods and people. With the country's large population and extensive land area, there is a constant demand for transportation services. This includes road, rail, air, and maritime transport, all of which contribute to the service sector's GDP contribution. Furthermore, the tourism industry has the potential to drive economic growth and contribute to the service sector's GDP. Nigeria is known for its diverse culture, historical sites, and natural attractions. Efforts to develop the tourism sector, including investments in hospitality, travel agencies, and tour operators, can significantly boost its GDP contribution[9].

The service sector plays an important role in Nigeria's economic growth and development. Over the years, the sector has contributed significantly to the country's Gross Domestic Product (GDP), employment generation, and foreign exchange earnings. However, the performance of the service sector in Nigeria has been influenced by various factors. Here is an overview of the service sector's performance and its impact on economic growth in Nigeria:

1. Contribution to GDP: The service sector is the largest contributor to Nigeria's GDP. According to data from the National Bureau of Statistics (NBS), the sector accounted for over

50% of the country's GDP in recent years. This highlights the significant role of services in driving economic growth.

2. Employment generation: The service sector is a major source of employment in Nigeria, providing opportunities for a large number of people. It encompasses a wide range of industries such as banking and finance, telecommunications, hospitality, transportation, and healthcare. These industries create jobs, promote entrepreneurship, and improve livelihoods.

3. Foreign exchange earnings: Certain service-based industries, such as tourism and telecommunications, contribute to foreign exchange earnings in Nigeria. Tourism, for example, attracts foreign tourists, leading to revenue generation through expenditures on accommodation, transportation, and other related services. The telecommunications sector, on the other hand, contributes to foreign exchange earnings through international calls and data services[9].

Service Sector Growth in Nigeria

The service sector in Nigeria has experienced significant growth and transformation over the years. It has become a key driver of the country's economy and has created numerous employment opportunities. Here are some trends in the service sector in Nigeria:

1. Expansion of the ICT Industry: The Information and Communication Technology (ICT) sector has witnessed immense growth in Nigeria, with the rise of tech startups, mobile banking, and e-commerce platforms. This has led to increased connectivity and digital transformation across various industries[60].

2. Fast-growing Financial Services: Nigeria's financial services sector has experienced significant growth, driven by the increasing adoption of banking services, insurance, and

microfinance. The introduction of innovative financial technologies like mobile banking and online payment solutions has contributed to the expansion of financial services[61].

3. Tourism and Hospitality: Nigeria's tourism and hospitality sector has seen steady growth, fueled by an increase in business and leisure travel. The country's rich cultural heritage, natural attractions, and improved infrastructure have contributed to the development of the sector, attracting both domestic and international tourists[62].

4. Healthcare Services: The healthcare sector in Nigeria has witnessed significant improvements with the expansion of private hospitals, clinics, and medical facilities. There has been a growing demand for quality healthcare services, resulting in increased investments in healthcare infrastructure and the adoption of innovative healthcare technologies[63].

Challenges Facing the Service Sector In Nigeria

The service sector in Nigeria faces several challenges that hinder its growth and development. These challenges include infrastructure deficiencies, low skilled labor, inadequate regulatory framework, and limited access to finance. Here are some of the key challenges facing the service sector in Nigeria,:

1. Infrastructure deficiencies: The inadequate infrastructure, including power supply, transportation networks, and communication systems, poses a major challenge to the service sector. Limited access to reliable infrastructure hampers the efficiency and competitiveness of service-based industries. The Nigerian government has recognized this challenge and has been making efforts to improve infrastructure through initiatives such as the National Integrated Infrastructure Masterplan (NIIMP)[64]

2. Low skilled labor: The service sector requires a skilled and knowledgeable workforce to deliver high-quality services. However, the lack of adequate skills and training programs hinders

the sector's growth. The Nigerian government has introduced several policies to address this challenge, such as the National Skill Development Plan, which aims to enhance the employability and skill levels of the Nigerian workforce[65].

3. Inadequate regulatory framework: The service sector in Nigeria faces challenges related to inconsistent regulations, excessive bureaucracy, and a lack of clarity in policies. These issues make it difficult for businesses to operate efficiently and attract investments. The Nigerian government has been working on improving the regulatory environment through initiatives such as the Ease of Doing Business reforms. The reforms aim to streamline regulations, simplify procedures, and create a more favorable business environment[66].

4. Limited access to finance: Access to finance is crucial for the growth and expansion of service-based businesses. However, many service sector enterprises in Nigeria face challenges in accessing affordable credit and investment capital. The Nigerian government, through agencies such as the Central Bank of Nigeria and Bank of Industry, has implemented initiatives and loan schemes to address this challenge[8].

Service Sector Policies in Nigeria

The service sector policies in Nigeria are aimed at promoting the growth and development of various service-based industries in the country. These policies have been formulated to attract investments, enhance competitiveness, and create employment opportunities within the service sector. Here are some key service sector policies in Nigeria:

1. **Nigerian Investment Promotion Commission (NIPC) Act:** This act promotes and coordinates investments in the service sector, including sectors such as tourism, hospitality,

banking, insurance, and telecommunications. It provides incentives, simplified procedures, and guarantees for investment in the country[67].

2. **National ICT Policy**: The National Information and Communication Technology (ICT) Policy aims to develop a vibrant and globally competitive ICT sector. It focuses on areas such as e-commerce, digital services, software development, and telecommunications. The policy provides a framework for infrastructure development, investment incentives, and capacity building[68].

3. **National Tourism Policy**: The National Tourism Policy seeks to develop and promote tourism as a major source of revenue and employment generation in Nigeria. The policy focuses on improving infrastructure, marketing, human resource development, and regulatory frameworks within the tourism sector[69].

4. **National Policy on Micro, Small, and Medium Enterprises (MSMEs)**: This policy aims to support the growth of MSMEs, including those in the service sector. It includes measures to provide access to finance, improve business development services, facilitate technology transfer, and enhance market access for MSMEs[70].

2.1.8. Trade Liberalization and Agricultural Sector Performance

Trade liberalization refers to the removal or reduction of trade barriers, such as tariffs and quotas, to promote international trade. In the context of Nigeria, trade liberalization has had a significant impact on the agricultural sector.

1. Increased market access: Trade liberalization has opened up new markets for Nigerian agricultural products, allowing farmers to export their goods to foreign countries. This has provided farmers with more opportunities to sell their products and increase their income[71].

2. Diversification of agricultural exports: Prior to trade liberalization, Nigeria heavily relied on oil exports, neglecting the agricultural sector. However, with trade liberalization, there has been a shift towards diversification, leading to increased agricultural exports. This has reduced the country's vulnerability to fluctuations in oil prices and improved the overall performance of the agricultural sector[72].

3. Technological advancements: Trade liberalization has facilitated the transfer of technology and knowledge between countries. This has led to the adoption of modern farming techniques, improved productivity, and increased agricultural output. Furthermore, exposure to international markets has also encouraged Nigerian farmers to upgrade their production processes and meet international quality and safety standards[73].

4. Foreign investment: Trade liberalization has attracted foreign investment in the agricultural sector, leading to increased capital inflows and improved access to modern inputs and machinery. This has facilitated agricultural development, improved productivity, and stimulated rural economic growth[74].

However, it is important to note that trade liberalization also has its drawbacks. Some of the potential challenges and risks associated with trade liberalization in the Nigerian agricultural sector include:

1. Competition from imports: The removal of trade barriers means that Nigerian farmers have to compete with imported agricultural products, which may be produced more efficiently and at lower costs. This can put pressure on domestic farmers, especially those with limited resources and access to credit, and result in market distortions.
2. Vulnerability to global market fluctuations: Increased integration into the global economy exposes the Nigerian agricultural sector to fluctuations in global market prices. Volatile

commodity prices can affect the income and livelihoods of farmers, especially smallholders who do not have the capacity to hedge against price volatility[72].

2.1.9. Trade Liberalization and Manufacturing Sector Performance.

These are the key points regarding the relationship between trade liberalization and the manufacturing sector's performance in Nigeria:

1. Increased market access and export opportunities: Trade liberalization has allowed Nigerian manufacturers to access new markets and export their products to foreign countries, thus expanding their customer base and increasing their revenue. This has been particularly beneficial for export-oriented industries[75].

2. Technological improvements and industrial upgrading: Trade liberalization has facilitated the importation of capital goods, machinery, and technology for the manufacturing sector. This has enabled Nigerian manufacturers to adopt more advanced production techniques, enhance productivity, and improve product quality[76].

3. Increased competition and efficiency: Trade liberalization has exposed Nigerian manufacturers to international competition, which has forced them to become more efficient to remain competitive. This has incentivized them to streamline their operations, reduce costs, and improve production processes[77].

4. Investment inflows and technology transfer: Trade liberalization has attracted foreign direct investment (FDI) in the Nigerian manufacturing sector. Foreign investors bring in capital, technology, and management expertise, which have contributed to the modernization and growth of the sector[78]

However, it is important to note that trade liberalization has also posed challenges for the Nigerian manufacturing sector. These include the potential displacement of domestic industries

due to increased competition from imports and the need for domestic firms to upgrade their capabilities and meet international standards.

2.1.10. Trade Liberalization and Service Sector Performance

Trade liberalization has also had a significant impact on the service sector in Nigeria. Here are some key points regarding the relationship between trade liberalization and the performance of the service sector in Nigeria.

1. Increased Foreign Direct Investment (FDI): Trade liberalization has attracted foreign investment in the service sector, particularly in areas such as telecommunications, finance, and tourism. FDI inflows have stimulated the growth and modernization of the service sector, leading to improved performance[79].

2. Market expansion and export of services: Trade liberalization has allowed Nigerian service providers to access new markets and export their services to foreign countries. This has increased revenue and employment opportunities in the service sector[80].

3. Technological advancements and innovation: Trade liberalization has facilitated technology transfer and knowledge diffusion in the service sector. This has enabled Nigerian service providers to adopt more efficient and innovative methods, leading to enhanced performance and competitiveness[81].

4. Increased competition and efficiency: Trade liberalization exposes Nigerian service providers to competition from foreign firms. This has encouraged them to improve efficiency, enhance service quality, and develop new service offerings to remain competitive[82].

However, it is important to note that trade liberalization also poses challenges for the Nigerian service sector, such as the need to address skill gaps, ensure the quality and standards of services, and enhance regulatory frameworks.

2.2. Theoretical Review

Theory is a set of believed and general principle that is intended to guide or explain a given economic or related phenomenon. There are many theories that explain the relationship between trade liberalization and sectoral performance. Such theories include:

2.2.1 Mercantilist Theory

The Mercantilist theory of international trade is an economic theory that prevailed during the 16th to 18th centuries and influenced the economic policies of many European countries, especially England and France. Developed in the sixteenth century, mercantilism was one of the earliest efforts to develop an economic theory. This theory stated that a country's wealth was determined by the amount of its gold and silver holdings. In it's simplest sense, mercantilists believed that a country should increase its holdings of gold and silver by promoting exports and discouraging imports. In other words, if people in other countries buy more from you (exports) than they sell to you (imports), then they have to pay you the difference in gold and silver. The objective of each country was to have a trade surplus, or a situation where the value of exports are greater than the value of imports, and to avoid a trade deficit, or a situation where the value of imports is greater than the value of exports86.

The Mercantilist theory, which dominated economic thinking from the 16th to the 18th century, is based on the belief that a nation's wealth and power can be increased by maximizing exports and minimizing imports. Nigeria can adopt certain aspects of the Mercantilist theory to boost its economy and promote self-sufficiency. One strategy could be to focus on increasing exports of

its abundant natural resources, such as oil, gas, solid minerals, and agricultural products, while also limiting imports to protect domestic industries.

By prioritizing export-oriented policies, Nigeria can generate foreign exchange earnings from the sale of its resources. This can strengthen its balance of trade and provide the country with the necessary funds to invest in infrastructure, education, and other developmental projects. Additionally, the revenue generated from exports can be used to reduce dependency on imports and foster the growth of domestic industries.

Nigeria can also promote import substitution industries to reduce its reliance on foreign goods and encourage the production of goods domestically. This involves implementing policies and incentives to support domestic industries and encourage them to produce goods that would otherwise be imported. By producing goods domestically, Nigeria can create jobs, enhance technology transfer, and stimulate economic growth.

Furthermore, Nigeria can adopt protectionist measures such as tariffs, quotas, and subsidies to safeguard domestic industries from foreign competition. These measures can be used strategically to protect emerging industries and give them time to mature and compete globally. However, it is crucial to strike a balance between protecting domestic industries and promoting free trade to avoid hindering competitiveness and stifling innovation in the long run.

It is important to note that the Mercantilist theory has been subject to criticism over the years, as it does not account for the mutually beneficial aspects of international trade and tends to overlook the potential gains from specialization and comparative advantage. Therefore, Nigeria should also consider the limits of a purely mercantilist approach and strive to achieve a balanced international trading system that fosters both domestic growth and global economic cooperation.

In conclusion, Nigeria can apply certain aspects of the Mercantilist theory by prioritizing its

exports, promoting import substitution industries, and implementing protectionist measures to strengthen its economy. However, it is essential for Nigeria to strike a balance between protectionism and free trade, while also considering the potential benefits of specialization and comparative advantage.

2.2.7. **Heckscher-Ohlin Theory**

The theories of Smith and Ricardo didn't help countries determine which products would give a country an advantage. Both theories assumed that free and open markets would lead countries and producers to determine which goods they could produce more efficiently. In the early 1900s, two Swedish economists, Eli Heckscher and Bertil Ohlin, focused their attention on how a country could gain comparative advantage by producing products that utilized factors that were in abundance in the country. Their theory is based on a country's production factors—land, labor, and capital, which provide the funds for investment in plants and equipment. They determined that the cost of any factor or resource was a function of supply and demand. Factors that were in great supply relative to demand would be cheaper; factors in great demand relative to supply would be more expensive. Their theory, also called the factor proportions theory, stated that countries would produce and export goods that required resources or factors that were in great supply and, therefore, cheaper production factors. In contrast, countries would import goods that required resources that were in short supply but higher demand[87].

For example, China and India are home to cheap, large pools of labor. Hence these countries have become the optimal locations for labor-intensive industries like textiles and garments.

The theory is based on the following assumptions:

1. There are no transport cost and impediment to trade

2. There is also perfect competition in commodity and factor market

3. All production function are homogenous of the first degree

4. The production functions differ between commodities but are the same in both countries.

2.2.8. **Theory of Absolute Advantage**

This theory is attributed to Adam Smith and discusses the benefit a country can achieve by actively participating in the international division of labour. Smith argued that specialization in production leads to increase in output. This theory advocates that a country that trades internationally should specialize in producing only those goods in which it has absolute advantage[83]. The country can then expert a portion of those goods and import goods that is trading partner produce more cheaply.

According to Smith, this approach would lead to global efficiency, Smith based his theory on The assumptions of:

1. trade involves only two countries,

2. only two goods are traded by the two countries

3. The countries have the same level of resource input.

Evaluating the absolute advantage and trade implications from Nigeria's perspective, Nigeria is a country located in West Africa and is known for its abundant natural resources, including oil, gas, solid minerals, and agricultural products. Through the absolute advantage theory, Nigeria should focus on producing and exporting goods and services in which it has a greater efficiency than-other-countries.

One of Nigeria's major absolute advantages lies in the production of crude oil. Nigeria is one of the largest oil producers in Africa and possesses vast reserves. It has extensive experience and infrastructure in the oil industry, making it highly efficient in extracting, refining, and exporting petroleum and petroleum-based products. This gives Nigeria a comparative advantage in the global market, allowing it to specialize in the oil sector and generate significant export revenues. Furthermore, Nigeria has a competitive advantage in agriculture due to its favorable climate and large arable land. The country is a major producer and exporter of various agricultural commodities such as cocoa, palm oil, rubber, and cassava. Nigeria's agricultural sector can benefit from its absolute advantage by increasing productivity, improving farming techniques, and expanding value-added processing industries. This would enhance its ability to compete internationally and increase export opportunities for agricultural products.

Despite having absolute advantages in specific sectors, it is vital for Nigeria to diversify its economy to reduce its reliance on oil exports. By developing other industries such as manufacturing, technology, and services, Nigeria can expand its export base and boost economic growth. This would help to mitigate the vulnerability that Nigeria faces due to fluctuations in global oil prices.

Additionally, trade agreements and partnerships can play a crucial role in enhancing Nigeria's trade opportunities. By participating in regional trade blocs, such as the Economic Community of West African States (ECOWAS), Nigeria can benefit from the free movement of goods, services, and investments within the member countries. Nigeria also has the potential to strengthen its trade relations with countries like China, the United States, and European nations through bilateral agreements and attracting foreign direct investment.

2.2.9. Theory of Comparative Advantage

This is credited to David Ricardo who proposed that countries can benefit from each other even though one has absolute advantage over the other in the production of both goods. The comparative advantage comes if each trading partner has a product that will bring a better price in another country than it will at home. If each country specializes in producing the gods in which it has a comparative advantage, more goods are produced, and the wealth of both countries increases[85]. This theory is based on the following assumption:

1. There is perfect competition in all markets. This means that:

   (a) firms are price takers,

   (b) firms choose output levels that equalizes the price with the marginal cost (PMC),

   (c) output is homogenous across all firms,

   (d) free entry exit

   (e) perfect information.

2. only two countries are involved in the trading.

3. both countries produce only two goods

4. labour is the only factor of production and it is homogenous and can freely move between industries but is immobile between two countries, and

5. There is no cost of transportation between countries.

The more divergent the patterns of comparative advantage between countries members, the

greater the belief of the existence of scope for trade creation in the free trade era[84]. Nigeria, with its diverse natural resources, agricultural potential, and growing industrial base, can benefit from the concept of comparative advantage in international trade.

Agriculture plays a significant role in Nigeria's economy, and the country has a comparative advantage in producing crops such as cocoa, palm oil, rubber, and cassava due to its favorable climate and large arable land. Nigeria can focus on increasing the productivity and efficiency of its agricultural sector, improving farming techniques, and investing in value-added processing industries. By capitalizing on its comparative advantage in agricultural production, Nigeria can increase exports in these sectors and earn foreign exchange.

Nigeria also possesses significant natural resources, with oil and gas being its primary export commodities. While oil extraction and export have traditionally been Nigeria's major source of revenue, its heavy reliance on this sector leaves it susceptible to price fluctuations in the global market. However, Nigeria could diversify its economy by developing other sectors, such as solid minerals, including tin, limestone, and coal. By leveraging its comparative advantage in these mineral resources, Nigeria can attract investment, expand its export base, and reduce its dependence on the volatile oil sector.

Furthermore, Nigeria's emerging manufacturing and industrial sectors are an area where the country can develop its comparative advantage. By promoting investment and technological advancements in industries such as textiles, automobiles, and electronics, Nigeria can enhance its manufacturing capabilities and compete globally. This would involve fostering an enabling business environment, improving infrastructure, and providing support for research and development.

Additionally, Nigeria can benefit from regional integration initiatives like the African Continental

Free Trade Agreement (AfCFTA). By participating in such agreements, Nigeria can tap into larger markets, diversify its export destinations, and take advantage of regional supply chains. This would allow Nigerian businesses to leverage their comparative advantages and gain a competitive edge in the African market.

In conclusion, Nigeria can capitalize on its comparative advantages in agriculture, natural resources, and industrial development to drive economic growth and increase its role in international trade. By emphasizing sectors of strength and exploring regional integration opportunities, Nigeria can optimize its participation in the global economy and achieve sustainable development.

2.2.5 **Endogenous Growth Theory**

The theory of Endogenous growth arose out of frustration with earlier neoclassical approaches to growth. The failure to identify the causes of the massive inequalities in national income levels between developing and developed countries as evidenced by the emergence of the Latin American debt crisis in the early 1980s. Dasgupta notes that this growth model differs greatly from neoclassical growth theory which emphasizes the principle of diminishing marginal returns of inputs to output levels. Rather, its argued that the factors of production show constant marginal returns for productivity and capital formation[88].

The theory of endogenous growth considers an increase in GDP to be the result of internal production processes. Unlike neoclassical theories of economic growth, which assume that technology is given, endogenous growth theory argue that the level of technology in the economy presupposes international capital transfers between developed and developing countries. Therefore, through these international capital movements, the role of international trade (imports and exports) becomes more pronounced. Developing countries trade their export products, mainly commodities, for capital injections such as foreign direct investments, and technology from rich countries. For

imports, the transmission mechanism for trade growth mainly concern technology" Imports contribute to economic growth by acting as a conduit for technological spillovers affects and knowledge transfers from developed to developing countries, increasing output level in the former.

2.2.6. Solow- Swan Growth Theory

Solow's growth theory, also known as the Solow-Swan growth model, is an economic model that analyzes long-term economic growth in terms of capital accumulation and technological progress. The model suggests that a nation's growth is determined by its savings rate, investment level, and technological advancements. Solow's theory states that, foreign trade play a role to play in achieving economic growth. Many arguments have been advanced in support of both the export-led growth (ELG) and import-led growth (ILG) hypothesis. Researchers supporting ELG, found that exports raise the level of a country's GDP by increasing returns on divisibility of scale and encouraging competitive domestic activities[89] Furthermore, the foreign exchange earnings generated from exports not only prop up the country's foreign exchange reserves, thereby stabilizing the value of the nation's currency, but can also be used to service foreign debt and import technologies that would further boost GDP growth". Consistent with this analysis, open economies are more likely to benefit from the ELG than closed economies. Higher returns to scale, mean that open economies converge at higher income levels than closed economies. Coupled with this, both exports and imports are viewed as factors of production that, if used efficiently, can generate greater return of an economy, increasing productivity and economies of scale.

To understand how Nigeria can benefit from the Solow-Swan growth theory, we need to consider the following factors:

Firstly, Increasing Savings and Investment. According to the Solow-Swan model, economic growth

can be achieved by increasing the savings rate and investment level. Nigeria can encourage its citizens to save more by implementing policies that promote a culture of savings. Increased savings can then be channeled into productive investments, such as infrastructure development, education, and research, which can help stimulate economic growth.

Secondly, Technological progress is a crucial driver of economic growth according to the Solow-Swan model. Nigeria can benefit by investing in research and development (R&D) activities, innovation centers, and technology transfer initiatives. Encouraging collaboration between universities, research institutions, and the private sector can help promote technological advancements and boost productivity in various sectors.

In addition, Human Capital Development with respect to Solow-Swan model emphasizes the importance of human capital in driving economic growth. Nigeria can focus on improving its education and healthcare systems to enhance the skills and productivity of its workforce. Investing in vocational training programs and promoting entrepreneurship can also contribute to human capital development. Finally, Infrastructure Investment is necessary for economic growth as it enhances productivity and facilitates trade. Nigeria can benefit from the Solow-Swan growth theory by investing in transportation networks, energy infrastructure, and communication systems. Improving infrastructure can attract investment, boost productivity, and create employment opportunities.

2.2.7 Harrod-Dormar Growth Model

Two great economists, Roy Harrod (1939) and Evsey Domar (1946) separately independently combined elements of both classical and keynssian economic growth theories such as investment, capital and imperfect markets, to develop what later came to be known as Harrod- Domar growth model. This model argues that a country's economic growth dependent not only on its saving

rates but alsoon its ability to minimize its current level of consumption. In this case, economic growth is viewed as a direct result of a country's ability to increase both its savings and its capital-output or GDP ratio.

The Harrod-Domar growth theory is an economic model that explains the relationship between investment and economic growth. It suggests that the rate of economic growth is directly dependent on the level of investment in an economy.

According to this theory, an increase in investment leads to an increase in economic output, which in turn results in higher employment levels and greater income generation. This increased income leads to higher savings, which can be further invested, creating a self-sustaining cycle of economic growth.

In the context of Nigeria, the Harrod-Domar growth theory can be applied to understand the importance of investment for economic development. Nigeria is a country with a significant population and abundant resources, but its economic growth has been hindered by various challenges.

One major challenge is the lack of sufficient investment in productive sectors of the economy. Inadequate investment in infrastructure, agriculture, manufacturing, and other key sectors has limited the country's capacity for economic growth. The Harrod-Domar growth theory suggests that a higher level of investment in these sectors would lead to increased economic output, job creation, and overall development.

To examine the relationship between the Harrod-Domar growth theory and Nigeria, it is important to consider the investment climate in the country. Factors such as political stability, security, infrastructure quality, access to credit, and government policies have a significant impact on attracting both domestic and foreign investments[12].

In recent years, Nigeria has implemented several reforms to improve its investment climate, such as the establishment of the Nigerian Investment Promotion Commission (NIPC) and the implementation of the Economic Recovery and Growth Plan (ERGP). These initiatives aim to attract more investment in critical sectors and stimulate economic growth. However, despite these efforts, Nigeria still faces challenges in mobilizing sufficient investment. Limited access to credit, corruption, bureaucratic bottlenecks, and infrastructure deficiencies remain obstacles to attracting investment on a larger scale.

To address these challenges and effectively apply the Harrod-Domar growth theory, policymakers in Nigeria should focus on creating a conducive investment environment by implementing reforms that improve ease of doing business, enhance infrastructure development, strengthen institutions, and encourage sustainable private sector participation.

2.3. **Review of Empirical Literature**

Trade openness may generate significant gains that enhance economic transformation. With trade openness, allocations of productive resources tend towards activities with comparatively great efficiency[91]. Trade liberalization may Improve productive and economic well-being of nations by increasing knowledge spillovers from more advanced trading partners to less develop ones. Trade openness may foster greater possibility of exploitation of economies of scale and location effects as efficient producer expand their market share which further reduces costs[92].

2.3.1 **Empirical Review on Trade Liberalization and Agricultural Sector Performance**.

In Nigeria, many studies have attempted to examine the relationship between trade liberalization and economic growth; however, there are scanty studies that link trade openness and economic growth in Nigeria. It was investigated the causality between the openness and economic growth

in Nigeria using the Vector Error Correction Method (VECM) and found that openness affects economic growth positively[89]. Employing the Ordinary Least Square (OLS) regression method, it was found that positive effect of trade liberalization on economic growth but noted the need for trade liberalization to be handled carefully as it also has some negative effects on the economy[90]. In addition, on the effect of trade liberalization on poverty reduction, researcher used the ARDL approach covering the period 1980 to 2011 and the result from the study showed that trade liberalisation does not cause poverty reduction in Nigeria[91].

In a more recent study, using data for the period 1981 to 2017, examined the effect of trade liberalization on economic growth in Nigeria[92]. The result of the study showed that openness has a positive effect on growth in Nigeria. Similarly, Error Correction Model (ECM) determined the impact of trade liberalisation on agricultural productivity and export in Nigeria. The study found that trade liberalisation was significant in increasing the agricultural sector productivity in Nigeria[93]. In addition, using the Variance Decomposition Approach (VDA), the relationship between external financial flows, trade, and agricultural performance found that a shock to agricultural exports, imports and openness contribute to the fluctuation in the variance of agricultural performance in the country[94]. Another work measured trade liberalism and economic growth using the Autoregressive Distributed Lag (ARDL) bound test approach over the period 1981 to 2014 and found that the Nigerian economy is yet to fully gain from the international trade as the growth in the economy is not commensurate to the level of international trade[95].

On the other hand, it was studied the impact of trade openness on Nigeria's manufacturing sector using the ARDL model and found that trade openness has a significant positive impact on manufacturing productivity in Nigeria. The study suggested for more trade liberalisation policies directed toward the manufacturing sector[96]. In the same vein, it was employed the Error

Correction Model (ECM) l to study the relationship between openness and industrial growth in Nigeria. The result showed that openness has a significant and positive influence on industrial production[97]. In another contex, it examined the relationship between trade and unemployment in Nigeria and the result based on the ARDL model showed that oil trade negatively affects employment while non-oil trade helps reduce unemployment[98].

On related international literature, assessed trade liberalisation on industrialisation in several agricultural economies from the period 1970 to 1995 and established that the economies that increased their openness experienced an increase in industrial production at the expense of the agricultural sector[99]. It was researched and investigated that the relationship between liberalization and economic growth from 1995 to 2009 and discovered that liberalization, both trade and financial openness is detrimental to the agricultural sector performance[100]. Similarly, it was examined the impact of trade liberalization on the productivity of selected African countries from 1980 to 2014 and found that trade liberalization help stimulates output in most developing countries[101]. In Sri Lanka, the impact of trade liberalization on agricultural production was analysed) utilising the Ordinary Least Square (OLS) method[102]. The result showed that increased trade liberalization had a positive impact on the agricultural sector. The effect of economic integration on agricultural export performance in West African economies and found that trade openness, is a strong predictor of export performance in the region[103].

2.3.2 **Empirical Review on Trade Liberalization and Manufacturing Sector Performance.**

A number of studies have explored the relationship between trade liberalization and industrial output growth. This empirical review explored related studies covering studies in Nigeria, Africa and outside the continent. The determinants of trade liberalization in transitional economies. The

study employed a panel data analysis, comprising of the dynamic generalized methods of moments (GMM), fixed effects, pooled ordinary least squares (OLS), and random effects on a panel dataset spanning 2000 to 2018. Findings from the study revealed that human capital development, the interaction between Foreign Direct Investment (FDI) and human capital development, economic growth and mining sector growth were found to have a significant positive impact on trade openness in transitional economies. These variables were important determinants of trade liberalization.

The relationship between trade liberalization, foreign direct investment and the performance of the Nigerian economy. The study used an annual time series data-set covering 1970 to 2018 for within sample forecast and a five-year out-of-sample forecast, spanning 2019 to 2023 were used under four policy scenarios in line with the Economic Recovery and Growth Plan (ERGP) in Nigeria. Findings revealed that trade openness attracts FDI and they affect macroeconomic performance in Nigeria through direct and indirect channels. The results established that increased trade openness, FDI, government expenditure and broad money supply would bring about increase in private investment, real consumption, outputs of oil and nonoil sectors, significant increase in non-oil exports, and government revenues[104]. In a similar study, it was examined that the impact of trade liberalization on the manufacturing sector of the country for the period of 1980 to 2016. Using annual time series data, the study employed the Error Correction Model (ECM) to analyze the data. The empirical analysis used manufacturing sector output as the dependent variable while trade openness, exchange rate, volume of exports and imports, and balance of payment were the independent variables. Findings from the ECM result showed that the effect of trade liberalization, exports and balance of payment had negative impacts on manufacturing output, however, exchange rate and imports exerted positive impact on manufacturing output with only imports and

exports being significant[105]. The study revealed that trade liberalization policy has not significantly improved the growth of the Nigerian manufacturing sector noting that trade has not been completely liberalized.

Similarly, it was examined that the long and short-run relationship between trade liberalization and industrial production in Nigeria using a quarterly time series data, spanning 1986:Q1- 2008:Q4. The study used the Auto-Regressive Distributed Lag model (ARDL) and theToda- Yamamoto (T-Y) causality procedure on the variables of industrial production index, trade liberalization, nominal exchange rate, and inflation rate. The ARDL result indicated that trade liberalization had a significant and positive impact on industrial production both in the long and shortrun. Equally, the result of the T-Y procedure showed that there was a one-way causation, running from trade openness to industrial production in the country[97].

Also in Nigeria, researchers assessed the impact of trade liberalization on the performance of the Nigerian economy, with reference to the agricultural and manufacturing sectors of the economy between 1981 and 2014 using annual time series data. The Generalized Method of Moment (GMM) technique was used on the variables comprising outputs from the manufacturing and agricultural sectors, trade openness, and exchange rate. Findings showed a significant positive impact of trade liberalization on the output of the agricultural sector while a negative and significant relationship was recorded between trade liberalization and manufacturing output in Nigeria, suggesting a poor manufacturing base in comparison to Nigeria's trading partners[106].

Investigation showed trade liberalization and manufacturing sector growth in Nigeria using an annual time series data-set spanning 1982 to 2015. The study used the Multiple regression analysis on the variables of manufacturing output, trade openness, investment, production index, and exchange rate. The study found that trade openness was statistically significant, production index

positively affected manufacturing output growth, while investment growth and exchange rate had an inverse relationship with manufacturing output. The findings revealed that although the policy of trade liberalization enhances the productivity of the manufacturing sector in Nigeria, its impact was relatively low, and this could be attributed to the weak technological base and low level of capacity utilization[107].

Furthermore, analysis examined the effects of trade liberalization on the performance of the manufacturing sector in Nigeria making use of a quarterly firm-level data from the survey of manufacturing industries in Nigeria for the period of 2008:Q1 to 2010:Q4. The data for the study reported information for firms in organized cohorts based on their location, industry activity and size characteristics in the country. Appropriate panel fixed effects and random effects estimation techniques were carried out for the empirical analysis. Findings of the study indicated that whereas import impedes productivity, export however enhanced productivity, thus, measures aimed at encouraging exports would be relatively more effective in improving productivity. Also, findings revealed that higher productivity does not influence the decision on whether or not a firm would participate in exports, but higher productivity increases the share of exports in total sales for firms that are already participating in foreign trade. In addition, the results provide some evidence in favor of the import discipline effect of trade liberalization thereby supporting the notion that trade liberalization provides a channel through which the competitiveness of firms in Nigeria's manufacturing industry can be improved upon[108].

Additionally, it was examined the impact of trade liberalization on manufacturing value-added in Nigeria using an annual time series data-set covering the period of 1970 to 2014. The study employed the ARDL model to carry out its estimation. Variables used in the analysis were manufacturing output, trade openness, nominal exchange rate, interest rate, and capital formation

(gross domestic savings). Findings from the study revealed that trade openness had a positive impact on manufacturing output, it was however not significant. The study noted that the heavy reliance of the Nigerian manufacturing firms on imported machinery and equipment is reflected in the country's weak manufacturing base. The study further revealed that the high cost of production in the country has limited the gains from trade liberalization, which is in favor of Nigeria's trading partners[109].

Situating the study in other African countries, research carried out investigated the effect of trade openness on manufacturing growth in the Economic and Monetary Community of Central African (EMCCA) countries using an annual panel data-set covering the period from 1984 to 2014. The study employed a Panel Co-integration as well as a Dynamic Ordinary Least Square method to undertake its analysis. Variables used for the analysis were manufacturing output growth, trade openness, investment, and FDI. The results of the empirical analysis revealed a positive and significant effect of FDI and investment on manufacturing growth, as well as a weak effect of trade openness on manufacturing growth in EMCCA countries[110].

In a study conducted in Bangladesh, study carried out the empirical relationship between trade liberalization, industrial value added and economic growth using annual time series data covering 1986 to 2022. As estimation technique, the study used the Multiple regression analysis and the Granger causality procedures. The model specification employed the variables of GDP, export, import, and industrial value added. The results from the empirical analysis indicated that imports had a negate ve relationship while exports positively influenced growth. The industrial value added also had a positive impact on growth. The Granger causality results showed a bidirectional causal relationship between export and growth as well as between export and industrial value added, indicating that trade liberalization causes industrial growth[111].

Extending the analysis to South Asian Association for Regional Cooperation (SAARC) countries, examined the impact of trade liberalization on the manufacturing sector development of member countries. Using a panel regression model, the study employed an annual panel data- set spanning the period of 1980 to 2013 for the selected six SAARC countries, namely, Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka. Variables used in the study were trade openness, industrial output ratio, investment, labor force, inflation, and education[112].

Situating the study in Cameroon, investigated the impact of trade liberalization on the manufacturing sector using annual time series data spanning 1980 to 2006. The study used the Multiple regression analysis and the Gravity model in its estimation. Variables in the Multiple regression were real exchange rate, manufacturing output, tariff rate, import, and export. Findings showed that reduction in protection (tariff) did not affect manufacturing positively. Furthermore, the result revealed that exchange rate and import is an important determinant of the performance of the manufacturing sector. The Gravity model was used to complement the single equation Multiple regression model. The main manufacturing performance indicator in the Gravity model was bilateral trade, and it was regressed with trade and other control variables like Gross Domestic Product (GDP), distance, tariffs, membership of regional trade agreement (RTA), common language and border, and colonial ties. Findings revealed that bilateral trade did not improve manufacturing performance despite trade liberalization. The results further revealed that membership of RTA and the reduction in tariffs (all indications of liberalization) did not positively influence bilateral trade in manufacturing. The distance variable and GDP variables equally did not influence bilateral trade in manufacturing[113].

In the review, inconsistency in time, country and methodology put up a barrier against a meaningful comparison among studies. However, the review revealed that majority of the related

studies covered only the manufacturing sub-sector of the industrial sector, limiting the validity of their findings in generalizing for the industrial sector as a whole. Although Adamu and Doğan (2017) was an industrial based study in Nigeria, its scope however terminated in 2008. This study extends the analysis to 2019.

2.3.3 Empirical Review on Trade Liberalization and Service Sector Performance.

The service and industrial sectors has been identified as a vehicle necessary to provide spillovers to ignite investment towards kick-starting economic growth[114]. The services sector in the 90s, witnessed an impressive expansion, contributing larger a proportion to the Gross Domestic Product (GDP) of several countries[115]. The sector's share of GDP amounted to 40% in Uganda, 50% in Zambia, over 60% in Korea and Brazil and 80% in the US, in the mid-1990s[116]. The service sector is an important component of any country's economy. It makes a direct and significant contribution to GDP and job creation, and provides crucial inputs for the rest of the economy, thus having a significant effect on the overall investment climate, which is an essential determinant of growth and development. Some service sectors such as the health, education, water and sanitation sectors, are also directly relevant to achieving social development objectives. The Nigerian services sector has shown impressive gains amid tough economic circumstances. Retail and wholesale trade, telecommunications, banking, and motion pictures "Nollywood". Spurred by favourable government policies and increased foreign direct investment (FDI), growth in these industries has helped to diversify Nigeria's economy, which a major statistical rebasing three years ago revealed to be the largest in sub-Saharan Africa (SSA)[117]. In their work, they attempted to examine the structure of the Nigerian industrial sector with emphasis on the manufacturing subsector. In their analysis, it was observed that, industrialisation is fundamental to economic growth and development[118,119]. This is because, the surplus labour resources in the country are expected to be

absorbed by the desired positive developments in the course of industrialisation. Ajakaiye has argued that many African countries like Nigeria have experienced a structural transformation process involving the transfer from agricultural to mostly non-tradable services. This has resulted in relative bypassing of manufacturing development that is usually characterised by efficiency, formal employment creation, manufactured exports and technological upgrading[120]. It was examined that the effect of non-oil components export on the economic growth in Nigeria. The paper extends the previous empirical studies on the issue providing some evidence from time series data period over 1980 – 2011. The results reveal that the economic growth in Nigeria is significantly influenced by non- oil exports sector. Based on this result, the study concludes that agricultural sector, manufacturing sector and services sector of nonoil export component has being contributing significantly to the economic growth of Nigeria. The work recommends that in a bid to turn around of the nation's economic outlook for the future, non-oil export growth should be encouraged[121]. It was later opine that the problem of the Nigerian manufacturing sector started in the late 1970s when the economy experienced a sharp rise in the global oil price. To stimulate domestic production, the structural adjustment programme (SAP) was initiated in 1986. SAP brought with it escalation in exchange rate resulting in high cost of raw materials and spare parts. The harsh economic situation set off a chain reaction, such as high cost of production, scarcity of raw materials and spare parts and huge stock of unsold goods due to low purchasing power. All these factors impacted negatively on capacity utilization of the manufacturing sector in Nigeria[122]. It was suggested that industrial development through foreign investors can have a positive influence on economic growth level. They claimed that the industrial development contribution to economic growth level is dependent upon a critical minimum level of income.

Below this level the contribution of industries to economic growth is insignificant and above this level, it is significant. Countries that have attained the required level of income benefit maximally from the experience of overseas industries and foreign stakeholders. The benefits include managerial skills, human capital development and new innovative technologies. Scholars have provided many other reasons for the growth of services while some of them have built on the theories previously discussed, others have been independently developed. In a nutshell, the most common explanations have been: structural transformation characterised by increased efficiency in agriculture and manufacturing, and the subsequent transfer of workers from agriculture, through to manufacturing and then to services. The extent to which services have been utilized as a driver to the growth of countries, particularly developing countries, have in recent times received considerable attention in the literature. The literature of industrialization has also considered the possibilities of knowledge transfer and exchange of resources due to the inclusion of new technologies. Studies of the industrial sector has also examined strategic management in a bid to emphasize the importance of the minimisation of transaction costs, risks and complementarities in the process of industrial innovation and development globally[123].

2.4 **Theoretical Framework**

Endogenous growth theory is an economic theory that suggests long-term economic growth is influenced by internal factors, such as investment in human capital, research and development (R&D), and technological innovation. It focuses on the concept of increasing returns to scale, where inputs of capital and labor become more productive over time[124]. One of the enduring legacies of the new growth theory is its emphasis on the role of trade and foreign direct investment as the major drivers of economic growth.

The concept of trade liberalization and its dynamic impact on economic growth is intricately tied to the theories of endogenous growth, also known as "new growth" theory, which have gained prominence since the mid-1980s. While endogenous growth theory has been widely discussed and explored, it is important to note that, in many respects, it bears a striking resemblance to the neoclassical growth model. Despite the similarities, both share certain common elements in their growth models[125].

One common thread in both neoclassical and endogenous growth theories is the incorporation of an "accumulable" factor, which represents a durable input whose stock grows over time. This factor can encompass physical capital, human capital, or technology. In cases where an increase in productivity of the inputs contributing to the accumulable factor occurs, subsequent periods experience a growth in the rate of accumulation and output.

The critical distinction between neoclassical and endogenous growth models lies in the duration of this increased growth. Neoclassical theory suggests that the increased growth rate eventually dwindles to zero. In contrast, endogenous growth theory posits that this upsurge can persist indefinitely, yielding permanent growth effects. This distinction arises from the differing assumptions regarding the income share of the accumulable factor. If this share is low, as in the neoclassical model, any increase in, for instance, capital, results in a relatively modest boost in capital production, leading to convergence. Conversely, in endogenous growth models with a higher income share, an increase in capital inputs results in a more substantial boost in the production of new capital, leading to a prolonged accumulation process with the potential for permanent growth effects.

In the context of endogenous growth theory, trade policy has the potential to influence income and long-term growth through various channels, which can be broadly categorized as:

- **Scale Effects:** Endogenous growth models often emphasize that the size of markets and factor endowments directly impacts the long-run growth rate. Trade liberalization can lead to scale effects through the integration of goods markets and the flow of "knowledge capital," which is intangible and non-rival.
- **Allocation Effects:** Static gains from the reallocation of resources in neoclassical models can translate into a growth effect when changes in the composition of national output are related to the production of accumulable factors. More resources directed toward sectors producing accumulable factors can enhance growth.
- **Spillover Effects:** International trade facilitates the diffusion and integration of technological knowledge, offering access to the knowledge available in other nations. The diffusion process can be modeled in different ways, either as non-purposeful knowledge exchange or as a purposeful activity where less developed countries imitate technology from more developed nations.
- **Redundancy Effects:** Trade policy's impact on growth can also be related to the characteristics of knowledge, which is a non-rival good. Opening the economy can reduce the wasteful duplication of resources devoted to research and development (R&D), enhancing the effectiveness of global R&D resources and stimulating growth.

It's worth noting that the ultimate effect of trade policy on growth in endogenous growth models often hinges on the pattern of comparative advantage. If changes in relative prices associated with trade liberalization lead to resource shifts away from innovative or high-tech sectors, or the sectors contributing to the accumulable factor, it may reduce long-term growth rates. The possibility of trade liberalization having adverse effects on economic performance has been demonstrated in various endogenous growth studies[126].

In summary, the theories of endogenous growth shed light on the complex relationship between trade liberalization and economic growth, offering valuable insights into how these two elements are interconnected and how trade policies can affect long-term growth prospects.

Robert Lucas's 1988 model of endogenous growth, known as the "Lucas Model," focuses on human capital accumulation as a driver of economic growth. The model incorporates a production function to illustrate how output is generated in an endogenous growth framework. The simplified representation of Lucas's model is given as:

$$Y = A.K^{\propto}.H^{1-\propto} \cdots\cdots\cdots\cdots\cdots (2.1)$$

Where:

Y=Total Output

A= Total factor productivity, representing technology and efficiency

K= Physical capital

H= Human capital

$\propto$= Output elasticity of physical capital with 1- representing the output elasticity of human capital.

Firms invest in physical capital, which accumulates over time. The investment in physical capital is determined by savings (S), which is a constant fraction of total output:

I_k – S.Y----------(2.2)

Where I_k is investment in physical capital and S is savings rate

Human capital accumulates through investment in education and training. The model assumes that a fraction of output is allocated to human capital investment:

$I_h = S_h.Y$---------- (2.3)

Where:

Ih is investment in human capital

S_h is the fraction of output allocated to human capital investment

The accumulation of physical and human capital over time is governed by the following equations:

$K_t = (1\ \delta\ -_k).K_{t-1}+I_k$------- (2.4)

K_t: Physical capital in period t

δ_k: Depreciation rate of physical capital

$H_t = (1- \delta_h).H_{t-1}+I_h$--------(2.5)

H_t: Human capital in period t

δ_h: Depreciation rate of human capital

Total factor productivity (TFP), denoted as A, grows at a constant rate, reflecting technological progress:

$A_t = A_{t-1} . (1+g_A)$---------(2.6)

A_t: Total factor productivity in period t

g_A: Rate of technological progress

Therefore, the model's output growth is determined by the dynamics of physical and human capital accumulation, technological progress, and the production function

$Y = A_t . K^{\propto} . H^{1-\propto}$---------(2.7)

This model illustrates how both physical and human capital accumulation, as well as technological progress, contribute to endogenous economic growth. The rate of growth depends on the rates of investment in both types of capital, the savings rate, and the rate of technological progress. The model aligns with the endogenous growth theory's focus on internal factors as drivers of long-term economic growth

2.5 **Summary of Gaps in Literature.**

This study differs from the previous works, especially on the Nigeria economy, for the following reasons. Unlike previous studies, the present study attempts to examine the role of trade liberalization at sectoral level with emphasis on the the three leading sectors which are agricultural sector, manufacturing sector and service sector in Nigeria.. The role of trade liberalization on sectoral development has had little attention in the context of the Nigeria economy

Endnotes

1. Q.X. Kong; D. Peng; Y.H Ni; X.Y. Jiang & Z.Q. Wang, *Trade Openness and Economic Growth Quality of China:* **Empirical Analysis Using Ardl Model. Finance Research Letters, 38, 2020,** Article ID: 101488. https://doi.org/10.1016/j.frl.2020.101488
2. F.M. Ajide. *Firm Specific and Institutional Determinants of Corporate Investment in Nigeria Fixture Business Journal*, 3(2), 2017, 107-118. Doi:https://doi.org/10.1016/j.fbj.2017.05.020 (CrossRef).
3. V. Bobek. *Trade and Global Market, IntechOpen.*, 2018.
4. J. Pinas; S.Wei; T. Oppong-Baah; E. Kim; M. Addai; I. Owusu; E. Gyamfi; D. Ofosu A.A. Nsaful; E. Nketiah; M. Adjei; A.A.A. Asiamah; F.A. Boateng; C. Twi-Brempong; S.K Fianko & K.K. Gyanmerah, *Assessing a Causal Relationship between Foreign Direct Investment and Human Capital: The Case of the Ntherlands. International Business Research,* 13, 2020, 247. https://doi.org/10.5539/ibr.v13n1p247.
5. D.A DeRosa,. *Regional integration arrangements: Static economic theory, Quantitative findings and policy guidelines*. World Bank, Development Research Group, Policy Research Working Paper No. 2012.
6. K.K. Ogujiuba, G.O. Oji ,& Adenuga (2014). *Is "Trade" Openness Valid for Nigeria's Long Run Growth: A Co integration Approach"* A Paper Presented to the USAID-Nigeria.
7. United Nations Conference on Trade and Development, (2018)

8. Central Bank of Nigeria Statistical Bulletin, 2018.
9. Nigeria Bureau of Statistics, 2020
10. E.S. Osuagwu & E. Olaifa, *Effects of oil spills on fish production in the Niger Delta*. **PLOS ONE**, 13, 2018, Article e0205114. http:doi.org/10.1371/journal.pone.0205114.
11. Central Bank of Nigeria (2019). Annual Report and Statement of Account for the Year Ended, 31st December, Abuja
12. World Bank. (2019). Nigeria.
13. C. Driver. *Trade liberalization and South African manufacturing. United Nations University World Institute for Development Economics Research,* 1(1), 1 – 20. 2019
14. G.O. Ebenyi, , D.U. Nwanosike, B. Uzoechina., & V. Ishiwu, V. (2018). *The impact of trade liberalization on manufacturing value-added in Nigeria*. **Saudi Journal of Business and Management Studies**, 2(5A), 475 – 481
15. Federal Government of Nigeria (2001). *Report of the Vision 2010 Committee: Economic sectors and issues, Abuja*: Vision 2010 Committee
16. D.N Gujaraji., & W.C. Porter, (2009). *Basic Econometrics. (5th ed.).New York:McGraw Hill.*
17. A. Ani. *Assessment of the commercial agriculture development project in Enugu state, Nigeria. Unpublished Ph.D thesis, Department of Agricultural Extension, University of Nigeria*, Nsukka. (2013)

18. C.D.S. Bartlett, and J.M. Fajemisin. . *Thesocial-scientist'S role in generating innovations forsmall farmers: Maize in Nigeria*. Experimental A g r i c u l t u r e , 1 7 (4) , 3 7 3 – 3 82 .https://doi.org/10.1017/S0014479700011820. (1981)

19. J.C. Iwuchukwu, and E.M. Igbokwe.. *Lessons from Agricultural Policies and Programmes in Nigeria. Journal of Law, Policy and Globalization*, 5 (11), 11-21.(2012)
20. D.O. Omonijo, S.W.O. Toluwase, O.A. Oludayo, and O.O.C. Uche (2014). *Impacts of Agricultural Development Programme (ADP) on Rura Dwellers in Nigeria*: A Study of Isan-Ekiti. **International Research Journal of Finance and Economics,** 128(12), 41-55.
21. World Bank Development Indicators. Available at: http://data.worldbank.org. (accessed 04/10/2021).
22. O. Adeoti. *Constraints on data collection implementation at the river basin level in Nigeria*. **Journal of Hydrology: Regional Studies**, 32(03), 1-12. https://doi.org/10.1016/j.ejrh.2020.100738. 2020
23. A. Danladi,, **and P.W. Naankiel.. *River basin development authorities and Nigeria's economic evelopment since 1960*. The** Journal of the Faculty of Arts and Islamic Studies, 17(1), 52-66. 2019
24. N. George. . *Improving agriculture in Nigeria through public-private partnerships*. **African Journal of Business Management**, 13(8), 256–263. https://doi.org/10.5897/ajbm2018.8690. (2019)
25. A.K. Offu. (2013). *The Nigerian Dependent Management and Leadership Development in the Post World War II Colonial Nigeria*. Author House Publishers, Bloomington, Indiana, United States.

26. N.I.A. Nwosu. (1990). *The state and rural development in Nigeria*. Ufahamu: **Journal of African Studies**, 18(3), 52-65.
27. O.D. Kolawole, O. (2012). *Agrarian reforms and the African Green Revolution*. **World Journal of Science, Technology and Sustainable Development**, 9(4), 301–316. https://doi.org/10.1108/20425941211271504.
28. C.J. Obiora,. *Agricultural Transformation Agenda in Nigeria: How Prepared is the Technology Transfer-Sub System?* **Journal of Biology, Agriculture and Healthcare**, 4(2), 82-85. 2014
29. E.N. Ajani, and E.M. Igbokwe. *A review of agricultural transformation agenda in Nigeria: The case of public and private sector participation.* **Research Journal of Agriculture and Environmental Management,** 3(5), 238–245.(2014)
30. M. Adesugba, and G. Mavrotas.. *Youth employment, agricultural transformation, and rural labor dynamics in Nigeria*. IFPRI Discussion Paper 1579. Washington, D.C.: International Food Policy Research Institute(IFPRI) . http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/130962. 2016
31. N.T. Meludu, B. Elijah, O.M Okanlawon, and P.O. Olanrewaju,. *Perceived effect of agricultural transformation agenda on livelihood of cocoa farmers in Osun State, Nigeria*. **Journal of Agricultural Extension,** 21(2),17– 29.https://doi.org/10.4314/jae.v21i2.2 2017
32. Y.J. Alhassan, S. Umar, , and G. Ayuba, *Impact of Agricultural Transformation Agenda Support programme Phase-1 in Promoting Agricultural extension Service Delivery in Kebbi and Sokoto States, Nigeria*. **World Journal of Agricultural Research**, 7(3), 94-102.DOI:10.12691/wjar-7-3-3.2019)

33. Federal Ministry of Agriculture and Rural Development (FMARD) . *The Agriculture Promotion Policy (2016 – 2020) Building on the Successes of the ATA, Closing Key Gaps.* Federal Ministry of Agriculture and Rural Development. 2016
34. O.A. Owoade.. *Sustaining Agricultural Transformation in Nigeria: Challenges, Issues and Strategies*. **International Journal of Innovative Agriculture & Biology Research** 7(4), 13-22 2019
35. National Association of Nigerian Traders (NANTS. *Fact sheet-on-agriculture-promotion policy. National Association of Nigerian Traders:* Plot 19 Dan Suleiman Street, Utako Abuja. https://nants.org/wp-content/uploads/2018/09/Factsheet-on-Agriculture-Promotion-Policy-APP.pdf (accessed12/02/2021). 2018
36. Action Aid,. *The Agriculture Promotion Policy: For smallholder women farmers.* Available at https://nesgroup.org/storage/app/public/policies/Simplified-Version-of-APP-for-Smallholder-Women-Farmers_1562696401.pdf (Accessed on 21/02/2021). 2018
37. O.T. Sola, M. Obamuyi, F. O. Adekunjo and E. Ogunleye, (2013) *"Manufacturing performance in Nigeria: Implication for sustainable development,"* **Asian Economic and Financial Review,** vol. 3, (9), pp. 1195. 2013
38. I. Adofu, , U. Taiga, & Y. Tijani, Y., *"Manufacturing sector and economic growth in Nigeria (1990-2013).*", pp. 1-6, . 2015
39. A. Ayodele. and G. O. Falokun, *The Nigerian Economy: Structure and Pattern of Development.* **JODAD.** 2003
40. **O.O. Olamade , T. O. Oyebisi and S. O. Olabode, *"Strategic ICT-Use Intensity of Manufacturing Companies in Nigeria,"*** Journal of Asian Business Strategy, vol. 4, (1),pp.1.2014

41. K. A. OU, *"The effect of industrial development on economic growth (an empirical evidence in Nigeria 1973–2013),"* Eur.J.Bus.Soc.Sci, vol. 4, (02), pp. 127-140. 2014
42. N. McCulloch, N. Balchin, , M. Mendez-Parra and K. Onyeka. *Local Content Policies and Backward Integration in Nigeria. Abuja: Nigeria Economic Summit Group*. (2017)
43. National Bureau of Statistics, 2008.
44. M.A. Aremu, & J,A, Bamiduro. *Infrastructure and manufacturing output in Nigeria. International Journal of Development and Economic Sustainability*, 3(2), 54-67. 2015
45. Nigerian Manufacturers Association. *Presidential policy dialogue on the manufacturing sector in Nigeria.* Retrieved from https://manufacturersnigeria.org/wp-content/uploads/2020/04/PRESIDENTIAL-POLICY-DIALOGUE-2019.pdf . 2019
46. E.I. Nwoke,. *Manufacturing sector and economic growth in Nigeria.* **Journal of Quality and Technology Management, 13(2), 78-100. 2017**
47. Central Bank of Nigeria. *Manufacturing sector survey report 2018.* Retrieved from https://www.cbn.gov.ng/Out/2019/MPD/MANUFACTURING-SECTOR-SURVE 2018. 2019
48. S.M. Olofin,, & P.V. Okoye. *Challenges of access to finance by small businesses in Nigeria.* **Journal of Management and Business Studies, 24(1), 205-218**. 2020
49. Y. Abdulrahman, & Y. Lawal. *Policy inconsistency and manufacturing investment in Nigeria. Futura Journal of Management and Social Sciences, 1(1), 57-71*.2020
50. M.A. Aremu, & S.A. Oyewole. *Skills gap and competitiveness of the manufacturing sector in Nigeria. Journal of Economics and Sustainable Development, 9(24), 50-6*.2020

51. C.M. Ortaru,. *The skills gap – A major challenge for the industry 4.0 in the manufacturing sector. Annals of the University of Oradea, Economic Science Series, 29(2), 325-332. 2020*
52. B.O. Ehigiator. *The service sector in Nigeria to excitatory for new economic growth Uusited Master's Theats Lund University*, 2017.
53. R. I McKinnon. *Money and capital in economic development. Brookings Institution Press, 1973*.
54. S.N. Bhaduri "*Investment, Financial constraints and Financial liberalization Some Sutized facts from a developing Economy, India"* **Journal of Asian Economics, 16.2005, 704-718**
55. P. Kolter, G. Armstrong V. Wong & and Saunders. *Principles of Marketing (5) Prentice Hall, 2008.*
56. OA hhola & M.O Ohmoji. *Service sector performance, industry and growth in Nigeria.* **International Journal of Service Selence, Management. Engineering and Technology, 11(1), 2020, 31-45**
57. O. Ajakaive, A.1. Jerome: D. Nabena & O.A Alaba. *Understanding the relationships. between growth and employment in Nigeria* **WIDER**: 2016
58. M. J. Ogborji. *"Contributions of the Service Sector to the Nigerian Economy."* **European Journal of Business, Economics, and Accountancy, 5(2), 63-73.** 2017
59. S. Olawale. *Growth of Nigeria's ICT sector amid COVID-19*. Retrieved from https://businessday.ng/technology/article/growth-of-nigerias-ict-sector-amid-covid-19/. 2020

60. BusinessDay. *Nigeria's financial services sector to witness growth in 2021.* Retrieved from https://businessday.ng/2021/02/nigerias-financial-services-sector-to-witness-growth-in-2021/ . 2021
61. J. Akande,. *Boosting Nigeria's tourism sector through effective marketing. Retrieved from https://www.proshareng.com/news/TOURISM/Boosting-Nigeria-s-*tourism-sector-through-effective-marketing/53974. 2020
62. A. Omokhua. *Nigeria's healthcare sector: A multi-billion-dollar opportunity*. Retrieved from https://businessday.ng/opinion/article/nigerias-healthcare-sector-a-multi-billion-dollar-opportunity/ 2021
63. Nigerian Infrastructure Concession Regulatory Commission: www.icrc.gov.ng
64. Industrial Training Fund: www.itf.gov.ng
65. Presidential Enabling Business Environment Council: pebec.gov.ng
66. www.nipc.gov.ng](http://www.nipc.gov.ng/
67. Ministry of Communications and Digital Economy : www.communication.gov.ng
68. The Nigerian TourismDevelopment : www.tournigeria.gov.ng
69. National MSME Development Council: www.msmedc.ng
70. A.S. Olomola. *Trade liberalization and the agricultural sector in Nigeria* (No.African Economic Research Consortium. 2006)

71. G.O. Odularu. *Agricultural trade liberalization and economic growth* ***in Nigeria:*** **A cointegration approach. Economic and Financial Review**, 51(1), 47-60. 2013
72. V.A. Adejumo, A. Olusegun, & B.H. Ayodeji. *Trade openness, agriculture value-added, technological innovation and economic growth in Nigeria*. **CBN Journal of Applied Statistics, 10(1), 303-325.** 2019
73. A.M. Ogunniyi,., O.N. Joel., & L.T. Ogunniyi. *Trade liberalization, agricultural productivity and poverty reduction in Nigeria.* Resource Use Efficiency in Agriculture. 2012.
74. *U.S. Akpan, & Isihak, S. R.. Trade liberalization, competitiveness, and manufacturing sector performance in Nigeria*. **Journal of Economic Issues, 50(1), 198- 224. 2016**
75. P. Dawson & G. Mavrotas. *Nigerian manufacturing and trade liberalization since 1986: A cointegration and error correction approach*. **Journal of Development Studies, 31(4), 557-578.**
76. C.N. Ekong., & H.A. Saliu,. *Trade liberalization and manufacturing sector performance in Nigeria*. **The Journal of Developing Areas, 41(2), 1-20. 2008**
77. D.B. Ekpenyong. *Trade liberalization and the Nigerian manufacturing sector: An econometric investigation.* **The Nigerian Journal of Economic and Social Studies, 42(3), 297-319.** 2000
78. E.B. Udah,, J.C. Anyanwu, & C. Aham-Neze. (2016*). Foreign Direct Investment and the Performance of the Nigerian Service Sector*. **African Development Review,** 28(3), 345-357.2016

79. A.A. Ogundipe,L.A. Amaghionyeodiwe, , & O.S Adediran,. *Trade liberalization and the performance of the Nigerian services sector*. **Journal of African Trade,** 4(1-2), 129-147. 2017
80. R. Ajayi, J. Dada, & A.S. Oludare*Trade Liberalization and Innovation Performance in Africa: Evidence from Nigerian Service Sector*. **Journal of African Business,** 20(2), 2019 2019 246-266.
81. W. Adekunle., E. Bamiro, & S.A. Oloyede. *Trade Liberalization and Competition among Service Firms in Nigeria*. **International Journal of Trade, Economics, and Finance,** 10(1), 15-20. 2019
82. A. Smith,. *The Wealth of Nations.1776*
83. A. Jayadi, &H.A Aziz,. *Comparative Advantage Analysis and Products Mapping of Indonesia, Malaysia, Philippines, Singapore*. 2017
84. D. Ricardo,. *On the Principles of Political Economy and Taxation. 1817*
85. D. O'Brien. The Mercantilist Perspective: *An Economic and Political Analysis. Routledge. 1994*
86. B. Rooberts. Ekelund Jr., D. Robert, Tollison.. *Mercantilism as Strategic Trade Policy: The Anglo-Dutch Rivalry for the East India Trade. Springer 2015*
87. S. Ghattak. Suffolk *Development Economics. Longman:*, 1978.
88. S.M. Olufemi,(2004*). Trade openness and economic growth in Nigeria: Further evidence on the causality issue.* **South African Journal of Economics and Management Science**,7(2),299-315.2004.

89. F. Echekoba, V. Okonkwo, & P. Adigwe. *Trade liberalization and economic growth: The Nigerian experience (1971-2012).* **Journal of Poverty, Investment and Development,** 14, 51-72. 2005
90. M. Yusuf, C.A. Malarvizhi, & A.A. Khin. *Trade Liberalization economic growth and poverty reduction in Nigeria***. International Journal of Business and Management,** 8(12), 42-4. 2013
91. M.M. Yakubu, & B.N. Akanegbu. *Trade openness and economic growth: Evidence From Nigeria***. European Journal of Business, Economics and Accountancy,** 6(4), 30-44. 2018
92. O.F. Anowor, Ukweni, & I. Martins. *The impact of trade liberalisation on Nigeria Agricultural Secto*r. **Journal of Economics and Sustainable Development**, 4(8), 14-25. 2013
93. N. Verter.. Analysis of external influences on agricultural performance in Nigeria. Acta Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis, 64(5), 1805- 1821. 2016
94. E. Iheanacho.. *ARDL approach to trade libralisation and economic growth in the developing countr*y: *Evidence from Nigeria.* **An International Multi-Disciplinary Journal, Ethiopia,** 11(2), 138-159. 2017
95. O.J. Umoh, & E.L Effiong. *Trade openness and manufacturing sector performance in Nigeria.* **The Journal of Applied Economic Research**, 7(2), 147–169. 2013
96. F.M. Adamu, & E. Doğan. (2015). *Trade openness and industrial growth: Evidence FromNigeria.Panoeconomicus*64(3),297-314.2015

97. O.O. Nnadozie, & R. Joshua,. *Trade and unemployment: Evidence From Nigeria*. **West African Financial and Economic Review,** 17(2), 73-93. 2017

98. S. Dodzin., & A. Vamvakidis.. *Trade and industrialization in developing agricultural economies (No. 1999/145).* International Monetary Fund. 1999

99. J.G. Djokoto. *Openness and agricultural performance in Ghana.* **Journal of Science and Technology**, 33(2), 24-36. 2013

100. P. Siyakiya.. *Can trade openness stimulate output performance? A case of selected African countries*. **Journal of International and Global Economic Studies**, 10(2), 55-67. 2017

101. N.D Silva, J. Malaga & J. Johnson. *). Trade liberalization effects on agricultural production growth: The case of Sri Lanka. Paper presented at the Orlando, Florida: Selected Paper Prepared for Presentation at the Southern Agricultural Economics Association.* 2013

102. O.A Shobande. *Effect of economic integration on agricultural export performance in selected west African countries. Economies,* 7(3), 1-14. 2019

103. E.T. Kpoghul, I.J. Okpe, & G. Anjande. *A macro-econometric analysis of trade openness, foreign direct investment and the performance of the Nigerian economy.* **Journal of Economics and Allied Research**, 4(3), 1-2. 2020

104. F.M Emerenini, & C.M. Ohadinma. (2018). *Impact of trade liberalization on manufacturing output in Nigeria.* **International Journal of Research in Social Sciences**,8(7),87-107.2018

105. T.A. Ojeyinka, & A.A. Adegboye. *Trade liberalization and economic performance in Nigeria: Evidence from agricultural and manufacturing sectors*. **African Journal of Economic Review**, 5(3),1-14. 2017.
106. A.G. Chibuzo. *Trade openness and manufacturing sector growth: An empirical analysis for Nigeria (Master's thesis). Department of Economics, Federal University of Technology, Owerri. 2017*
107. K.A. Akims. *Trade liberalization and performance of the manufacturing sector in Nigeria (Doctoral dissertation). School of Economics, Kenyatta University, Kenya*. 2017.
108. G.O Ebenyi , D.U. Nwanosike, B. V. Uzoechina, & V. Ishiwu. *The impact of trade liberalization on manufacturing value-added in Nigeria*. **Saudi Journal of Business and Management Studies**, 2(5), 475-481. 2017
109. T. Fongang, T., G. Martial, K.C. Bergaly, & L.T. Christian. *Does trade openness affect manufacturing growth in EMCCA countries? A panel co-integration analysis. Munich Personal RePEc Archive (MPRA),* Paper No. 83747. 2017
110. S. Ali, K.J. Alam, & S.M. Islam,. *Effects of trade openness and industrial value added on economic growth in Bangladesh***. International Journal of Sustainable Development Research, 2(2), 6-11. 2016**
111. M. Tahir, M.R. Estrada, I. Khan, & M.A. Afridi. *The role of trade openness on industrial sector development: Panel data evidence from SAARC region*. **Journal of Asia Business Studies,** 10(1), 93-103. 2015
112. B. Bongsha, (2011). *The impact of trade liberalization on the manufacturing sector in Cameroon (Doctoral dissertation). Department of Economics, North-West University, Potchefstroom.*2011

113. N. Singh, . *Services-led industrialization in India: Assessment and lessons. In Industrial Development for the 21st Century: Sustainable Development Perspectives* (pp. 235-291). Academic Press. 2006
114. T.A. Oyejide, & A.S. Bankole,. *Liberalisation of the Services Sector in Nigeria: Implications of Unilateral and Multilateral Approaches. Paper Prepared For The African Economic Research Consortium on Services Sector Liberalization in Nigeria. Academic Press*. 2001
115. WTO. *Economic Effects of Services Liberalization. Geneva: Background Note by the Secretariat*. 1997
116. E. Cali, &W. te Velde. *The Contribution of Services to Development and The Role of Trade Liberalisation and Regulation ODI Briefing Notes*. UK: DFID. 2008
117. O.H. Erick,. *Nigeria's Services Economy: The Engine for Future Growth*. USITC. 2017.
118. A.I. Ayodele, &G. Falokun. *The Nigerian Economy: Structure and Pattern of Development.* JODAD Publishers. 2003
119. O. Ajakaiye, A.T. Jerome, D. Nabena, & O.A. Alaba. *Understanding the relationship between growth and employment in Nigeria.* WIDER 2016.
120. O.P. Oluwatoyese, & S.D. Applanaidu,. *Effect of Agricultural, Manufacturing And Services Sectors Performance In Nigeria, 1980-2011*. **Journal of Economics and Sustainable Development,** 4(20), 35–41. 2013
121. O.A. Oyeranti, & O.A. Ishola,. *Inflation and Capacity Utilisation in Nigeria's Manufacturing Sector*. **African Journal of Economic Policy,** 20(1). 2013
122. S. Rachid, & B. Mohammed,. *Cooperation in Incremental Innovation Activities: An 1. Empirical Analysis of Moroccan Firms. International Journal of Service Science,Management,Engineering,andTechnology,9(3). doi:10.4018/IJSSMET.2018070104. 2018*
123. O.A Oyebanji, & O.O Arowolo,. *Endogenous Growth and Development Nexus: Nigeria Experience.* **European Journal of Humanities and Social Sciences,** 13(1), 987- 1000. 2011
124. M. Salaam, & I.S Ajayi, s. *Human Capital and Economic Growth in Nigeria: An Application of Endogenous Growth Model.* **Journal of Social Economics Research,** 3(3), 76-87. 2017
125. A.N Gbosi, & A. U Nweze,. *R&D, Technology Transfer and Economic Growth in Nigeria:* **An Enpirical Appraisal. International Journal of Public Administration and Management Research**, 5(6), 71-84. 2017

Chapter Three

Methodology

This chapter describes the methodology adopted in the study. It includes the model specification, data source and definitions, a-priori expectation, estimation technique and model evaluation.

3.1. Model Specification

This study is based on the Endogenous growth which links trade openness with innovation and growth. The study adopted the endogenous growth framework where output is generated via a production function[1]. This model of endogenous growth, known as the "Lucas Model," focuses on human capital accumulate on as a driver of economic growth. The model incorporates a production function to illustrate how output is generated in an endogenous growth framework. The simplified representation of Lucas's model is given as:

$$Y = A.K^{\propto}.H^{1-\propto} \cdots\cdots\cdots\cdots\cdots (3.1)$$

Where:

Y=Total Output

A= Total factor productivity, representing technology and efficiency

K= Physical capital

H= Human capital

∝= Output elasticity of physical capital with 1-α representing the output elasticity of human capital.

Following previous literature, this study extends the Lucas's framework to factor in the relationship between trade liberalization and sectoral performance within the Nigerian context[2,3], Trade liberalization captures the spillover effect on the different sectors of the economy[4]. The

functional form of the model for the study is specified as follows:

MANt = f(LAB, PCAP, HC, TRADE, EXC,INF)------(3.2)

AGRICt = f(LAB, PCAP, HC, TRADE, EXC,INF)-----(3.3)

SERt = f(LAB, PCAP, HC, TRADE, EXC,INF)-------(3.4)

Where MAN, AGRIC and SER are Manufacturing, Agricultural and Service sector performance respectively, LAB is labour force, PCAP is physical capital, HC is human capital, TRADE is trade liberalization, EXC is exchange rate and INF is inflation.

The econometric representation of the models become:

$$MAN_t = \alpha_0 + \alpha_1 LNLAB_t + \alpha_2 LNHC_t + \alpha_3 LNPCAP_t + \alpha_4 LNTRADE_t + \alpha_5 LNEXC_t + \alpha_6 INF_t + \mu_t \ldots\ldots\ldots (3.5)$$

$$AGRIC_t = \alpha_0 + \alpha_1 LNLAB_t + \alpha_2 LNHC_t + \alpha_3 LNPCAP_t + \alpha_4 LNTRADE_t + \alpha_5 LNEXC_t + \alpha_6 INF_t + \mu_t \ldots\ldots\ldots (3.6)$$

$$SER_t = \alpha_0 + \alpha_1 LNLAB_t + \alpha_2 LNHC_t + \alpha_3 LNPCAP_t + \alpha_4 LNTRADE_t + \alpha_5 LNEXC_t + \alpha_6 INF_t + \mu_t \ldots\ldots\ldots (3.7)$$

Table 3.1. Apriori Expectation

PARAMETERS	α_1	α_2	α_3	α_4	α_5	α_6
EXPECTATIONS	+	+	+	+/-	+/-	-

3.2 Data Source and Definition

Table 3.1: Data Sources and Definition

S/N	Variables	Label	Description	Source
1.	Dependent Variable	Manufacturing Sector Performance	Growth rate of manufacturing sector output	**WDI**
2.	Dependent Variable	Agricultural Sector Performance	Growth rate of agricultural sector output	**WDI**
3.	Dependent Variable	Service Sector Output Growth	Growth rate of service sector output	**WDI**
4.	Independent Variable	Trade Liberalization	Trade Openness is the primary proxy for trade liberalization. It is expressed as total trade divided by GDP. It means the sum of exports plus imports divided by GDP.	**WDI**
5.	Control Variable	Labour force	Refers to persons who fulfil the requirements for inclusion among the employed or the unemployed It is measured by labour force participation rate	**WDI**
6.	Control Variable	Physical Capital	Defined as the acquisition of produced assets (including purchases of second-hand assets), including the production of such assets by producers for their own use.It is measured by Gross fixed Capital formation	**WDI**

8.	Control variable	Human Capital	The economic value of a person's abilities and the qualities of their labor that influence productivity. It is measured by primary school enrollment rate.	**WDI**
9.	Control variable	Exchange Rate	This refers to the rate of exchange of one country's currency (naira) to another country's currency (dollars)	**Central bank Statistical Bulletin**
10.	Control variable	*Inflation*	Persistent rise in price of goods and services	**WDI**

Source: Author's Illustration (2023)

3.3. Pre-Estimation Tests

3.3.1 Unit Root Test

The unit-root test will be adopted to test the time-series properties of the data. The Augmented-Dickey Fuller test is employed in testing the unit-root properties of the data.

3.3.2 Co-integration Test

In order to investigate the cointegration relationship between the variables of interest, the Autoregressive Distributed Lag (ARDL) bounds test is applied. This cointegration approach, proposed has several key advantages: First, this method tests for cointegration between variables integrated of order zero i.e. I(0) and order one i.e. I(1) [5]. The Bound test for cointegration will be used to determine whether there is long-run relationship between the variables of interest. The co-integration test will be tested at 5% level of significance. It is based on the null hypothesis of

no cointegration against alternative hypothesis of cointegration as set below which can be determined using the Wald or F-statistics. If co-integration is established, we can proceed to run an ARDL model.

3.4. Estimation Technique

3.4.1. Auto-Regressive Distributed Lag Method (ARDL)

In analyzing the effect of trade liberalization on sectoral performance in Nigeria, an Autoregressive Distributed Lag (ARDL) model framework is employed. The ARDL approach yields consistent estimates of the long-run coefficients that are asymptotically normal, irrespective of whether the underlying regressors are I(1) or I(0), and also works well with small samples.

Similarly, the test is based on a single ARDL equation, rather than on a VAR, thus reducing the number of parameters to be estimated. Finally, it estimates simultaneously the long-run and short-run parameters. Three ARDL models are estimated in analyzing the effect of oil price on macroeconomic performance in Nigeria. If there is evidence in support of a long run relationship or cointegration among the variables, the long run models will be estimated as:

$$MAN_t = \alpha_0 + \alpha_1 LNLAB_{t-1} + \alpha_2 LNHC_{t-1} + \alpha_3 LNPCAP_{t-1} + \alpha_4 LNTRADE_{t-1}$$

$$+ \alpha_5 LNEXC_{t-1} + \alpha_6 INF_{t-1} + \mu_{t-1} \ldots\ldots\ldots (3.8)$$

$$AGRIC_t = \alpha_0 + \alpha_1 LNLAB_{t-1} + \alpha_2 LNHC_{t-1} + \alpha_3 LNPCAP_{t-1} + \alpha_4 LNTRADE_{t-1}$$

$$+ \alpha_5 LNEXC_{t-1} + \alpha_6 INF_{t-1} + \mu_{t-1} \ldots\ldots\ldots (3.9)$$

$$SER_t = \alpha_0 + \alpha_1 LNLAB_{t-1} + \alpha_2 LNHC_{t-1} + \alpha_3 LNPCAP_{t-1} + \alpha_4 LNTRADE_{t-1} + \alpha_5 LNEXC_{t-1}$$

$$+ \alpha_6 INF_{t-1} + \mu_{t-1} \ldots\ldots\ldots (3.10)$$

While the short run error correction ARDL model will be specified as:

$$\Delta MAN_t = \alpha_0 + \alpha_1 \Delta LNLAB_{t-1} + \alpha_2 \Delta LNHC_{t-1} + \alpha_3 \Delta LNPCAP_{t-1} + \alpha_4 \Delta LNTRADE_{t-1}$$

$$+ \alpha_5 \Delta LNEXC_{t-1} + \alpha_6 \Delta INF_{t-1} + \alpha_7 ECM_{t-1} + \mu_{t-1} \ldots\ldots\ldots (3.11)$$

$$AGRIC_t = \alpha_0 + \alpha_1 \Delta LNLAB_{t-1} + \alpha_2 \Delta LNHC_{t-1} + \alpha_3 \Delta LNPCAP_{t-1} + \alpha_4 \Delta LNTRADE_{t-1}$$

$$+ \alpha_5 \Delta LNEXC_{t-1} + \alpha_6 \Delta INF_{t-1} + \alpha_7 ECM_{t-1} + \mu_{t-1} \ldots\ldots\ldots (3.12)$$

$$SER_t = \alpha_0 + \alpha_1 \Delta LNLAB_{t-1} + \alpha_2 \Delta LNHC_{t-1} + \alpha_3 \Delta LNPCAP_{t-1} + \alpha_4 \Delta LNTRADE_{t-1}$$

$$+ \alpha_5 \Delta LNEXC_{t-1} + \alpha_6 \Delta INF_{t-1} + \alpha_7 ECM_{t-1} + \mu_{t-1} \ldots\ldots\ldots (3.13)$$

Endnotes

1. Lucas Jr, Robert E. *"On the mechanics of economic development."* ***Journal of monetary economics*** 22, no. 1 (1988): 3-42.

2 Umoru, David, and Matthew Eborieme. "Trade liberalization and industrial growth in Nigeria." **Journal of Poverty, Investment and Development** 1, no. 1 (2013): 148-156.

3.Adenikinju, Adeola F., and Louis N. Chete. *"Trade liberalization, market structure and productivity in Nigeria."* **The Nigerian Journal of Economic and Social Studies** 41, no. 3 (1999): 385-403.

4. O.A Osidipe, O. Onuchuku, G. Otto, and S. G. Nenbee. *"Trade Liberalisation and Selected Manufacturing Sectoral Groups in Nigeria."* **World Journal of Innovative Research** 5, no. 6 (2012): 37-46.

5 Damodar N. Gujarati http://www.abebooks.com/9780072478525/Basic-Econometrics-Gujarati-Damodar-N-0072478527/plp (1995

Chapter Four

Results and Discussion of Findings

4.1. Preliminary Tests

Some preliminary tests are conducted to summarize the data, give information about the order of integration of the variables employed as well as test whether or not cointegration exists among the variables.

4.1.1. Descriptive Statistics

This is done to summarize the basic features of the data. The results of the descriptive statistics are presented in Table 4.1.1.

Table 4.1: Descriptive statistics

	AGRIC	MANU.	SERVICE	TRADE	LABOUR	INF	GFCF	PRIMARY
Mean	5.88	1.65	5.77	-4.73	59.55	20.04	2.058	89.13
Median	4.01	1.82	4.30	3.38	60.29	12.94	2.61	88.22
Maximum	55.57	18.05	19.99	281.43	60.71	72.83	-23.75	100.18
Minimum	-3.19	-8.85	-2.22	-639.57	55.27	17.91	-23.75	76.46
Std. Dev.	9.123	5.71	4.89	124.53	1.54	17.91	12.18	6.42
Skewness	4.92	0.55	0.89	-3.68	-1.42	1.65	0.34	6.42

Kurtosis	27.52	3.49	3.48	21.98	3.78	4.38	4.90	2.04
Jarque-Bera	989.20	2.04	4.83	587.20	12.25	18.19	5.77	1.50
Probability	0.00	0.36	0.09	0.00	0.02	0.000112	0.055848	0.471677
Sum	200.03	56.24	196.09	-160.70	2024.81	681.41	69.97	3030.30

Source: Author's Computation (2023)

From the summary statistics presented above, it is evident that all the variables have positive mean value except trade openness. Primary school enrolment has the highest mean value while trade openness has the lowest mean value. Also, the standard deviation of each variable gives a more accurate and comprehensive estimates of dispersion, because an outlier can largely overstate the range of observations. The probability values of the Jarque–Bera statistics suggest the non-rejection of the null hypothesis, for most of the variables – implying the normality of the residual. Finally, the minimum and maximum values describe each variable as it appears, in terms of the lowest and highest values in each series. For the Jarque-Bera analysis, all the variable except primary school enrolment are leptokurtic given their values to be greater than 3, while primary school enrolment is platykurtic, given that it is less than 3.

Table 4.2. Correlation Matrix

	AGRIC	TRADE	LABOUR	INF	GFCF	PRIMARY
AGRIC	1					
TRADE	-0.087	1				
LABOUR	0.13	-0.08	1			
INF	-0.088	0.32	0.32	1		
GFCF	0.16	-0.03	-0.04	-0.06	1	
PRIMARY	0.26	-0.11	0.27	-0.04	0.08	

The correlation matrix shows the association between variables. It explains the degree of association existing among the variables, whether positive or negative. It is also used to know the level of multicollinearity in the model analyzed. The correlation analysis explains the level of association between the variables employed in the study

4.1.3. Unit Root Test

The unit root test is essential in order to ensure that the variables are estimated in their stationary forms to avoid spurious result. To do this, the Augmented Dickey-Fuller (ADF) and Phillip Perron (PP) tests are employed. The essence is to test the null hypothesis of unit root or non-stationary stochastic process. To reject this, the ADF and PP statistic must be more negative than the critical values at either 1%, 5% & 10% significance levels respectively.

Table 4.3: Unit root test result

Variable	ADF Test Statistic at level (I_0)	ADF Test Statistic at first difference (I_1)	Decision value
AGRIC	-5.71	----------	1(0)
EXC	-2.27	-3.87	1(1)
GFCF	-10.27	----------	1(0)
MANU	-5.92	----------	1(0)
INF	-3.42	----------	1(0)
PRIMARY	-3.04	-3.27	1(1)
SERVICE	-1.72	-10.21	1(1)
TRADE	-3.21	----------	1(0)
CRITICAL VALUE	-2.96	-3.02	1(1)

Source: Author's Computation (2023)

Table 4.3 shown above reports unit root test for all our variables using the ADF Test. Agricultural sector performance, gross fixed capital formation, manufacturing sector performance, inflation and trade openness are integrated of order zero I_0, while exchange rate, labour force, primary school enrolment and service sector performance are integrated of order one I. This justifies our choice of ARDL estimation technique as variables exhibit a mix of integration order I_0 and I_1.

4.4. Bound Test for Linear Co-integration

In this study we test the null hypothesis by means of F-statistics, given that:

Null Hypothesis H_0: $\varphi_1 = \varphi_2 = \varphi_3 = \varphi_4 = 0$

Alternative Hypothesis H_1: $\varphi_1 \neq \varphi_2 \neq \varphi_3 \neq \varphi_4 \neq 0$

The F-statistic value is compared against the two critical value bounds (upper and lower bounds). The upper bound applies when all the variables are integrated of order one, I (1) while lower bound assume all the variables are integrated of order zero, I (0). If the calculated F-statistics value exceeds the upper bound, then the null hypothesis of no cointegration is rejected. If the calculated F-statistics value is lower than the lower bound critical value, then the null hypothesis cannot be rejected. However, conclusive inference with regards to cointegration cannot be reached if the calculated F-statistics falls within the critical bounds.

The bounds test is more efficient for a small sample size and is applicable even when variables show any signs of endogenous properties as it makes corrections for any residual serial correlation.

Table 4.4.: Bound Test Result for ARDL:

Model	ADF-Statistic	Prob.
AGRIC/TRADE, LABOUR INF, GFCF, PRIMARY	31.85	I0: 3.12 I1: 4.25
MAN/TRADE, LABOUR, EXC, GFCF, PRIMARY	6.67	I0: 2.86 I1: 4.01
SER/TRADE, LABOUR, EXC, GFCF, PRIMARY	4.40	I0: 2.62 I1: 3.79

Note: *** indicates significance and rejection of the null hypothesis of no co-integration at 1% significance level.*Source: Author's Computation (2023)*

Table 4.4.1 presented above displays the Bound-Test for linear co-integration. This methodology is performed to assess the presence of a long-term relationship, specifically co-integration, between the variables analysed. The condition for rejecting the null hypothesis, which posits no co-integration, is that the F-Statistic must exceed the lower and upper thresholds at significance levels of 1%, 5%, or 10%. Based on the obtained F-Statistic value of 31.85, 6.67 and 4.40 for the three models respectively, which exceeds the critical values at significance levels of 1%, 5%, and 10%, we can conclude that there exists a long-run relationship among the variables.

4.2. **. Effect of Trade Liberalization on Agricultural Sector Performance in Nigeria**

Results of the ARDL are reported in this section. This explains the effect of trade liberalization on agricultural sector performance in Nigeria. The short and long-run estimates for all variables are presented using the ARDL framework.

Table 4.5: Effect of Trade Liberalization on Agricultural Sector Performance in Nigeria

Dependent Variable: AGRICULTURE				
Variable	Coefficient	Standard	T-Statistics	Probability

		Error		
LONG RUN ESTIMATES				
TRADE	0.02	0.01	2.24	0.06
LABOUR	-1.02	0.41	-2.50	0.04
INF	-0.44	0.07	-6.31	0.00
GFCF	-1.42	0.19	-7.45	0.00
PRIMARY	0.63	0.09	7.15	0.00
EC=AGRIC-(0.02*TRADE-1.05*LABOUR-0.44*INF-1.42*GFCF0.63*PRIMARY)				
ΔSHORT RUN ESTIMATES				
C	84.41	4.86	17.38	0.00
@TREND	-1.401	0.09	-14.71	0.00
Δ(AGRIC(-1)	1.40	0.11	9.35	0.00
Δ(AGRIC(-2)	0.51	0.07	7.59	0.00
Δ(LABOUR)	2.11	0.94	0.24	0.07
Δ(LABOUR(-1)	4.43	1.00	4.42	0.00
Δ(LABOUR(-2)	-2.00	0.92	-2.18	0.70
Δ(INF)	-0.70	0.06	-11.29	0.00
Δ(INF(-1))	0.37	0.04	8.17	0.00
Δ(GFCF)	-0.86	0.09	-9.25	0.00
Δ(GFCF)-1)	1.37	0.10	13.56	0.00
Δ(GFCF)(-2)	0.49	0.06	7.89	0.00
Δ(PRIMARY)	0.84	0.16	5.29	0.00
Δ(PRIMARY)(-1)	0.26	0.17	1.50	0.18
Δ(PRIMARY)(-2)	-0.33	0.17	-1.87	0.10
CointEq(-1)*	-0.88	0.06	-14.77	0.00

Source: Author's Computation (2023)

The ARDL result shown above reveals that in the short run, most of the employed variables have significant effect on agricultural sector performance. One and two lagged values of agricultural sector

performance significantly affect current performance of the agricultural sector at 1 percent significance level. This means that a percentage increase in agricultural sector performance in the one and two lagged periods will increase current performance of the sector by 1.03 and 0.51 percent respectively Similarly, the current as well as one lagged value of labour force exhibit positive and significant effect on agricultural sector performance. In magnitude terms, a percentage increase in labour in both the present and one lagged period will increase agricultural sector performance by 2.12 and 4.13 percent respectively. Conversely, the two lagged value of labour has a negative effect on agricultural sector performance, reducing it by 2 percent, given a percentage increase in its value. Inflation in the current period has a negative effect on agricultural sector performance, thereby reducing agricultural performance by 0.69 percent, following a percentage increase. Conversely, inflation in the immediate past period has an increasing effect on agricultural sector performance. An increase in inflation by one percent will increase agricultural sector performance by 0.37 percent.

Gross fixed capital formation in the current period has a decreasing effect on agricultural sector performance, while the one and two lagged values of gross fixed capital formation, significantly increases agricultural sector performance. A percentage increase in gross fixed capital formation will increase agricultural sector performance by 1.37 and 0.49 percent respectively. Primary school enrolment as a measure of human capital capital development has a significant and positive effect on agricultural sector performance, with a percentage increase in primary school enrolment, increasing agricultural sector performance by 0.84 percent. The error correction term is statistically significant, negative and less than one. This means that the speed of adjustment from short-run to long –run equilibrium given any shock in the model is about 88 percent.

For the long run estimates, all the employed variables exert significant influence on agricultural

sector performance. While trade liberalization and human capital as measured by primary school enrolment have positive effects on agricultural sector performance, labour, inflation and gross fixed capital formation affect the sector negatively. A percentage increase in trade openness and primary school enrolment will increase agricultural sector performance by 0.02 and 0.63 percent respectively, while a percentage increase in labour, inflation and gross fixed capital formation respectively reduces agricultural performance by 1.02, 0.44 and 1.42 percent respectively.

4.2.1.. Post Estimation Diagnostic Test on Model I

Some diagnostic tests are carried out after estimating the ARDL result to validate findings.

Table 4.6.: Breusch-Godfrey Serial Correlation Test

F-Statistic	2.88	Prob. F (2,5)	0.15

Source: Author's Computation (2023)

Since the probability value (0.15) is greater than 0.05, we conclude that there is no evidence of serial correlation in our estimation.

Table 4.6.3.1: Breusch-Pagan Godfrey Heteroskedasticity Test

F-Statistic	0.70	Prob. F (20, 7)	0.75

Source: Author's Computation (2023)

Since the probability value (0.75) is greater than 0.05, we conclude that there is no evidence of heteroskedasticity in our model .

4.6 Effect of Trade Liberalization on Manufacturing Sector Performance in Nigeria

Table 4.7: . Effect of Trade Liberalization on Manufacturing Sector Performance in Nigeria

Variable	Coefficient	Standard Error	T-Statistics	Probability
SHORT RUN ESTIMATES				
Δ (MAN(-1))	0.417993	0.229983	1.817495	0.0892
Δ (TRADE)	-0.134875	0.054520	-2.473878	0.0258
Δ (TRADE(-1))	0.008133	0.034779	0.233846	0.8183
Δ (TRADE(-2))	0.112325	0.031240	3.595512	0.0026
Δ (TRADE(-3))	0.027576	0.013778	2.001437	0.0638
Δ (LABOUR)	-2.992363	1.933981	-1.547255	0.1426
Δ (LABOUR(-1))	-5.550936	1.908591	-2.908395	0.0108
Δ (INF)	-0.073461	0.170484	-0.430896	0.6727
Δ (INF)-1))	0.493836	0.270546	1.825331	0.0879
Δ (INF)-2))	-0.843126	0.278356	-3.028952	0.0085
Δ (INF)-3))	0.360569	0.159588	2.259369	0.0392
Δ (GFCF)	-0.014733	0.116612	-0.126339	0.9011
CointEq(-1)	-1.529247	0.290597	-5.262431	0.0001
Cointeq = MAN - (-0.2418*TRADE -0.7425*LABOUR + 0.0968*INF -0.0096 *GFCF + 47.2607)				

LONG RUN ESTIMATES

Variable	Coefficient	Standard Error	T-Statistics	Probability
TRADE	-0.241805	0.080718	-2.995660	0.0091
LABOUR	-0.742476	0.652733	-1.137489	0.2732
INF	0.096842	0.149840	0.646298	0.5279
GFCF	-0.009634	0.076414	-0.126077	0.9013
C	47.260691	37.846551	1.248745	0.2309

R-squared	0.801972	Mean dependent var	2.279694
Adjusted R-squared	0.590742	S.D. dependent var	9.010014
S.E. of regression	5.764000	Akaike info criterion	6.645955
Sum squared resid	498.3554	Schwarz criterion	7.424627
Log likelihood	-89.33527	Hannan-Quinn criter.	6.904062
F-statistic	3.796680	Durbin-Watson stat	1.854088
Prob(F-statistic)	0.006651		

From the short run analysis, manufacturing sector performance in the immediate past period significantly affects the current value of manufacturing sector performance. A percentage increase in the one lagged value of manufacturing sector performance will increase its current value by 0.42 percent. The current value of trade openness as well as its two and three lagged values also affect manufacturing sector performance. While the relationship is negative for the current period. The relationship is positive for the two and three lagged periods. In magnitude terms, a percentage increase in the current value of trade openness will reduce manufacturing sector performance by 0.13

percent, while a percentage increase in the two and three lagged values of trade openness will increase manufacturing sector performance by 0.11 and 0.03 percent. The immediate past value of labour also has significant and negative effect on manufacturing sector performance, as a percentage increase in the one lagged value of labour reduces manufacturing sector performance by 5.55 percent. Inflation in the one, two and three lagged periods show significant effects on manufacturing sector performance, while it is positive for the one and three lagged periods, the effect is negative for the two lagged period of inflation. The speed of adjustment from short-run to long –run equilibrium given any shock in the model is about 152 percent, and this shows oscillatory convergence.

For the long run estimate, only trade openness has a significant and negative relationship with manufacturing sector performance. A percentage increase in trade openness will reduce manufacturing sector performance by 0.24 percent.

4.3.1. Post Estimation Diagnostic Test on Model II

Some diagnostic tests are carried out after estimating the ARDL result to validate findings.

Table 4.8: Breusch-Godfrey Serial Correlation Test\

F-Statistic	0.34	Prob. F (2,13)	0.71

Source: Author's Computation (2023)

Since the probability value (0.71) is greater than 0.05, we conclude that there is no evidence of serial correlation in our estimation.

Table 4.6.3.1: Breusch-Pagan Godfrey Heteroskedasticity Test

F-Statistic	0.49	Prob. F (16, 15)	0.91

Source: Author's Computation (2023)

Since the probability value (0.91) is greater than 0.05, we conclude that there is no evidence of heteroskedasticity in our estimation

4.4. . Effect of Trade Liberalization on Service Sector Performance in Nigeria

Table 4.9: . Effect of Trade Liberalization on Service Sector Performance in Nigeria

Variable	Coefficient	Standard Error	T-Statistics	Probability
Δ SHORT RUN ESTIMATE				
Δ (SERVICE(-1))	-0.380884	0.168329	-2.262737	0.0449
Δ (TRADE)	-0.012170	0.011712	-1.039134	0.3210
Δ (LABOUR)	1.608715	1.144614	1.405466	0.1875
Δ (LABOUR(-1))	-1.999444	1.325486	-1.508461	0.1596
Δ (EXC)	-0.166084	0.063938	-2.597572	0.0248
Δ (EXC(-1))	0.051803	0.092658	0.559077	0.5873
Δ (EXC(-2))	-0.104885	0.069768	-1.503344	0.1609
Δ (GFCF)	-0.206079	0.069270	-2.974989	0.0126
Δ (PRIMARY)	0.503604	0.202078	2.492124	0.0299
Δ (PRIMARY(-1))	0.238270	0.286321	0.832176	0.4230
Δ (PRIMARY(-2))	-0.778088	0.266831	-2.916030	0.0140

CointEq(-1)	-0.966023	0.211196	-4.574058	0.0000

Cointeq = SERVICE - (-0.0126*TRADE -0.0373*LABOUR + 0.0257*EXC

-0.2901*GFCF + 0.6339*PRIMARY -47.4963)

Variable	Coefficient	StandardError	T-Statistics	Probability
LONG RUN ESTIMATE.				
TRADE	-0.012598	0.012144	-1.037389	0.3218
LABOUR	-0.037257	0.788206	-0.047268	0.9631
EXC	0.025659	0.010650	2.409416	0.0347
GFCF	-0.290150	0.130335	-2.226183	0.0478
PRIMARY	0.633930	0.161641	3.921842	0.0024
C	-47.496262	46.752937	-1.015899	0.3315

R^2	0.867353	Mean dependent var	6.068387
Adjusted R^2	0.674411	S.D. dependent var	5.308103
S.E. of regression	3.028825	Akaike info criterion	5.334203
Sum squared resid	100.9116	Schwarz criterion	6.143042
Log likelihood	-57.67885	Hannan-Quinn criter.	5.581473
F-statistic	4.495414	Durbin-Watson stat	2.882105
Prob(F-statistic)	0.007728		

From the short run analysis, service sector performance in the immediate past period significantly affects the current value of service sector performance. A percentage increase in the one lagged value of manufacturing sector performance will reduce its current value by 0.38 percent. The current value

of exchange rate also affects service sector performance negatively. In magnitude terms, a percentage increase in the current value of exchange rate will reduce service sector performance by 0.17 percent. Gross fixed capital formation in the current period also exerts significant and negative relationship with service sector performance. A percentage increase in gross fixed capital formation will reduce service sector performance by 0.21 percent. Human capital measured by primary school enrollment in the current and two lagged period also affects service sector performance significantly. While the effect is positive in the current period, a negative effect is observed for the two lagged period. In magnitude terms, a percentage increase in primary school enrollment will increase service sector performance by 0.50 percent. The speed of adjustment from short-run to long –run equilibrium given any shock in the model is about 96 percent.

For the long run estimate, trade openness and labour have no significant relationship with service sector performance. However, exchange rate and primary school enrolment have positive and significant effect on service sector performance. A percentage increase in primary school enrollment and exchange rate will increase service sector performance by 0.63 and 0.02 percent respectively. Gross fixed capital formation has a significant and negative relationship with service sector performance with a percentage increase in gross fixed capital formation, reducing service sector performance by 0.29 percent.

4.4.1. Post Estimation Diagnostic Test on Model III

Some diagnostic tests are carried out after estimating the ARDL result to validate findings.

Table 4.10: Breusch-Godfrey Serial Correlation Test

F-Statistic	4,59	Prob. F (2,9)	0.71

Source: Author's Computation (2023)

Since the probability value (0.71) is greater than 0.05, we conclude that there is no evidence of serial correlation in our estimation.

Table 4.6.3.1: Breusch-Pagan Godfrey Heteroskedasticity Test

F-Statistic	0.53	Prob. F (16, 11)	0.88

Source: Author's Computation (2023)

Since the probability value (0.88) is greater than 0.05, we conclude that there is no evidence of heteroskedasticity in our estimation

4.5. Discussion of Findings

The study analysed the effect of trade liberalization on sectoral performance in Nigeria by considering the agricultural, anufacturing and service sectors of the Nigerian economy. For the agricultural sector, results showed reveals that in the short run, one and two lagged values of agricultural sector performance significantly and positively affect current performance of the agricultural sector at 1 percent significance level. Trade openness provides farmers with access to larger markets, both domestic and international. Increased market access allows farmers to sell their products to a broader consumer base, leading to higher demand and potentially higher prices for agricultural goods. Trade openness can facilitate the transfer of technology and innovation in agriculture. Exposure to international markets may encourage the adoption of advanced farming

techniques, machinery, and technologies that can enhance productivity and efficiency in the agricultural sector.

Similarly, the current as well as one lagged value of labour force exhibit positive and significant effect on agricultural sector performance. This corroborates findings by [1,2]. Agriculture is often labor-intensive, requiring a substantial workforce for tasks such as planting, harvesting, and tending to livestock. The abundance of labor in Nigeria allows for the cultivation of larger areas of land and the production of a diverse range of crops. Many Nigerians, especially in rural areas, depend on agriculture for their livelihoods. The agricultural sector provides employment opportunities for a significant portion of the population, contributing to poverty reduction and improved living standards in rural communities.

Inflation in the current period has a negative effect on agricultural sector performance. This also conforms with studies such as [1,2, 7]. Inflation often leads to higher prices for inputs such as seeds, fertilizers, pesticides, and machinery. These increased input costs can squeeze profit margins for farmers, particularly small-scale farmers who may have limited resources and are more vulnerable to cost fluctuations.

Gross fixed capital formation in the current period has a decreasing effect on agricultural sector performance. Primary school enrolment as a measure of human capital development has a significant and positive effect on agricultural sector performance. Human capital development, including education and training can enhance the skills and knowledge of farmers. Well-educated and skilled farmers are more likely to adopt advanced techniques, technologies, and best practices, leading to increased productivity and efficiency in the agricultural sector.

In the long run, trade liberalization and human capital as measured by primary school enrolment have

positive effects on agricultural sector performance, labour, inflation and gross fixed capital formation affect the sector negatively.

In analyzing the effect of trade liberalization on manufacturing sector performance in Nigeria, the short run analysis reveals that manufacturing sector performance in the immediate past period significantly affects the current value of manufacturing sector performance. The current value of trade openness as well as its two and three lagged values also affect manufacturing sector performance. While the relationship is negative for the current period, Increased trade openness exposes domestic industries, including manufacturing, to greater competition from foreign products. This corroborates findings by [3,4] . However, the findings deviates from [5,6].

If the domestic manufacturing sector is not sufficiently competitive, it may struggle to withstand the influx of cheaper imported goods, leading to a decline in production and market share for domestic manufacturers. The immediate past value of labour also has significant and negative effect on manufacturing sector performance. Inflation in the one, two and three lagged periods show significant effects on manufacturing sector performance, while it is positive for the one and three lagged periods. During periods of inflation, businesses may be able to adjust their prices upward to compensate for increased input costs. If firms can pass on higher costs to consumers without a significant reduction in demand, it may contribute to higher profit margins. For the long run estimate, only trade openness has a significant and negative relationship with manufacturing sector performance.

In analysing the effect of trade liberalization on the service sector performance, the short run estimates show that service sector performance in the immediate past period significantly affects the

current value of service sector performance. The current value of exchange rate also affects service sector performance negatively. Gross fixed capital formation in the current period also exerts significant and negative relationship with service sector performance. Human capital measured by primary school enrollment in the current and two lagged period also affects service sector performance significantly. While the effect is positive in the current period.

For the long run estimate, trade openness and labour have no significant relationship with service sector performance. However, exchange rate and primary school enrolment have positive and significant effect on service sector performance. Gross fixed capital formation has a significant and negative relationship with service sector performance with a percentage increase in gross fixed capital formation, reducing service sector performance by 0.29 percent.

Endnotes

1. Okoh, John & Okungbowa, Ewere. (2023). Trade Openness and Real Sector Performance in Nigeria: An Aggregated Approach. 9. 131 - 142

2.Ebenyi, G. O, Nwanosike, D.U, Uzoechina, B & Ishiwu, V (2016). Impact of Trade Liberalization on Manufacturing value added in Nigeria. Saudi Journal of Business and Management Studies.475-481, DOI: 10.21276/sjbms

3. Sade, Akintunde Temitope, Akanbi Bosede Esther, Anthony Dotun Oladipo, and Daniel Adedokun. "Trade Openness and Manufacturing Sector Performance in Some Selected West African Countries: A Panel Study Approach." *Acta Universitatis Danubius. Œconomica* 17, no. 3 (2021).

4. Khobai, Hlalefang, and Clement Moyo. "Trade openness and industry performance in SADC countries: is the manufacturing sector different?." *International Economics and Economic Policy* 18 (2021): 105-126.

5. . Neoh, Sun Fu, and Tian So Lai. "The impact of trade openness on manufacturing Sector performance: evidence from Malaysia." *Journal of Economics and Sustainability* 3, no. 1 (2021): 11-11.

6. ENIEKEZIMENE, Ariayefa Francis. "Trade Liberalization and Manufacturing Sector Performance in Nigeria."

7. Olusola Ogunjinmi and Adebunmi Oduyoye-Ejumedia,. *The Role of Trade Policy in the Performance of Nigerian Agricultural Sector: A Time Series Analysis Journal of Economics and Sustainable Development* www.iiste.org, ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online), Vol.12, No.16, 2021.

Chapter Five

Conclusion

5.1. Summary of Findings

This study investigated the effect of trade liberalization on sectoral performance in Nigeria while analysing the key sectors of the economy vis-à-vis agriculture, manufacturing and service. The utilisation of the ADF test statistics in the unit root test reveals a varied level of integration across the variables, hence confirming the appropriateness of employing the ARDL estimation technique.

Bound test was performed to assess the existence of a long-run relationship for the models, and it was determined that a long-run relationship is indeed present. As a result, it was necessary to specify the models for the short term. For the agricultural sector, results showed reveals that in the short run, one and two lagged values of agricultural sector performance significantly and positively affect current performance of the agricultural sector at 1 percent significance level. Similarly, the current as well as one lagged value of labour force exhibit positive and significant effect on agricultural sector performance.

Conversely, the two lagged value of labour has a negative effect on agricultural sector performance, reducing it by 2 percent, given a percentage increase in its value. Inflation in the current period has a

negative effect on agricultural sector performance. Gross fixed capital formation in the current period has a decreasing effect on agricultural sector performance. Primary school enrolment as a measure of human capital capital development has a significant and positive effect on agricultural sector performance.

In the long run, trade liberalization and human capital as measured by primary school enrolment have positive effects on agricultural sector performance, labour, inflation and gross fixed capital formation affect the sector negatively.

In analyzing the effect of trade liberalization on manufacturing sector performance in Nigeria, the short run analysis reveals that manufacturing sector performance in the immediate past period significantly affects the current value of manufacturing sector performance. The current value of trade openness as well as its two and three lagged values also affect manufacturing sector performance. While the relationship is negative for the current period, The immediate past value of labour also has significant and negative effect on manufacturing sector performance. Inflation in the one, two and three lagged periods show significant effects on manufacturing sector performance, while it is positive for the one and three lagged periods. For the long run estimate, only trade openness has a significant and negative relationship with manufacturing sector performance.

In analyzing the effect of trade liberalization on the service sector performance, the short run estimates show that service sector performance in the immediate past period significantly affects the current value of service sector performance. The current value of exchange rate also affects service sector performance negatively. Gross fixed capital formation in the current period also exerts significant and negative relationship with service sector performance. Human capital measured by

primary school enrollment in the current and two lagged period also affects service sector performance significantly. For the long run estimate, trade openness and labour have no significant relationship with service sector performance. However, exchange rate and primary school enrolment have positive and significant effect on service sector performance. Gross fixed capital formation has a significant and negative relationship with service sector performance.

5.2 Conclusion

This study examined the effect of trade liberalization on sectoral performance in Nigeria, by disaggregating into the agricultural, manufacturing and service sectors of the Nigerian economy. To accomplish this objective, the study utilised the ARDL technique on an annual time series dataset covering the period from 1986 to 2021. The analysis revealed the presence of both short-term and long-term relationships among the variables.

For the agricultural sector, results showed reveals that in the long run, trade liberalization has a significant and positive effect. For the effect of trade liberalization on manufacturing sector performance in Nigeria, the short run analysis reveals that trade openness affect manufacturing sector performance. In the long run, trade openness also has a significant and negative relationship with manufacturing sector performance. In analysing the effect of trade liberalization on the service sector performance, trade openness has no significant effect on service sector performance in both the short and long run periods.

5.3 Recommendations

From the results of the study, the following recommendations are made:

1. It is recommended that the government adopt an outward-looking trade strategy that promotes the exportation of domestically produced agricultural products, thus fostering an increase in agricultural output.
2. The central bank, as the monetary authority, should play a role in maintaining stability in the country's currency vis-à-vis other currencies. Additionally, it should prevent the excessive importation of food supplies by implementing rigorous monetary policies.
3. The formulation and implementation of well-designed policies can confer a significant comparative advantage upon Nigeria in the manufacturing and production sector. Consequently, this advantage would enhance the competitiveness of the nation's products in the global market.
4. In order to facilitate the industrialization process in Nigeria, it is imperative to prioritise the manufacturing sector's production of capital goods.

5.4 Contribution to Knowledge

Prior to this study, most studies have not provided evidence for service sector in Nigeria, Most are basically on Agricultural sector and Manufacturing sector over the years. The service sector contributed 58.42% to the GDP according to the National Bureau of Statistics. In analyzing the relationship between trade liberalization and sectoral performance with addition of service sector compared to previous works in Nigeria. This contributes to understanding the potential benefits and challenges associated with opening up markets and provides insights for policy makers to design effective trade policies that foster inclusive and sustainable economic growth.

5.5. Recommendation for further Research

For the purpose of future research, it will be suggested that studies should extend more research on trade liberalization and sectoral performance in West Africa and Africa at large to acquire more knowledge of the dynamics of trade liberalization among nations.

BIBLIOGRAPHY

Conference

Silva, N. D., Malaga, J. & Johnson, J., Trade Liberalization Effects on Agricultural Production Growth: The Case of Sri Lanka. Paper Presented at the Orlando, Florida: Selected Paper Prepared for Presentation at the Southern Agricultural Economics Association, 2013

United Nations Conference on Trade and Development, 2018

Journals

Abdulrahman, Y. & Lawal, Y. *Policy Inconsistency and Manufacturing Investment in Nigeria*, **Futura Journal of Management and Social Sciences**, 1(1), 2020, 57-71.

Adamu, F. M. & Doğan, E. *Trade Openness and Industrial Growth: Evidence From Nigeria*. **Panoeconomicus** 64(3), 2015, 297-314.

Adejumo, V. A., Olusegun, A. & Ayodeji, B. H., *Trade Openness, Agriculture Value-Added, Technological Innovation and Economic Growth in Nigeria*. **CBN Journal of Applied Statistics**, 10(1), 2019, 303-325.

Adeoti, O., *Constraints on Data Collection Implementation at the River Basin Level in Nigeria*, **Journal of Hydrology: Regional Studies**, 32(03), 2020, 1-12.

Adofu, I., Taiga, U. U., & Tijani, Y., *Manufacturing Sector and Economic Growth in Nigeria (1990-2013)*, **Donnish Journal of Economics and International Finance**, *1*(1), 2015, 001-006.

Ajani, E. N. & Igbokwe, E. M., *A Review of Agricultural Transformation Agenda in Nigeria: The Case of Public and Private Sector Participation*, **Research Journal of Agriculture and Environmental Management**, 3(5), 2014, 238–245.

Ajayi, R. Dada, J. & Oludare, A. S., *Trade Liberalization and Innovation Performance in Africa: Evidence from Nigerian Service Sector*, **Journal of African Business**, 20(2), 2019, 246-266.

Ajide, F. M., *Firm-Specific, and Institutional Determinants of Corporate Investments in Nigeria*, **Future Business Journal**, *3*(2), 2017, 107-118.

Akpan, U. S. & Isihak, S. R., *Trade Liberalization, Competitiveness, and Manufacturing Sector Performance in Nigeria*, **Journal of Economic Issues**, 50(1), 2016, 198- 224.

Alam, M. S., Rabbani, M. R., Tausif, M. R., & Abey, J., *Banks' Performance and Economic Growth in India: A Panel Cointegration Analysis*, **Economies,** *9*(1), 2021, 1-13.

Alhassan, Y. J., Umar, S. & Ayuba, G., *Impact of Agricultural Transformation Agenda Support programme Phase-1 in Promoting Agricultural extension Service Delivery in Kebbi and Sokoto States, Nigeria*. **World Journal of Agricultural Research**, 7(3), 2019, 94-102.

Ali, S., Alam, K. J. & Islam, S. M., *Effects of Trade Openness and Industrial Value Added on Economic Growth in Bangladesh*, **International Journal of Sustainable Development Research**, 2(2), 2016, 6-11.

Anowor, O. F., Ukweni, & Martins, I., *The Impact of Trade Liberalisation on Nigeria Agricultural Sector*, **Journal of Economics and Sustainable Development**, 4(8), 2013, 14-25.

Anwar, N., & Elfaki, K. E., *Examining the Relationship between Energy Consumption, Economic Growth and Environmental Degradation in Indonesia: Do Capital and Trade Openness Matter?*. **International Journal of Renewable Energy Development,** *10*(4), 2021, 769-778.

Anyanwu, S. O., Offor, U. S., Adesope, O. M. & Ibekwe U. C., *Structure and Growth of the Gross Domestic Product (1960-2008): Implications for Small-Scale Enterprises in Nigeria*, **Global Advanced Research Journal of Management and Business Studies**, 2(6), 2013, 342-348.

Aremu, M. A. & Bamiduro, J. A., *Infrastructure And Manufacturing Output In Nigeria,* **International Journal of Development and Economic Sustainability**, 3(2), 2015, 54-67.

Aremu, M. A. & Oyewole, S. A., *Skills Gap and Competitiveness of the Manufacturing Sector in Nigeria*, **Journal of Economics and Sustainable Development**, 9(24), 2018, 50-63

Arjun, K., Sankaran, A., Kumar, S., & Das, M. (2020). *An Endogenous Growth Approach on the Role of Energy, Human Capital, Finance and Technology in Explaining Manufacturing Value-Added: A Multi-Country Analysis*, ***Heliyon***, *6*(7), 2020, 1-12.

Bartlett, C. D. S. & Fajemisin, J. M., *The Social-Scientist's Role in Generating Innovations for Small Farmers: Maize in Nigeria*, **Experimental Agriculture**, 17(4), 1981, 373-382 .

Bawa, S. & Mohammed, J. A., *Natural Resource Abundance and Economic Growth in Nigeria,* **Central Bank of Nigeria Economic Review**, 45(3), 2007, 25-32.

Belloumi, M., & Alshehry, A. *The Impact of International Trade on Sustainable Development in Saudi Arabia*, **Sustainability**, *12*(13), 2020, 1-18.

Bhaduri, S. N., *Investment, Financial Constraints and Financial Liberalization: Some Stylized*

Facts from a Developing Economy, India, **Journal of Asian Economics**, *16*(4), 2005, 704-718.

Chukwudike, C. N., Bright, C. O., Maxwell, O., Okezie, O., & Onwuegbulam, C., *ARIMA Modelling of Neonatal Mortality in Abia State of Nigeria***, Asian Journal of probability and Statistics,** *6*(2), 2020, 54-62.

Danladi, A. & P. W. Naankiel, *River Basin Development Authorities and Nigeria's Economic Development Since 1960*. **The Journal of the Faculty of Arts and Islamic Studies**, 17(1), 2019, 52-66.

Dawson, P. & Mavrotas, G. *Nigerian Manufacturing and Trade Liberalization since 1986: A Cointegration and Error Correction Approach*, **Journal of Development Studies**, 31(4), 557-578, 1995.

Djokoto, J. G., *Openness and Agricultural Performance in Ghana*, **Journal of Science and Technology**, 33(2), 2013, 24-36.

Driver, C., *Trade liberalization and South African manufacturing*, **United Nations University World Institute for Development Economics Research**, *1*(1), 2019, 1-20.

Ebenyi, G. O., Nwanosike, D. U., Uzoechina, B. V., & Ishiwu, *The Impact of Trade Liberalization on Manufacturing Value-Added in Nigeria*, **Saudi Journal of Business and Management Studies**, 2(5), 2017, 475-481.

Ebenyi, G. O., Nwanosike, D. U., Uzoechina, B., & Ishiwu, V., *The Impact of Trade Liberalization on Manufacturing Value-Added in Nigeria*, **Saudi Journal of Business and Management Studies**, 2(5A), 2018, 475 – 481.

Echekoba, F. Okonkwo, V. & Adigwe, P., *Trade Liberalization and Economic Growth: The Nigerian Experience (1971-2012)*, **Journal of Poverty, Investment and Development**, 14, 2005, 51-72.

Ekong, C. N., & Saliu, H. A., *Trade Liberalization And Manufacturing Sector Performance In Nigeria*, **The Journal of Developing Areas**, 41(2), 2008, 1-20.

Ekpenyong, D. B., *Trade Liberalization and the Nigerian Manufacturing Sector: An Econometric Investigation*, **The Nigerian Journal of Economic and Social Studies**, 42(3), 2000, 297-319.

Emerenini, F. M & Ohadinma, C. M., *Impact of Trade Liberalization on Manufacturing Output in Nigeria*, **International Journal of Research in Social Sciences**, 8(7), 2018, 87-107.

Gabriel, A. A., & David, A. O. (2021). *Effect of Trade Openness and Financial Openness on Economic Growth in Sub-Saharan African Countries*, **African Journal of Economic Review**, *9*(1), 2021, 109-130.

Gbosi, A. N. & Nweze, A. U., *Technology Transfer and Economic Growth in Nigeria: An Enpirical Appraisal*, **International Journal of Public Administration and Management Research**, 5(6), 2017, 71-84.

George, N., *Improving Agriculture in Nigeria through Public-Private Partnerships*. **African Journal of Business Management**, 13(8), 2019, 256–263.

Huchet-Bourdon, M., Le Mouël, C., & Vijil, M., *The Relationship between Trade Openness and Economic Growth: Some New Insights on the Openness Measurement Issue*, **The World Economy**, *41*(1), 2018, 59-76.

Iheanacho, E., ARDL *Approach to Trade Libralisation and Economic Growth in the Developing Country: Evidence from Nigeria*, **An International Multi-Disciplinary Journal, Ethiopia**, 11(2), 2017, 138-159.

Ishola, O. A., & Olusoji, M. O., *Service Sector Performance, Industry and Growth in Nigeria*, **International Journal of Service Science, Management, Engineering, and Technology (IJSSMET),** *11*(1), 2020, 31-45.

Ishola, O. A., *Inflation and Capacity Utilisation in Nigeria's Manufacturing Sector*, **African Journal of Economic Policy**, 20(1), 2013, 1-30.

Iwuchukwu J. C., & Igbokwe, E. M., *Lessons from Agricultural Policies and Programmes in Nigeria*. **Journal of Law, Policy and Globalization**, 5(11), 2012, 11-21.

Jayadi, A., & Aziz, H. A., *Comparative Advantage Analysis and Products Mapping of Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam Export Products*. **Journal of Developing Economies**, *2*(1), 2017, 12-27.

Kenneth, G. E. & Onyedikachi, P., *Short Term Modeling of the Nigerian Naira/United States Dollar Exchange Rate Using ARIMA Model*, **Sch J Phys Math Stat,** 1, 2021, 8-13.

Kolawole, O. D., *Agrarian Reforms and the African Green Revolution*. **World Journal of Science, Technology and Sustainable Development**, 9(4), 2012, 301 – 316.

Kong, Q., Peng, D., Ni, Y., Jiang, X., & Wang, Z., *Trade openness and economic growth quality of China: Empirical analysis using ARDL model*, **Finance Research Letters**, *38*, 2021, 101488.

Kpoghul, E. T, Okpe, I. J. & Anjande, G., *A Macro-Econometric Analysis of Trade Openness, Foreign Direct Investment and the Performance of the Nigerian Economy*, **Journal of Economics and Allied Research**, 4(3), 2020, 1-24.

Meludu, N. T., Elijah, B., Okanlawon, O. M. & Olanrewaju, P. O., *Perceived Effect of Agricultural Transformation Agenda on Livelihood of Cocoa Farmers in Osun State, Nigeria*, **Journal of**

Agricultural Extension , 21(2), 2017, 1 7 – 29.

Nwoke, E. I. *Manufacturing Sector and Economic Growth in Nigeria*, **Journal of Quality and Technology Management**, 13(2), 2017, 78-100.

Nwosu, N. I. A., *The State and Rural Development in Nigeria,* **Ufahamu: Journal of African Studies**, 18(3), 1990, 52-65.

Obiora, C. J., *Agricultural Transformation Agenda in Nigeria: How Prepared is the Technology Transfer-Sub System?* **Journal of Biology, Agriculture and Healthcare**, 4(2), 2014, 82-85.

Odularu, G. O., *Agricultural Trade Liberalization and Economic Growth in Nigeria: A Cointegration Approach*, **Economic and Financial Review**, 51(1), 2013, 47-60.

Ogborji, M. J., Contributions of the Service Sector to the Nigerian Economy, **European Journal of Business, Economics, and Accountancy**, 5(2), 2017, 63-73.

Ogundipe, A. A., Amaghionyeodiwe, L. A. & Adediran, O. S., *Trade Liberalization and the Performance of the Nigerian Services Sector*, **Journal of African Trade**, 4(1-2), 2017, 129-147.

Ojeyinka, T. A. & Adegboye, A. A., *Trade Liberalization and Economic Performance in Nigeria: Evidence from Agricultural and Manufacturing Sectors*. **African Journal of Economic Review**, 5(3), 2017, 1-14.

Olamade, O. O., Oyebisi, T. O. & S. O. Olabode, *"Strategic ICT-Use Intensity of Manufacturing Companies in Nigeria,"* **Journal of Asian Business Strategy**, 4(1), 2014, 1.

Olofin, S. M. & Okoye, P. V., *Challenges of Access to Finance by Small Businesses in Nigeria*, **Journal of Management and Business Studies**, 24(1), 2020, 205-218.

Olufemi, S. M., *Trade Openness and Economic Growth in Nigeria: Further Evidence on the Causality Issue*, **South African Journal of Economics and Management Science**, 7(2), 2004, 299-315.

Oluwatoyese, O. P. & Applanaidu, S. D., *Effect of Agricultural, Manufacturing and Services Sectors Performance in Nigeria, 1980-2011*, **Journal of Economics and Sustainable Development**, 4(20), 2013, 35–41.

Omonijo, D. O., Toluwase, S. W. O., Oludayo, O. A. & Uche, O. O. C., *Impacts of Agricultural Development Programme (ADP) on Rura Dwellers in Nigeria: A Study of Isan-Ekiti*, **International Research Journal of Finance and Economics**, 128(12), 2014, 41-55.

Ortaru, C. M., *The Skills Gap – A Major Challenge for the Industry 4.0 in the Manufacturing Sector*, **Annals of the University of Oradea, Economic Science Series**, 29(2), 2020, 325-332.

Osuagwu, E. S., & Olaifa, E., *Effects of Oil Spills on Fish Production in the Niger Delta*, **PloS one**, *13*(10), 2018, 1-14.

Osuji, G. A., Obubu, M. & Nwosu, C. A., *Stock Investment Decision in Nigeria*; *A PC Approach*, **World Journal of Multidisciplinary and Contemporary Research,** 2(1), 2016, 1-11.

Ou, K. A., *The Effect of Industrial Development on Economic Growth (An Empirical Evidence in Nigeria 1973–2013*), **Eur. J. Bus. Soc. Sci**, 4(02), 2015, 127-140.

Owoade, O. A., *Sustaining Agricultural Transformation in Nigeria: Challenges, Issues and Strategies.* **International Journal of Innovative Agriculture & Biology Research**, 7(4), 2019, 13-22

Oyebanji, O. A. & Arowolo, O. O., *Endogenous Growth and Development Nexus: Nigeria Experience*, **European Journal of Humanities and Social Sciences**, 13(1), 2011, 987- 1000.

Pinas, J., Wei, S., Oppong-Baah, T., Kim, E., Addai, M., Owusu, I., Gyamfi, E., Ofosu, D., Nsaful, A. A., Nketiah, E., Adjei, M., Asiamah, A. A. A., Boateng, F. A., Twi-Brempong, C., Fianko, S. K., Gyamerah, K. K. & Gyamerah, K. K., *Assessing a Causal Relationship between Foreign Direct Investment and Human Capital: The Case of the Netherlands*, **International Business Research**, *13*(1), 2020, 247-258.

Sadgui, R., & Benchekara, M., *Cooperation in Incremental Innovation Activities: An Empirical Analysis of Moroccan firms,* **International Journal of Service Science, Management, Engineering, and Technology (IJSSMET),** *9*(3), 2018, 48-61.

Salaam, M. & Ajayi, I. S., *Human Capital and Economic Growth in Nigeria: An Application of Endogenous Growth Model*, **Journal of Social Economics Research**, 3(3), 2017, 76-87.

Shobande, O. A., *Effect of Economic Integration on Agricultural Export Performance in Selected West African Countries*, **Economies**, 7(3), 2019, 1-14.

Siyakiya. P., *Can Trade Openness Stimulate Output Performance? A Case of Selected African Countries*, **Journal of International and Global Economic Studies**, 10(2), 2017, 55-67.

Sola, O. T., Obamuyi, M., Adekunjo, F. O. & Ogunleye, E., *Manufacturing Performance in Nigeria: Implication for Sustainable Development*, **Asian Economic and Financial Review**, 3(9), 2013, 1195.

Tahir, M., Estrada, M. R., Khan, I. & Afridi, M. A., *The Role of Trade Openness on Industrial Sector Development: Panel Data Evidence from SAARC Region*, **Journal of Asia Business Studies**, 10(1), 2015, 93-103.

Udah, E. B., Anyanwu, J. C. & Aham-Neze, C., *Foreign Direct Investment and the Performance of*

the Nigerian Service Sector, **African Development Review**, 28(3), 2016, 345- 357.
Umoh, O. J. & Effiong, E. L. *Trade Openness And Manufacturing Sector Performance In Nigeria*, **The Journal of Applied Economic Research**, 7(2), 2013, 147–169.

Verter, N., *Analysis of External Influences on Agricultural Performance in Nigeria*, **Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis**, *64*(5), 2016, 1805- 1821.

W. Adekunle., E. Bamiro, & S.A. Oloyede, *Trade Liberalization and Competition among Service Firms in Nigeria*, **International Journal of Trade, Economics, and Finance**, 10(1), 2019, 15-20.

West African Financial and Economic Review, 17(2), 73-93

Yakubu, M. M. & Akanegbu, B. N., *Trade openness and economic growth: Evidence from Nigeria*, **European Journal of Business, Economics and Accountancy**, 6(4), 2018, 30-44.

Yusuf, M. Malarvizhi, C. A. & Khin, A. A., *Trade Liberalization Economic Growth and Poverty Reduction in Nigeria*, **International Journal of Business and Management**, 8(12), 2013, 42-4

Zahonogo, P., *Trade and Economic Growth in Developing Countries: Evidence from Sub-Saharan Africa*, **Journal of African Trade**, *3*(1), 2017, 1-16.

Periodical Articles

McCulloch, N., Balchin, N., Mendez-Parra, M., & Onyeka, K., *Local Content Policies and Backward Integration in Nigeria*, ODI SET Paper, 2017. *https://set. odi. org/local-content-backwardintegration-in-nigeria*..

Reports

Central Bank of Nigeria Statistical Bulletin, 2018.

Central Bank of Nigeria, *Annual Report and Statement of Account for the Year Ended, 31st December, Abuja*, 2019.

Central Bank of Nigeria. Statistical Bulletin:2019

Federal Government of Nigeria, *Report of the Vision 2010 Committee: Economic sectors and issues, Abuja: Vision 2010 Committee*, 2001.

National Bureau of Statistics, 2008.

Nigeria Bureau of Statistics, 2020

World Bank, Nigeria, 2019.

Textbooks

Adenikinju, A. F., *Trade Liberalization, Investment Climate, and Sectoral Performance in Nigeria*, African Economic Research Consortium. 2003.

Adesugba, M. & Mavrotas, G., *Youth Employment, Agricultural Transformation, and Rural Labor Dynamics in Nigeria*. IFPRI Discussion Paper 1579. Washington, D.C.: International Food Policy Research Institute (IFPRI), 2016.

Ajakaiye, O. Jerome, A.T. Nabena, D. & Alaba, O. A., *Understanding the Relationship between Growth and Employment in Nigeria*. WIDER, 2016.

Ajakaiye, O., Jerome, A. T., Nabena, D., & Alaba, O. A., *Understanding the Relationship between Growth and Employment in Nigeria* (No. 2015/124). WIDER Working Paper, 2015.

Ayodele, A. I. & Falokun, G. *The Nigerian Economy: Structure and Pattern of Development*, JODAD Publishers, 2003.

Ayodele, A. S., & Falokun, G. O., *The Nigerian Economy: Structure and Pattern of Development*. JODAD, 2003

Bobek, V., *Trade and Global Market*, Intech Open, 2018.

Cali, E. & teVelde, W., The Contribution of Services to Development and The Role of Trade Liberalisation and Regulation ODI Briefing Notes. UK: DFID, 2008.

D. A. DeRosa, *Regional Integration Arrangements: Static Economic Theory, Quantitative Findings and Policy Guidelines*, World Bank, Development Research Group, Policy Research Working Paper No. 2012, 2012.

D. O'Brien, *The Mercantilist Perspective: An Economic and Political Analysis*, Routledge, 1994.

Dodzin, S. & Vamvakidis, A., *Trade and Industrialization in Developing Agricultural Economies (No. 1999/145)*, International Monetary Fund, 1999.

Ehigiator, B. (2017). *The Service Sector in Nigeria: An Escalator for New Economic Growth*, School of Economics and Management, 2017.

Ekaette, U. J., *Development Challenges in the Niger Delta and the implications for the Nigeria Economy*, Port Harcourt: PANAM Nigeria Publishers, 2009

Erick, O. H., *Nigeria's Services Economy: The Engine for Future Growth*, USITC, 2017.

Federal Ministry of Agriculture and Rural Development (FMARD), *The Agriculture Promotion Policy (2016 – 2020) Building on the Successes of the ATA, Closing Key Gaps*. Federal Ministry of

Agriculture and Rural Development, 2016.

Fongang, T., Martial, G. Bergaly, K. C. & Christian, L.T., *Does Trade Openness Affect Manufacturing Growth in EMCCA Countries? A Panel Co-Integration Analysis*, Munich Personal RePEc Archive (MPRA), Paper No. 83747, 2017.

Ghattak, S. *Development Economics*, Longman: Suffolk, 1978.

Gujaraji, D. N. & Porter, W. C., Basic Econometrics. (5th ed.). New York: McGraw Hill, 2009.

Kolter, P., Armstrong, G., Wong, V. & Saunders. *Principles of Marketing*, Prentice Hall, 2008.

M. Iyoha & L. Oriakhi, *'Explained African Economic Growth Performance: The c Nigeria'*. African Economic Research Consortium, Nairobi. 2012.
McKinnon, R. I., *Money and Capital in Economic Development*. Brookings Institution Press, 2010.

N. Singh, *Services-led industrialization in India: Assessment and lessons*. *In Industrial Development for the 21st Century: Sustainable Development Perspectives*, 235-291, Academic Press, 2006.

National Association of Nigerian Traders (NANTS), *Fact sheet-on-agriculture- promotion policy*. National Association of Nigerian Traders: Plot 19 Dan Suleiman Street, Utako Abuja, 2018.

Nnadozie, O. O., & Joshua, R., *Trade and unemployment: Evidence from Nigeria*, 2017.

Offu, A. K., *The Nigerian Dependent Management and Leadership Development in the Post World War II Colonial Nigeria*. Author House Publishers, Bloomington, Indiana, United States, 2013.

Ogujiuba, K. K., Oji, G. O. & Adenuga, *Is "Trade" Openness Valid for Nigeria's Long Run Growth: A Co integration Approach"* A Paper Presented to the USAID- Nigeria, 2014

Ogunniyi, A. M., Joel, O. N. & Ogunniyi, L. T., *Trade Liberalization, Agricultural Productivity and Poverty Reduction in Nigeria*, Resource Use Efficiency in Agriculture, 2012.

Olomola, A. S., Trade liberalization and the agricultural sector in Nigeria (No.7). African Economic Research Consortium, 2006.

Oyejide, T. A. & Bankole, A. S., *Liberalisation of the Services Sector in Nigeria: Implications of Unilateral and Multilateral Approaches*, *Paper Prepared for the African Economic Research Consortium on Services Sector Liberalization in Nigeria*, Academic Press, 2001.

Ricardo, D., On the Principles of Political Economy and Taxation, 1817.

Rooberts, B., Ekelund, Jr., Robert, D. & Tollison, *Mercantilism as Strategic Trade Policy: The*

Anglo-Dutch Rivalry for the East India Trade, Springer, 2015.

Smith, A., The Wealth of Nations, 1776.

WTO*, Economic Effects of Services Liberalization, Geneva: Background Note by the Secretariat,* 1997.

Thesis/Dissertation (Unpublished)

Akims, K. A., (2017). Trade Liberalization and Performance of the Manufacturing Sector in Nigeria (Doctoral Dissertation). School of Economics, Kenyatta University, Kenya, 2017.

Ani, A., *Assessment of the Commercial Agriculture Development Project in Enugu State, Nigeria*, Unpublished Ph.D Thesis, Department of Agricultural Extension, University of Nigeria, Nsukka, 2013.

Bongsha, B., *The Impact of Trade Liberalization on the Manufacturing Sector in Cameroon (Doctoral Dissertation),* Department of Economics, North-West University, Potchefstroom, 2011.

Chibuzo, A. G., Trade Openness and Manufacturing Sector Growth: An Empirical Analysis for Nigeria (Master's Thesis). Department of Economics, Federal University of Technology, Owerri, 2017.

Websites

Action Aid, The Agriculture Promotion Policy: For smallholder women farmers, 2018. Available at https://nesgroup.org/storage/app/public/policies/Simplified-Version-of-APP- for-Smallholder-Women-Farmers_1562696401.pdf (Accessed on 21/02/2021).

Akande J., *Boosting Nigeria's Tourism Sector through Effective Marketing,* 2020. Available Online: https://www.proshareng.com/news/TOURISM/Boosting-Nigeria-s- tourism-sector-through-effective-marketing/53974

Business Day, *Nigeria's Financial Services Sector to Witness Growth In 2021,* 2021. Available Online: https://businessday.ng/2021/02/nigerias-financial-services-sector-to- witness-growth-in-2021/

Central Bank of Nigeria, *Manufacturing Sector Survey Report* 2018, 2019. Available online:https://www.cbn.gov.ng/Out/2019/MPD/MANUFACTURING%20SECTOR%20SURVEY%202018.

Industrial Training Fund: www.itf.gov.ng

Ministry of Communications and Digital Economy:

www.communication.gov.ng

National MSME Development Council: www.msmedc.ng

Nigerian Manufacturers Association, *Presidential Policy Dialogue on the Manufacturing Sector in Nigeria*, 2019. Available Online: https://manufacturersnigeria.org/wp-content/uploads/2020/04/PRESIDENTIAL-POLICY-DIALOGUE-2019.pdf

Nigerian Infrastructure Concession Regulatory Commission: www.icrc.gov.ng

Omokhua. A. (2021). Nigeria's healthcare sector: A multi-billion-dollar opportunity. Available Online: https://businessday.ng/opinion/article/nigerias-healthcare-sector-a-multi- billion-dollar-opportunity/

Presidential Enabling Business Environment Council: pebec.gov.ng

S. Olawale, *Growth of Nigeria's ICT sector amid COVID-19*, 2020. Available Online: https://businessday.ng/technology/article/growth-of-nigerias-ict-sector-amid-covid-19/

The Nigerian Tourism Development Corporation: www.tournigeria.gov.ng

United Nations Economic Commission for Africa, Trade Liberalization in Africa: Experiences and Current Challenges, 2015. AvailableOnline: https://www.uneca.org/sites/default/files/PublicationFiles/trade_liberalisation_in_africa_en.pdf

World Bank, Nigeria – Overview, 2020. Available online: http://www.worldbank.org/en/country/nigeria/overview.

World Bank, *World Bank Development Indicators*, 2012. Available at: http://data.worldbank.org. (accessed 04/10/2021).

www.nipc.gov.ng](http://www.nipc.gov.ng/

APPENDIX

ARDL Bounds Test

Date: 11/21/23 Time: 08:39

Sample: 1990 2021

Included observations: 32

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	6.673153	4

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

ARDL Cointegrating And Long Run Form

Dependent Variable: MAN

Selected Model: ARDL(2, 4, 2, 4, 0)

Date: 11/21/23 Time: 08:38

Sample: 1986 2022

Included observations: 32

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Δ (MAN(-1))	0.417993	0.229983	1.817495	0.0892
Δ (TRADE)	-0.134875	0.054520	-2.473878	0.0258
Δ (TRADE(-1))	0.008133	0.034779	0.233846	0.8183
Δ (TRADE(-2))	0.112325	0.031240	3.595512	0.0026
Δ (TRADE(-3))	0.027576	0.013778	2.001437	0.0638
Δ (LABOUR)	-2.992363	1.933981	-1.547255	0.1426
Δ (LABOUR(-1))	-5.550936	1.908591	-2.908395	0.0108
Δ (INF)	-0.073461	0.170484	-0.430896	0.6727
Δ (INF)	0.493836	0.270546	1.825331	0.0879

Δ (INF)	-0.843126	0.278356	-3.028952	0.0085
Δ (INF)	0.360569	0.159588	2.259369	0.0392
Δ (GFCF)	-0.014733	0.116612	-0.126339	0.9011
CointEq(-1)	-1.529247	0.290597	-5.262431	0.0001

Cointeq = MAN - (-0.2418*TRADE -0.7425*LABOUR + 0.0968*INF -0.0096 *GFCF + 47.2607)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TRADE	-0.241805	0.080718	-2.995660	0.0091
LABOUR	-0.742476	0.652733	-1.137489	0.2732
INF	0.096842	0.149840	0.646298	0.5279
GFCF	-0.009634	0.076414	-0.126077	0.9013
C	47.260691	37.846551	1.248745	0.2309

Dependent Variable: MAN

Method: ARDL

Date: 11/21/23 Time: 08:40

Sample (adjusted): 1990 2021

Included observations: 32 after adjustments

Maximum dependent lags: 4 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (4 lags, automatic): TRADE LABOUR INF

GFCF

Fixed regressors: C

Number of models evalulated: 2500

Selected Model: ARDL(2, 4, 2, 4, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
MAN(-1)	-0.111254	0.197920	-0.562119	0.5823
MAN(-2)	-0.417993	0.229983	-1.817495	0.0892
TRADE	-0.134875	0.054520	-2.473878	0.0258
TRADE(-1)	-0.086869	0.052288	-1.661370	0.1174
TRADE(-2)	-0.008133	0.034779	-0.233846	0.8183
TRADE(-3)	-0.112325	0.031240	-3.595512	0.0026
TRADE(-4)	-0.027576	0.013778	-2.001437	0.0638
LABOUR	-2.992363	1.933981	-1.547255	0.1426
LABOUR(-1)	-3.694003	2.925869	-1.262532	0.2260
LABOUR(-2)	5.550936	1.908591	2.908395	0.0108
INF	-0.073461	0.170484	-0.430896	0.6727
INF(-1)	0.232835	0.299769	0.776715	0.4494
INF(-2)	-0.493836	0.270546	-1.825331	0.0879
INF(-3)	0.843126	0.278356	3.028952	0.0085
INF(-4)	-0.360569	0.159588	-2.259369	0.0392
GFCF	-0.014733	0.116612	-0.126339	0.9011
C	72.27329	64.82843	1.114839	0.2825

R-squared	0.801972	Mean dependent var	2.279694
Adjusted R-squared	0.590742	S.D. dependent var	9.010014

S.E. of regression	5.764000	Akaike info criterion	6.645955
Sum squared resid	498.3554	Schwarz criterion	7.424627
Log likelihood	-89.33527	Hannan-Quinn criter.	6.904062
F-statistic	3.796680	Durbin-Watson stat	1.854088
Prob(F-statistic)	0.006651		

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.345067	Prob. F(2,13)	0.7145
Obs*R-squared	1.613155	Prob. Chi-Square(2)	0.4464

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.497565	Prob. F(16,15)	0.9113
Obs*R-squared	11.09503	Prob. Chi-Square(16)	0.8036
Scaled explained SS	4.274873	Prob. Chi-Square(16)	0.9983

SERVICE

ARDL Bounds Test

Date: 11/21/23 Time: 08:48

Sample: 1989 2021

Included observations: 28

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	K
F-statistic	4.397950	5

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18

1%	3.41	4.68

ARDL Cointegrating And Long Run Form

Dependent Variable: SERVICE

Selected Model: ARDL(2, 0, 2, 3, 1, 3)

Date: 11/21/23 Time: 08:49

Sample: 1986 2022

Included observations: 28

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Δ (SERVICE(-1))	-0.380884	0.168329	-2.262737	0.0449
Δ (TRADE)	-0.012170	0.011712	-1.039134	0.3210
Δ (LABOUR)	1.608715	1.144614	1.405466	0.1875
Δ (LABOUR(-1))	-1.999444	1.325486	-1.508461	0.1596
Δ (EXC)	-0.166084	0.063938	-2.597572	0.0248
Δ (EXC(-1))	0.051803	0.092658	0.559077	0.5873
Δ (EXC(-2))	-0.104885	0.069768	-1.503344	0.1609
Δ (GFCF)	-0.206079	0.069270	-2.974989	0.0126
Δ (PRIMARY)	0.503604	0.202078	2.492124	0.0299

Δ (PRIMARY(-1))	0.238270	0.286321	0.832176	0.4230
Δ (PRIMARY(-2))	-0.778088	0.266831	-2.916030	0.0140
CointEq(-1)	-0.966023	0.211196	-4.574058	0.0008

Cointeq = SERVICE - (-0.0126*TRADE -0.0373*LABOUR + 0.0257*EXC

-0.2901*GFCF + 0.6339*PRIMARY -47.4963)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TRADE	-0.012598	0.012144	-1.037389	0.3218
LABOUR	-0.037257	0.788206	-0.047268	0.9631
EXC	0.025659	0.010650	2.409416	0.0347
GFCF	-0.290150	0.130335	-2.226183	0.0478
PRIMARY	0.633930	0.161641	3.921842	0.0024
C	-47.496262	46.752937	-1.015899	0.3315

Dependent Variable: SERVICE

Method: ARDL

Date: 11/21/23 Time: 08:50

Sample (adjusted): 1989 2021

Included observations: 28 after adjustments

Maximum dependent lags: 3 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (3 lags, automatic): TRADE LABOUR EXC

GFCF

PRIMARY

Fixed regressors: C

Number of models evalulated: 3072

Selected Model: ARDL(2, 0, 2, 3, 1, 3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
SERVICE(-1)	-0.346907	0.190296	-1.822988	0.0956
SERVICE(-2)	0.380884	0.168329	2.262737	0.0449

TRADE	-0.012170	0.011712	-1.039134	0.3210
LABOUR	1.608715	1.144614	1.405466	0.1875
LABOUR(-1)	-3.644150	1.755661	-2.075658	0.0622
LABOUR(-2)	1.999444	1.325486	1.508461	0.1596
EXC	-0.166084	0.063938	-2.597572	0.0248
EXC(-1)	0.137789	0.090456	1.523279	0.1559
EXC(-2)	-0.051803	0.092658	-0.559077	0.5873
EXC(-3)	0.104885	0.069768	1.503344	0.1609
GFCF	-0.206079	0.069270	-2.974989	0.0126
GFCF(-1)	-0.074212	0.062816	-1.181435	0.2623
PRIMARY	0.503604	0.202078	2.492124	0.0299
PRIMARY(-1)	-0.431032	0.253091	-1.703072	0.1166
PRIMARY(-2)	-0.238270	0.286321	-0.832176	0.4230
PRIMARY(-3)	0.778088	0.266831	2.916030	0.0140
C	-45.88246	44.33272	-1.034957	0.3229

R-squared	0.867353	Mean dependent var	6.068387
Adjusted R-squared	0.674411	S.D. dependent var	5.308103
S.E. of regression	3.028825	Akaike info criterion	5.334203
Sum squared resid	100.9116	Schwarz criterion	6.143042
Log likelihood	-57.67885	Hannan-Quinn criter.	5.581473
F-statistic	4.495414	Durbin-Watson stat	2.882105
Prob(F-statistic)	0.007728		

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	4.594838	Prob. F(2,9)	0.0422
Obs*R-squared	14.14599	Prob. Chi-Square(2)	0.0008

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.533996	Prob. F(16,11)	0.8767
Obs*R-squared	12.24064	Prob. Chi-Square(16)	0.7273
Scaled explained SS	1.649543	Prob. Chi-Square(16)	1.0000

ARDL Bounds Test
Date: 11/21/23 Time: 08:39
Sample: 1990 2021
Included observations: 32

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	6.673153	4

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Dependent Variable: MANUFACTURING

Method: ARDL

Date: 11/21/23 Time: 08:40

Sample (adjusted): 1990 2021

Included observations: 32 after adjustments

Maximum dependent lags: 4 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (4 lags, automatic): TRADE LABOUR INF

GFCF

Fixed regressors: C

Number of models evalulated: 2500

Selected Model: ARDL(2, 4, 2, 4, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
MAN(-1)	-0.111254	0.197920	-0.562119	0.5823
MAN(-2)	-0.417993	0.229983	-1.817495	0.0892
TRADE	-0.134875	0.054520	-2.473878	0.0258
TRADE(-1)	-0.086869	0.052288	-1.661370	0.1174

TRADE(-2)	-0.008133	0.034779	-0.233846	0.8183
TRADE(-3)	-0.112325	0.031240	-3.595512	0.0026
TRADE(-4)	-0.027576	0.013778	-2.001437	0.0638
LABOUR	-2.992363	1.933981	-1.547255	0.1426
LABOUR(-1)	-3.694003	2.925869	-1.262532	0.2260
LABOUR(-2)	5.550936	1.908591	2.908395	0.0108
INF	-0.073461	0.170484	-0.430896	0.6727
INF(-1)	0.232835	0.299769	0.776715	0.4494
INF(-2)	-0.493836	0.270546	-1.825331	0.0879
INF(-3)	0.843126	0.278356	3.028952	0.0085
INF(-4)	-0.360569	0.159588	-2.259369	0.0392
GFCF	-0.014733	0.116612	-0.126339	0.9011
C	72.27329	64.82843	1.114839	0.2825

R-squared	0.801972	Mean dependent var	2.279694
Adjusted R-squared	0.590742	S.D. dependent var	9.010014
S.E. of regression	5.764000	Akaike info criterion	6.645955
Sum squared resid	498.3554	Schwarz criterion	7.424627
Log likelihood	-89.33527	Hannan-Quinn criter.	6.904062
F-statistic	3.796680	Durbin-Watson stat	1.854088
Prob(F-statistic)	0.006651		

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.345067	Prob. F(2,13)	0.7145
Obs*R-squared	1.613155	Prob. Chi-Square(2)	0.4464

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.497565	Prob. F(16,15)	0.9113
Obs*R-squared	11.09503	Prob. Chi-Square(16)	0.8036
Scaled explained SS	4.274873	Prob. Chi-Square(16)	0.9983

SERVICE

ARDL Bounds Test
Date: 11/21/23 Time: 08:48
Sample: 1989 2021
Included observations: 28
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	K
F-statistic	4.397950	5

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

ARDL Cointegrating And Long Run Form
Dependent Variable: SERVICE

Selected Model: ARDL(2, 0, 2, 3, 1, 3)
Date: 11/21/23 Time: 08:49
Sample: 1986 2022
Included observations: 28

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SERVICE(-1))	-0.380884	0.168329	-2.262737	0.0449
D(TRADE)	-0.012170	0.011712	-1.039134	0.3210
D(LABOUR)	1.608715	1.144614	1.405466	0.1875
D(LABOUR(-1))	-1.999444	1.325486	-1.508461	0.1596
D(EXC)	-0.166084	0.063938	-2.597572	0.0248
D(EXC(-1))	0.051803	0.092658	0.559077	0.5873
D(EXC(-2))	-0.104885	0.069768	-1.503344	0.1609
D(GFCF)	-0.206079	0.069270	-2.974989	0.0126
D(PRIMARY)	0.503604	0.202078	2.492124	0.0299
D(PRIMARY(-1))	0.238270	0.286321	0.832176	0.4230
D(PRIMARY(-2))	-0.778088	0.266831	-2.916030	0.0140
CointEq(-1)	-0.966023	0.211196	-4.574058	0.0008

Cointeq = SERVICE - (-0.0126*TRADE -0.0373*LABOUR + 0.0257*EXC
-0.2901*GFCF + 0.6339*PRIMARY -47.4963)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TRADE	-0.012598	0.012144	-1.037389	0.3218
LABOUR	-0.037257	0.788206	-0.047268	0.9631
EXC	0.025659	0.010650	2.409416	0.0347
GFCF	-0.290150	0.130335	-2.226183	0.0478
PRIMARY	0.633930	0.161641	3.921842	0.0024
C	-47.496262	46.752937	-1.015899	0.3315

Dependent Variable: SERVICE
Method: ARDL
Date: 11/21/23 Time: 08:50
Sample (adjusted): 1989 2021
Included observations: 28 after adjustments
Maximum dependent lags: 3 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (3 lags, automatic): TRADE LABOUR EXC GFCF PRIMARY
Fixed regressors: C
Number of models evalulated: 3072
Selected Model: ARDL(2, 0, 2, 3, 1, 3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
SERVICE(-1)	-0.346907	0.190296	-1.822988	0.0956
SERVICE(-2)	0.380884	0.168329	2.262737	0.0449
TRADE	-0.012170	0.011712	-1.039134	0.3210
LABOUR	1.608715	1.144614	1.405466	0.1875
LABOUR(-1)	-3.644150	1.755661	-2.075658	0.0622
LABOUR(-2)	1.999444	1.325486	1.508461	0.1596
EXC	-0.166084	0.063938	-2.597572	0.0248
EXC(-1)	0.137789	0.090456	1.523279	0.1559
EXC(-2)	-0.051803	0.092658	-0.559077	0.5873
EXC(-3)	0.104885	0.069768	1.503344	0.1609
GFCF	-0.206079	0.069270	-2.974989	0.0126
GFCF(-1)	-0.074212	0.062816	-1.181435	0.2623
PRIMARY	0.503604	0.202078	2.492124	0.0299
PRIMARY(-1)	-0.431032	0.253091	-1.703072	0.1166
PRIMARY(-2)	-0.238270	0.286321	-0.832176	0.4230
PRIMARY(-3)	0.778088	0.266831	2.916030	0.0140
C	-45.88246	44.33272	-1.034957	0.3229

R-squared	0.867353	Mean dependent var	6.068387

Adjusted R-squared	0.674411	S.D. dependent var	5.308103
S.E. of regression	3.028825	Akaike info criterion	5.334203
Sum squared resid	100.9116	Schwarz criterion	6.143042
Log likelihood	-57.67885	Hannan-Quinn criter.	5.581473
F-statistic	4.495414	Durbin-Watson stat	2.882105
Prob(F-statistic)	0.007728		

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	4.594838	Prob. F(2,9)	0.0422
Obs*R-squared	14.14599	Prob. Chi-Square(2)	0.0008

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.533996	Prob. F(16,11)	0.8767
Obs*R-squared	12.24064	Prob. Chi-Square(16)	0.7273
Scaled explained SS	1.649543	Prob. Chi-Square(16)	1.0000

Table 4.1.1: Descriptive statistics

	AGRIC	TRADE	LABOUR	INF	GFCF	PRIMARY
Mean	5.88	-4.73	59.55	20.04	2.058	89.13
Median	4.01	3.38	60.29	12.94	2.61	88.22
Maximum	55.57	281.43	60.71	72.83	-23.75	100.18
Minimum	-3.19	-639.57	55.27	17.91	-23.75	76.46
Std. Dev.	9.123	124.53	1.54	17.91	12.18	6.42
Skewness	4.92	-3.68	-1.42	1.65	0.34	6.42

Kurtosis	27.52	21.98	3.78	4.38	4.90	2.04
Jarque-Bera	989.20	587.20	12.25	18.19	5.77	1.50
Probability	0.000000	0.000000	0.02184	0.000112	0.055848	0.471677
Sum	200.03	-160.70	2024.81	681.41	69.97	3030.30

Source: Author's Computation (2023)

Table **4.2.1: Correlation matrix for model I**

	AGRIC	TRADE	LABOUR	INF	GFCF	PRIMARY
AGRIC	1					
TRADE	-0.087	1				
LABOUR	0.13	-0.08	1			
INF	-0.088	0.32	0.32	1		
GFCF	0.16	-0.03	-0.04	-0.06	1	
PRIMARY	0.26	-0.11	0.27	-0.04	0.08	

Source: Author's Computation (2023)

4.3.1: Unit root test result

Variable	ADF Test Statistic at level (I_0)	ADF Test Statistic at first difference (I_1)	Decision value
AGRIC	-5.71	----------	1(0)
EXC	-2.27	-3.87	1(1)
GFCF	-10.27	----------	1(0)
MANU	-5.92	----------	1(0)

INF	-3.42	----------	1(0)
PRIMARY	-3.04	-3.27	1(1)
SERVICE	-1.72	-10.21	1(1)
TRADE	-3.21	----------	1(0)
CRITICAL VALUE	-2.96	-3.02	1(1)

Source: Author's Computation (2023)

Table: Effect of trade liberalization on agricultural sector performance in Nigeria.

Dependent Variable: AGRICULTURE				
Variable	Coefficient	Standard Error	T-Statistics	Probability
LONG RUN ESTIMATES				
TRADE	0.02	0.01	2.24	0.06
LABOUR	-1.02	0.41	-2.50	0.04
INF	-0.44	0.07	-6.31	0.00
GFCF	-1.42	0.19	-7.45	0.00
PRIMARY	0.63	0.09	7.15	0.00
EC=AGRIC-(0.02*TRADE-1.05*LABOUR-0.44*INF-1.42*GFCF0.63*PRIMARY)				
ΔSHORT RUN ESTIMATES				
C	84.41	4.86	17.38	0.00

@TREND	-1.401	0.09	-14.71	0.00
Δ(AGRIC(-1)	1.40	0.11	9.35	0.00
Δ(AGRIC(-2)	0.51	0.07	7.59	0.00
Δ(LABOUR)	2.11	0.94	0.24	0.07
Δ(LABOUR(-1)	4.43	1.00	4.42	0.00
Δ(LABOUR(-2)	-2.00	0.92	-2.18	0.70
Δ(INF)	-0.70	0.06	-11.29	0.00
Δ(INF(-1))	0.37	0.04	8.17	0.00
Δ(GFCF)	-0.86	0.09	-9.25	0.00
Δ(GFCF)-1)	1.37	0.10	13.56	0.00
Δ(GFCF)(-2)	0.49	0.06	7.89	0.00
Δ(PRIMARY)	0.84	0.16	5.29	0.00
Δ(PRIMARY)(-1)	0.26	0.17	1.50	0.18
Δ(PRIMARY)(-2)	-0.33	0.17	-1.87	0.10
CointEq(-1)*	-2.43	0.13	-18.10	0.00

$R^2 = 0.98$	Adjusted R^2. = 0.96
S.E of regression = 2.81	Sum of squared residual = 94.43
Log likelihood = -56.75	F-statistic = 42.51
Prob(F-statistic) = 0.00	Mean dependent variation = -0.27
S.D.dependent var = 13.76	Akaike info criterion = 5.19
Schwarz criterion = 5.95	Hannan-Quin criterion = 5.43
D.W. Statistics = 2.52	

Source: Author's Computation (2023)

	MANU.	TRADE	PRIMARY	LABOUR	GFCF	EXC
MEAN	1.65	-4.73	89.13	59.55	2.06	128.94
MEDIAN	1.82	3.38	88.22	60.29	2.61	127.22
MAXIMUM	18.05	281.43	100.18	60.71	40.39	401.15
MINIMUM	-8.85	-639.57	76.46	55.27	-23.75	1.75
STD.DEV.	5.71	124.53	6.42	1.54	12.18	109.61
SKEWNESS	0.55	-3.68	0.19	-1.42	0.34	0.79
KURTOSIS	3.49	21.98	2.04	3.78	4.90	2.93
JARQUE-BERA	2.04	587.20	1.50	12.25	5.77	3.54
PROB.	0.36	0.00	0.47	0.00	0.06	0.17
SUM	56.24	-160.70	3030.30	2024.81	69.98	4384.11

Source: Author's Computation (2023)

Correlation matrix for model II

	MANUFACTURING	TRADE	PRIMARY	LABOUR	GFCF	EXC
MANUFACTURING	1					
TRADE	0.11	1				
PRIMARY	-0.12	-0.11	1			
LABOUR	0.14	-0.06	0.27	1		
GFCF	0.24	-0.03	0.08	-0.04	1	
EXC	-0.17	0.14	-0.22	-0.62	-0.05	1

Source: Author's Computation (2023)

Effect of trade liberalization on Manufacturing sector performance in Nigeria.

Variable	Coefficient	Standard Error	T-Statistics	Probability
SHORT RUN ESTIMATES				
Δ (MAN(-1))	0.417993	0.229983	1.817495	0.0892
Δ (TRADE)	-0.134875	0.054520	-2.473878	0.0258
Δ (TRADE(-1))	0.008133	0.034779	0.233846	0.8183
Δ (TRADE(-2))	0.112325	0.031240	3.595512	0.0026
Δ (TRADE(-3))	0.027576	0.013778	2.001437	0.0638
Δ (LABOUR)	-2.992363	1.933981	-1.547255	0.1426
Δ (LABOUR(-1))	-5.550936	1.908591	-2.908395	0.0108
Δ (INF)	-0.073461	0.170484	-0.430896	0.6727
Δ (INF)-1))	0.493836	0.270546	1.825331	0.0879
Δ (INF)-2))	-0.843126	0.278356	-3.028952	0.0085
Δ (INF)-3))	0.360569	0.159588	2.259369	0.0392
Δ (GFCF)	-0.014733	0.116612	-0.126339	0.9011
CointEq(-1)	-1.529247	0.290597	-5.262431	0.0001
Cointeq = MAN - (-0.2418*TRADE -0.7425*LABOUR + 0.0968*INF -0.0096 *GFCF + 47.2607)				

LONG RUN ESTIMATES

Variable	Coefficient	Standard Error	T-Statistics	Probability
TRADE	-0.241805	0.080718	-2.995660	0.0091
LABOUR	-0.742476	0.652733	-1.137489	0.2732
INF	0.096842	0.149840	0.646298	0.5279
GFCF	-0.009634	0.076414	-0.126077	0.9013
C	47.260691	37.846551	1.248745	0.2309

R-squared	0.801972	Mean dependent var	2.279694
Adjusted R-squared	0.590742	S.D. dependent var	9.010014
S.E. of regression	5.764000	Akaike info criterion	6.645955
Sum squared resid	498.3554	Schwarz criterion	7.424627
Log likelihood	-89.33527	Hannan-Quinn criter.	6.904062
F-statistic	3.796680	Durbin-Watson stat	1.854088
Prob(F-statistic)	0.006651		

Effect of trade liberalization on service sector performance in Niigeria.

	TRADE	PRIMARY	LABOUR	GFCF	EXC	SERVICE
Mean	--4.73	89.13	59.55	2.06	128.94	5.77
Median	3.38	88.22	60.29	2.61	127.22	4.30
Maximum	281.43	100.19	60.71	40.39	401.15	19.99
Minimum	-639.57	76.46	55.27	-23.75	1.75	-2.22
Std. Dev.	124.53	6.42	1.54	12.18	109.60	4.89
Skewness	-3.68	0.19	-1.41	0.34	0.79	0.89
Kurtosis	21.98	2.04	3.78	4.90	2.93	3.48
Jarque-Bera	587.20	1.50	12.25	5.77	3.54	4.83
Probability	0.000000	0.47	0.00	0.06	0.17	0.09
Sum	-160.70	3030.30	2024.81	69.98	4384.11	196.09

Source: Author's Computation (2023)

Correlation matrix for model III

	TRADE	PRIMARY	LABOUR	GFCF	EXC	
TRADE	1					
PRIMARY	-0.11	1				
LABOUR	-0.08	0.27	1			
GFCF	-0.03	0.08	-0.04	1		
EXC	0.14	-0.23	-0.62	-0.05	1	
SERVICE	-0.01	0.34	0.21	-0.00	-0.12	

Source: Author's Computation (2023)

Variable	Coefficient	Standard Error	T-Statistics	Probability
Δ SHORT RUN ESTIMATE				
Δ (SERVICE(-1))	-0.380884	0.168329	-2.262737	0.0449
Δ (TRADE)	-0.012170	0.011712	-1.039134	0.3210
Δ (LABOUR)	1.608715	1.144614	1.405466	0.1875
Δ (LABOUR(-1))	-1.999444	1.325486	-1.508461	0.1596
Δ (EXC)	-0.166084	0.063938	-2.597572	0.0248
Δ (EXC(-1))	0.051803	0.092658	0.559077	0.5873
Δ (EXC(-2))	-0.104885	0.069768	-1.503344	0.1609
Δ (GFCF)	-0.206079	0.069270	-2.974989	0.0126
Δ (PRIMARY)	0.503604	0.202078	2.492124	0.0299
Δ (PRIMARY(-1))	0.238270	0.286321	0.832176	0.4230
Δ (PRIMARY(-2))	-0.778088	0.266831	-2.916030	0.0140
CointEq(-1)	-0.966023	0.211196	-4.574058	0.0000

Cointeq = SERVICE - (-0.0126*TRADE -0.0373*LABOUR + 0.0257*EXC

-0.2901*GFCF + 0.6339*PRIMARY -47.4963)

Variable	Coefficient	Standard Error	T-Statistics	Probability
LONG RUN ESTIMATE.				
TRADE	-0.012598	0.012144	-1.037389	0.3218
LABOUR	-0.037257	0.788206	-0.047268	0.9631
EXC	0.025659	0.010650	2.409416	0.0347
GFCF	-0.290150	0.130335	-2.226183	0.0478
PRIMARY	0.633930	0.161641	3.921842	0.0024
C	-47.496262	46.752937	-1.015899	0.3315

R^2	0.867353	Mean dependent var	6.068387
Adjusted R^2	0.674411	S.D. dependent var	5.308103
S.E. of regression	3.028825	Akaike info criterion	5.334203
Sum squared resid	100.9116	Schwarz criterion	6.143042
Log likelihood	-57.67885	Hannan-Quinn criter.	5.581473
F-statistic	4.495414	Durbin-Watson stat	2.882105
Prob(F-statistic)	0.007728		

Bio-Data

A. Personal Data

Full Names: Ogunnaike Olajide Adewale

Address: Block 208, Flat 1, LSDPC Phase 4 Medium Housing Estate, Ogba.

Date and Place of Birth: 7th January, 1981. Ikeja, Lagos state.

Nationality: Nigerian

B. Name and Address of Next of Kin:

Mr. Ogunnaike, Akorede Emmanuel. Block 208, Flat 1, LSDPC Phase 4 Medium Housing Estate, Ogba.

C. Educational Background:

Lead City University Ibadan, Oyo State. (MSc Economics)	In view
Lead City University Ibadan, Oyo State. (B.Sc Economics)	2012-2016
Pre-Campus College, Ogba, Lagos State.	2001

D. Working Experience with dates:

Intercessor Nigeria Limited	2022- till date
Silverpaper Logistics Nigeria	2017-2022

Adgozo Advertising Agency	2016-2017
E. Award and Fellowship	Nil
F. Membership and Academic Professional Bodies:	Nil
G. Publication:	Nil.

H. References :

Olusegun Ogunnaike	Dr. Esther Aderinto
Managing Director	Senior Lecturer
GOPOD Consulting,Lagos.	Lead City University Ibadan, Oyo state.
08037203479	08021473839

----------	----------
Signature	Date

University Compliance Certification

This is to certify that this thesis written by Ogunnaike, Olajide Adewale with Matric No. LCU/PG/002616 in The department of Economics, Faculty of Environment Management and Social Sciences, Lead City University, Ibadan is in full compliance with the approved university format and style.

---------- ----------

Name Date