IMPACT OF GLOBALISATION ON ECONOMIC GROWTH IN NIGERIA

BY

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POSTGRADUATE STUDIES, IN ECONOMICS

DECLARATION

I hereby declare that this project on "Impact of Globalization on Economic Growth in Nigeria" is an original work done by me and that it has not been presented anywhere for an award of certificates. All works cited are duly acknowledged by means of references.

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CERTIFICATION

This is to certify that this research work was carried out by Aponbiede Babatunde Oyedeji, under the supervision of Mr. Ajidani Moses Sabo in the Department of Economics, Faculty of Social Sciences, Nasarawa State University, Keffi, Nasarawa State, Nigeria.

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DEDICATION

This project is dedicated to God Almighty for his grace that made it possible for me to end this program and to write this research work. The most of all my parent for their moral support, love, guidance, and unrelenting help to make this research work a reality. I also thank my sisters, brothers and friends for their great support. May the Almighty God abide with you all. Amen.

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Abstract

This study examines the impact of globalization on economic growth in Nigeria between 1980 and 2018 using secondary data. The study uses the ARDL model in the contemporary econometric techniques of unit root test, cointegration and Error Correction mechanism within the framework of the Pesaran et al. (2001). The study reveals that gross fixed capital formation has significant impact on economic growth in Nigeria in the long run while trade openness and foreign direct investment were not having significant impact on economic growth in Nigeria in the long run. This shows that any decision made on the gross fixed capital formation will have a strong causality effect at 10.5% decrease to the economy growth of Nigeria.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The world has witnessed increased interdependence in the last two decades, thanks to globalization. The main driving forces of this process are technology, policy, competition and its subordinate domestic economies to global market conditions and practices. Developed nations are the most beneficiaries of globalization as their share of world trade and finance has been expanded at the expense of developing countries like Nigeria. Thus, the process gave birth to inequality between the world's regions and poverty in the developing world. Nigeria has not benefited much from globalization due to monocultural export, inability to attract increased foreign investments and huge indebtedness. But globalization can be domesticated in the country through diversification of exports, debt reduction and expanded development cooperation with other countries. The Nigerian state also need to be strengthened as a rampart against the dictates of foreign capital. All this accomplished, Nigeria could join the league of nations enjoying the benefits of globalization.

Globalization connotes the tendency of moving towards the integration of a nation into the world economy (Okpokpo, Helenian and Osuyali 2014). Globalization entails the links among enterprises, institution as well as citizens across national borders. Thus, as a historical process, globalization it is the result of innovation and technological progress by humans (Nwakama and Ibe, 2014). Globalization involves the movement of goods and services across national borders. Nsavcama and Ibe (2014) also noted that globalization has cultural, political and technological perspectives. Thus, all things being equal globalization ought to have brought efficiency, technological breakthrough as well as competitiveness to the economy. This has however not been the case due to the mono production base of the Nigerian economy which

rely mostly on the exports of crude oil for her foreign exchange. This has led to the neglect of all other sectors like the manufacturing and agricultural sectors. This has deprived the country of the supposed benefits from globalization.

The impact of globalization has not been felt in the Nigerian economy. This is because, currently, Nigeria exports crude oil and imports refined products due to the inability of local refineries to meet the domestic demand despite the huge money spent on the Turn Around Maintenance (TAM) of the four local refineries. The exports from Nigeria thus have very high import content. This has made the Nigeria economy to be industrially underdeveloped. For example, in 1960, Nigeria's oil exports were just 2.6 percent of the total exports. In 1965 it rose to 25.4 percent and 57 .5 percent in 1970. By the 2000 it has increased to 98.7 percent and reduced to 96.4 percent in 2010 (Sede and Izilein, 2013). Since 2010 the percentage of oil exports in total exports has not fallen below 90 percent since then. This paints a grim picture of the impact of globalization on the Nigerian economy which is currently in recession with the exchange rate of the naira to the dollar being higher than ever before in the history of the country. Some developing countries including Nigeria has blamed the failure to achieve the supposed benefit of globalization on the harsh trade policies of the Western world.

Globalization in recent times involves lots of investment. Globalization whether for or against remains a subject on which there has been comprehensive and unyielding misunderstanding especially concerning the constraints that it does not place on the power of government. The emergence of Nigeria into globalization started significantly with the advent of Structural Adjustment Programme (SAP) in collaboration with the International Monetary Fund (IMF) and World Bank which led towards external liberation focusing on market oriented economic system, export-led strategy and stability of the growth in the economy. Nigeria as an economy cannot experience growth in isolation. Therefore, efforts must be geared towards removing

factors that hinder effective integration of Nigeria to the global economy and improving benefits derivable from globalization (Alimi & Atanda, 2011).

Globalization as an economic concept has been viewed at differently by different academic scholars, to represent so many things. However, globalization has been defined by John Vogi (Vanguard 2003) to mean a word that is liberalized of barriers to trade and invest where cooperation can produce and sell almost any service and can produce anywhere. Globalization is a state whereby the world is becoming a global village where the country can come together to have great benefits. Moreover, since globalization also means the growing inter-dependence and inter-connectedness of the modern world, it boosts the growth in the economic which birth to development in the country.

Furthermore, any nation or country globalization sets in the economy of that nation starts waxing strong. According to Ajodele (1995), the increase in movements of goods, services, capital and information access, national borders is rapidly creating a single global economy. The process is drawn by technological advancement and reduction in the cost of international transactions, raise the share of trade in the world of production and increase the mobility of capital. According to Jack Show, British Foreign secretary in a write up the international Guardian of September 10, 2011, he said attempts to manage change in global levels are in their infancy. To him global market, world wide access to each other and information both give us a sense of belonging.

Steward (1990), noted that the impact of globalization on poor people varies widely both between countries and within them, depending on initial circumstance and on the policies that government pursue. For instance, in China poor people living in coastal province have benefited more from increased export and investment than those in land provinces.

Globalization however has continued to agender enormous debate controversy, protest and demonstrations that are sometimes violent in nature. The reaction to the concept of globalization and its application to human development have been significantly more pronounced in the relationship between the developed western world which are owners of the new technologies and the poor developing countries which are by and large consumers of the new capitalist economy. Nigeria is in the global village hence is an importer of goods and services.

The growing global economy which was fastened mostly by international trade and technology has no doubt created a global dual phenomenon where regions continued to experience economic growth at the expense of others. This research work looks into the third world countries of Africa if they are fully incorporated into global capitalist economy, the benefit of this inescapable global phenomenon is not evenly distributed. Secondary sources of data were used as essential methodology for this work. The features that characterize globalization include interconnection of sovereign countries through trade and capital flow; harmonization of the economic rules that govern the interaction or relationship between these sovereign nations; create structures to support and facilitate dependence and interconnection; and creation of a global market place. However, globalization brings about advancement in information, technology, harmonization of different cultures and belief and harmonization of the political systems of different countries of the world.

Globalization has led to the intensification of the world social relations which link distant localities in such a way that local happenings are shaped by events occurring many Kilometers away and vice versa. The components of globalization include: movement of people, goods and services across the world, interdependence of economic transaction, belief on the efficacy of the market, public and private sector growth.

1.2 Statement of the Problem

From time immemorial, there have been studies to address the issue of impact of globalization on the economic growth in different region of other countries that are developed, leaving some developing countries out like Nigeria; this has led to improvement in such regions. The developing country like Nigeria are left out without addressing the issue pertaining to impact of globalization on the economic growth; not addressing the factors of globalization that affect the economic growth especially in Nigeria. Some researchers as also looked into impact of globalization on economic development; researchers in Nigeria as also looked into the concept of globalization in different perspective but some factors of globalization like trade openness, foreign direct investment and gross fixed capital formation that can play a major role in the area of economic growth in Nigeria are not properly looked into.

It is expected that countries with more trade openness will relatively outperform those with less openness. From this perspective, developing countries have much to gain by trading with advanced countries. It is mainly in view of these expected gains that international institutions and donor governments routinely recommend trade liberalization policies to developing countries in the hope of opening up and integrating them into the global market. These policies were fueled by the failure of import-substitution industrialization strategy and also by findings from empirical studies showing that more outward-oriented economies record higher economic growth rates. Trade openness needed to be encouraged in respect to decrease in import and export tariffs and non-tariff barriers should be in place.

The foreign direct investment inflows targeted the oil and gas, real estate, communications and consumer goods sectors of Nigeria's economy Oguh C. (2016). According to Onuba I. (2016) & Okafor V.L. *el al.* (2017), the Nigerian economy recorded its worst investment inflow in 10 years with the country attracting a total investment of $5.12bn in the 2016 fiscal period. These was based on economic crisis faced during this period and the weak value of the naira. Nigerian

government has put in place certain measures and policies to encourage foreign investment in Nigeria economy. The measures put in place by the government include the Privatization enacted by the Public Enterprise Act of 1995, Foreign Exchange Decree of 1995, the Nigerian Enterprises promotion Decree (NEPD) of 1989 which repealed or relaxed that of 1972 and 1977.

The capital formation in Nigeria has been characterized by fluctuations which may be responsible for lack of inadequate social infrastructure such as roads, power supply and health facilities. The speed and the strength of economic growth in Nigeria has not been satisfactory which contributes equally to the decline in capital formation over time Oloyede J.A. (2001). There can be consistency in the rapid rate of capital formation in the country, if smaller proportion of the community's current income or output is partly devoted to consumption and the other part is saved and invested in capital or industrial equipment in order to bring about improvement in the country.

Given the fact above, this research work will look into the extent to which the trade openness has been in the country whether it has been of great influence on the economic growth in Nigeria. The study will find out the impact of FDI on the Nigerian economy from 1980 to 2018; in order to highlight its trend and status on the Nigeria economy. This study will check if there is consistency in the capital formation in the country.

1.3 Research Questions

(i) What effect does trade openness has on economic growth in Nigeria?

(ii) To what extent does foreign direct investment have effect on the economic growth in Nigeria?

(iii) What is the effect of gross fixed capital formation on the economic growth in Nigeria?

1.4 Objectives of the Study

The major objective of the study is to determine the impact of globalization on economic growth in Nigeria.

Specifically, the study intends: -

(i) To identify if trade openness has effect on the economic growth in Nigeria.

(ii) To know the possible effect of foreign direct investment on the economic growth in Nigeria.

(iii) To ascertain the influence of fixed capital formation on the economic growth in Nigeria.

1.5 Research Hypothesis

(i) H0: The degree of trade openness does not have a significant effect on the Nigeria economy growth.

(ii) H0: Foreign direct investment does not have a significant effect on the Nigeria economy growth.

(iii) H0: Gross fixed capital formation does not have a significant effect on the Nigeria economy growth.

1.6 Scope of the Study

This research work is within geographical zone of Nigeria, the work span through the period of 1980-2018. The economy of Nigeria is a middle-income, mixed economy and emerging market, with expanding manufacturing, financial, service, communications, technology and entertainment sectors Nigeria Economy (2020). It is ranked as the 27th-largest economy in the world in terms of nominal GDP, and the 24th-largest in terms of purchasing power parity Nigeria Data (2020). According to manufacturing report in 2015, Nigeria has the largest economy in Africa; its re-emergent manufacturing sector became the largest on the continent

in 2013, and it produces a large proportion of goods and services for the West African subcontinent. In addition, update by Nigeria government shows that the debt-to-GDP ratio is 16.075 percent as of 2019.

Nigerian GDP at purchasing power parity (PPP) has almost tripled from $170 billion in 2000 to $451 billion in 2012. Correspondingly, the GDP per capita doubled from $1400 per person in 2000 to an estimated $2,800 per person in 2012 (again, with the inclusion of the informal sector, it is estimated that GDP per capita hovers around $3,900 per person). (Population increased from 120 million in 2000 to 160 million in 2010).

According to financial times in 201, oil revenues contribute 2/3 of state revenues, oil only contributes about 9% to the GDP. Nigeria produces only about 2.7% of the world's oil supply. Although the petroleum sector is important, as government revenues still heavily rely on this sector, it remains a small part of the country's overall economy.

Since 2015, economic growth remains muted. Growth averaged 1.9% in 2018 and remained stable at 2% in the first half of 2019. Domestic demand remains constrained by stagnating private consumption in the context of high inflation (11% in the first half of 2019). On the production side, growth in 2019 was primarily driven by services, particularly telecoms. Agricultural growth remains below potential due to continued insurgency in the Northeast and ongoing farmer-herdsmen conflicts. Industrial performance is mixed. Oil GDP growth is stable, while manufacturing production is expected to slow down in 2019 due to a weaker power sector performance. Food and drink output are expected to increase, likely in response to import restrictions. Construction continues to perform positively, supported by ongoing megaprojects, higher public investment in the first half of the year, and import restrictions.

The research work will look into how independent variables (i.e. trade openness, foreign direct investment and gross fixed capital formation) have effect on dependent variable (i.e. GDP which is the proxy to economic growth) in Nigeria. The data for the work shall be restricted to

secondary data released by the World Bank national accounts data, and OECD National Accounts data files.

1.7 Significance of the Study

The outcome of this research work will be of significant to the government as means of policy formulation that will bring about improvement in the economy, it will help businesses to plan in the area of production and utilizing the available resources in the country and more also it will help the consumer to save for investment that will enhance his standard of living in the future. Also, it will be of great importance to the ministry of education, ministry of foreign affair, finance minister among others. Above all, it will be a foundation for economist, students and researchers who have interest on globalization and its impacts on Nigeria economic growth

1.8 Organization of the Study

This research work is organized into five chapters. Chapter one is concern with the introduction, which consist of the overview of the study, statement of problem, objectives of the study, research question, significance or the study, research methodology, and historical background of the study. Chapter two highlight the theoretical framework on which the study its based, and the review of related literature. Chapter three deals with research design and methodology adopted in the study. Chapter four concentrate on the data presentation and analysis and discussion of findings. Chapter five gives summary, conclusion, and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual Review

There is need to understand the influence of economic growth and this can be done in a simple model in order for a clearer understanding to be ascertained. This is used to show the interaction of different variables on the subject matter that is economic growth. This is to give a clear picture of how independent variables (trade openness, foreign direct investment and gross fixed capital formation) influence the dependent variable (GDP which is the proxy to economic growth).

2.1.1 Economic Growth

In respect to Wikipedia, defined economic growth as the increase in the amount of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. Growth is usually calculated in real terms, i.e. inflation adjusted terms, in order to net out the effect of inflation on the price of the goods and services produced. In economics, "economic growth" or "economic growth theory" typically refers to growth of potential output, i.e., production at "full employment," which is caused by growth in aggregate demand or observed output Arthur Lewis (1963) in his concept of economic growth incorporates the human element and sees the goal of economic growth as "the growth of the output per head of population".

Sichel & Eckstein (1974) defined economic growth as an increase in the ability of the economy to produce commodities service. According to Todaro (1977) economic growth is simply the increase overtime of an economy's capacity to produce those goods and services needed to improve the well-being of the citizens in increasing numbers and diversity. It is the steady process by which the productive capacity of the economy is increased overtime to bring about rising levels of national income. Baumol & Blinder (1988) sees economic growth as occurring

when an economy is able to produce more goods and services for each consumer, while Roger Miller (1991) defined economic growth as the expansion of the economy to produce more goods, jobs and wealth. Henderson & Poole (1991) defined economic growth as the increase in output and other measures of material progress at a certain period. It is also said to be either growth in national output as measured by GDP or GNP (which measures economic power), or growth in the national average standard of living as measured by the GNP per capita (which measures the well-being of citizens. Beardshaw, Brewster, et al (1998) defined economic growth as an increase in the real GDP per capita of a nation; while the Encyclopaedia of earth defined economic growth as an increase in real gross domestic product (GDP).

Johnson (2000) defined economic growth as that part of economic theory that explains the rate at which a country's economy grows over time. It is usually measured as the annual percentage rate of growth of the country's major national income accounting aggregates, such as the gross national product (GNP) or the gross domestic product (GDP) with appropriate statistical adjustment to discount the potentially misleading effects of price inflation. Samuelson et al. (2001) defined economic growth as an expansion of a country's potential GDP or national output. This means that economic growth occurs when a nation's production possibility frontier shifts outward. Economic growth is a dynamic process in which the supply, demand and efficiency factor all interest.

2.1.2 Trade Openness

According to World Trade Organization, and World Bank trade openness as a share of GDP is the sum of merchandise exports and imports divided by the value of GDP, all in current U.S. dollars. Pro-traders: those in favour of foreign trade, date back to Smith's (1776) analysis of market specialization and Ricardo's (1932) theory of comparative advantage that openness promotes efficient allocation of resources and allows for the dissemination of knowledge and technology and improved levels of competition in international and domestic markets.

Moreover, some scholars revealed long-run growth effect of trade openness (Chang, Kaltani & Loayza, 2009; Young, 1991; Grossman & Helpman, 1991b; Lee, 1993; Eicher, 1999).

Given the growth trend among ECOWAS countries, several attempts and programs have been established in the quest to accelerate economic growth in West African countries. Among them are; the United States Agency for International Development (USAID) and West Africa Trade Program (WATP), West African Economic and Monetary Union (WAEMU) and Economic Community of West African States (ECOWAS) with the aim of improving product quality by farmers. ECOWAS was originally established with the aim of promoting trade among member countries and the imposition of uniform trade barriers such as ECOWAS Common External Tariff (CET) to international markets. The question is, does trade openness significantly affect growth in ECOWAS member countries like Nigeria? This question has not been given any significant empirical attention since the inception of ECOWAS. The objective of this study therefore is to provide a framework that will fill the existing empirical gap and to assess the exact impact of trade openness on economic growth Nigeria.

According to Julian di Giovano and Andrei A.Levchenko (2006), they examine the mechanisms through which trade openness affects output volatility using an industry-level panel database of manufacturing products and trade. The main results are threefold. First, sectors more open to international trade are more volatile. Second, trade leads to increased specialization. These two forces act to increase aggregate volatility. Third, sectors which are more open to trade are less correlated with the rest of the economy, an effect that acts to reduce overall volatility. The point estimates indicate that each of the three effects has an appreciable impact on aggregate volatility. Added together, they imply that the overall effect of trade openness is positive and economically significant. These impacts also vary a great deal with countries characteristics. They estimate that the same increase in openness raises aggregate volatility five times more in developing countries compared to developed ones and also find

out that the marginal impact of openness on volatility roughly doubled over the last thirty years, implying trade exerts a large influence on volatility over time.

Trade openness also indicates the dependence of the country on the foreign trade. Economists generally see the concept of trade openness as the integration among the nations of the world. It is likened to openness of the world economy where nations link together to the extent that they have free trade, free movement of capital and financial activities Igudia (2004). Thus, openness to trade can be said to be the platform of globalization while trade, finance, investment and entrepreneurs constitutes the heart Obadan (2004). Economic growth is defined as the increase of per capita gross domestic product (GDP) or other measures of aggregate income. Plainly, it is the annual increases in a country's total output of goods and services. With globalization and trade liberalization, one of the basic interests in development and international economics is to check if trade openness promotes economic growth. The idea that trade openness affects economic growth is not new again. However, the nature of the effect is being seriously debated in the literature.

Studies carried out on Nigeria using time series data, has been scanty. Egwaikhide (1994) examined the link between the trade variable (export) and economic growth in Nigeria between 1959 and 1989, using cointegration and error correction methods. This approach is appealing as it could eliminate the problem of spurious estimates, which previous studies ignored. Ekpo (1995) also examined the openness and performance of the Nigerian economy for the period 1970 to 1992 using broad measures of openness. Using the aggregate production model, his analysis showed that capital stock and labour contributed positively to output growth during the period. However, an increase in trade share measured by the black-market premium rate and trade/GDP respectively, reduced output.

2.1.3 Foreign Direct Investment

According to International Monetary Fund; Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP.

Nigeria as a country, given her natural resource base and large market size, qualifies to be a major recipient of FDI in Africa and indeed is one of the top three leading African countries that consistently received FDI in the past decade. However, the level of FDI attracted by Nigeria is mediocre (Asiedu, 2003) compared with the resource base and potential need. Further, the empirical linkage between FDI and economic growth in Nigeria is yet unclear, despite numerous studies that have examined the influence of FDI on Nigeria's economic growth with varying outcomes (Oseghale and Amonkhienan, 1987; Odozi, 1995; Oyinlola, 1995; Adelegan, 2000; Akinlo, 2004). Most of the previous influential studies on FDI and growth in sub-Saharan Africa are multi country studies. However, recent evidence affirms that the relationship between FDI and growth may be country and period specific. Asiedu (2001) submits that the determinants of FDI in one region may not be the same for other regions. In the same vein, the determinants of FDI in countries within a region may be different from one another, and from one period to another.

Khan (2007) asserts that Foreign Direct Investment (FDI) has emerged as the most important source of external resource flows to developing countries over the years and has become a significant part of capital formation in these countries, though their share in the global distribution of FDI continued to remain small or even declining. The role of Foreign Direct Investment (FDI) has been widely recognized as a growth-enhancing factor in the developing

countries. Falki (2009), speaking on the effects and advantages of FDI to the host economy, noted that the effects of FDI on the host economy are normally believed to be: increase in employment, augmenting the productivity, boost in exports and amplified pace of transfer of technology. The potential advantages of the FDI to the host economy are: it facilitates the utilization and exploitation of local raw materials, introduces modern techniques of management and marketing, eases the access to new technologies, foreign inflows can be used for financing current account deficits, finance inflows form FDI do not generate repayment of principal or interests (as opposed to external debt) and increases the stock of human capital via on-the-job training. The realization of the importance of FDI had informed the radical and pragmatic economic reforms introduced since the mid-1980s by the Nigerian government. The reforms were designed to increase the attractiveness of Nigeria's investment opportunities and foster the growing confidence in the economy so as to encourage foreign investors to invest in the economy Ojo (1998).

In addition, the impact of FDI on economic growth is more contentious in empirical than theoretical studies, hence the need to examine the relationship between FDI and growth in different economic dispensations. There is the further problem of endogeneity, which has not been consciously tackled in previous studies in Nigeria. FDI may have a positive impact on economic growth leading to an enlarged market size, which in turn attracts further FDI.

2.1.4 Gross Fixed Capital Formation

According to World Bank national accounts data, and OECD National Accounts; Gross fixed capital formation (formerly gross domestic fixed investment) includes land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. According to the 1993 SNA, net acquisitions of valuables are also considered capital formation.

A nation that needs to meet her objective of economic development needs a capital formation (physical capital stock) or capital accumulation. However, economic development may be measured through building of capital equipment on a sufficient scale to increase productivity in agriculture, mining, plantations and/or industry on the one hand. While on the other, capital is required to construct schools, hospitals, roads, railways, standards of living, research and development (R & D), etc. (Jhingan, 2006; Ainabor, Shuaib & Kadiri, 2014). The essence of economic development is the creation of economic and social overhead capitals (or costs), which leads to increase in national output and/or income through creation of employment opportunities and/or reduction of vicious circle of poverty both from the demand side and supply side. The discovered problem that are responsible for the emerging economies are resulting from low capital formation (Jhingan, 2006; Ainabor, et. al., 2014). The emerging countries of the World have no opportunity costs or the attitude of sacrificing present consumption (i.e. save) for future consumption (i.e. investment) in order to increase future national output and income. Gross capital formation leads to technical progress which helps realize the economies of large scale of production (or economies of scale or operation) which can increase specialization, in terms of providing machines, tools and equipment for growing labour force. Thus, the accumulated capital enables the acquisition of new factories alongside with machinery, equipment and all productive capital goods. In addition, to the construction of capital or mega projects and utilize the gross capital formation into educational sectors, health sectors, etc.

In the research of Bakare (2011) asserted that capital formation influences the economic welfare of a country. It helps in meeting all the requirements of an increasing population in developing economy. It leads to the proper exploitation of natural resources and the establishment of different types of industries, levels of increase and the varied wants of the people are satisfied. They consume a variety of commodities; their standard of living rises and

their economic welfare increases. Capital formation raises the level of national income. Bakare, (2011) using cointegration to ascertain the relationship between capital formation and economic growth, his result showed that capital formation has a direct relationship with economic growth of Nigeria.

Ainabor (2014) examined the impact of capital formation on the growth of Nigeria using time series data from 1960 to 2010. The paper applied Harrod –Domar model to Nigerian growth model and tested if it has a significant relationship with Nigerian economy. The paper utilized secondary data and the paper explored various econometrics and/or statistical analytical (Eview 4.0) method to examine the relationship between capital formation and economic growth. The paper tested the stationarity, OLS, cointegration of Nigeria's time series data and used an error correction mechanism to determine the long-run relationship among the variables examined. The results of the findings supported the Harrod-Domar model which proved that the growth rate of national income was directly related to saving ratio and capital formation (i.e. the more an economy is able to save-and invest-out of given GNP, the greater will be the growth of that GDP).

According to Donwa and Odia (2009), they considered the impact of globalization on the gross fixed capital formation in Nigeria from 1980 to 2006.Using the ordinary least square, it was found that globalization proxy by openness was negatively and insignificantly related to gross fixed capital formation. In other words, globalization has not helped in assisting fixed capital formation. Foreign Direct Investment and Gross Domestic Product were positive and significant while exchange rate had a negative impact on GFCF. Interest rate had positive and insignificant relationship with GFCF. Suggestions on how Nigerian could benefit from globalization and improve on her gross fixed capital formation were proffered.

According to Ugwuegbe and Uruakpa, (2013) in there research the impact of capital formation on economic growth in Nigeria. To analyze the impact of capital formation, stock market capitalization, inflation rate and interest rate on economic growth, the study employed Ordinary least square (OLS) technique. To test for the properties of time series, phillip-perron test was used to determine the stationarity of the variables and it was discovered that gross fixed capital formation and economic growth are integrated of order zero I(0), Johansen co integration test was employed to determine the order of integration while error correction model was employed to determine the speed of adjustment to equilibrium. The empirical findings suggested that capital formation has positive and significant impact on economic growth in Nigeria for the period under review.

2.2 Theoretical Review

The aspect of Growth theories originated from representatives of mercantilism that runs through the 15th - 17th centuries. The term "mercantilism" was introduced into scientific circulation by the French economist Antoine de Montchrestien (Montchrestien & Billacois, 1999). Mercantilists considered the accumulation of wealth as the main source of economic growth and the main purpose of economic activities of traders and the state (McDermott, 1999). While representatives of the early mercantilism preferred precious metals and coins, as absolute liquid materials, later mercantilists considered the economic power of the nation in terms of total amount of the goods produced and were in favor of a trade surplus. This trend is partly due to the development of manufacture and domestic markets.

In the views of the mercantilists Osipian (2007), the opportunities to profit from the production of goods and access to credit contribute to the multiplication of wealth. The presence of a sufficient amount of metallic money, particularly of gold and silver coins, provided the necessary access to credit facilities and relatively low interest rates on loans in the country. For this reason, early mercantilists insisted on restricting the export of gold from the country. Thus,

the presence of gold and silver coins in circulation was elevated to a necessary fundamental principle of the economic growth, while active trading activity was seen as a prerequisite for such growth. This approach can be considered as historical pattern, based on the simple fact that all the capital at that time was presented as trade capital, while there wasn't any significant amount of industrial capital yet.

Based on the above position, the mercantilists welcomed the export of goods, as it is a source of metal money inflow into the country, and at the same time advocated for the restriction of imports of goods into the country. According to Osipian (2007) this policy was designed to ensure a trade surplus, a sufficient amount of metal money, and thus sustained economic growth.

In the second half of the 18th century, physiocrats came to replace the mercantilists. Physiocracy (from the Greek for "Government of Nature") is an economic theory developed by a group of 18th century enlightened French economists, who believed that the wealth of nations was derived solely from the value of "land agriculture" or "land development" and that agricultural products should be highly priced. Their theories originated in France and were most popular during the second half of the 18th century. The most significant contribution of the Physiocrats was their emphasis on productive work as the source of national wealth. The Physiocratic school of economics was the first to see labor as the sole source of value. However, for the Physiocrats, only agricultural labor created this value in the products of society. In view of Marx (2000) all "industrial" and non-agricultural labor was "unproductive appendages" to agricultural labour. Physiocrats considered the economic life as a natural process that has its own internal laws, and established the principle of "natural order." They opposed to state's intervention in economic processes (Osipian, 2007). The theories slated different ideas that brought about growth in the country.

2.2.1 The Classical Theory of Economic Growth

Adam Smith's "The Wealth of Nations" (1776) is usually considered to mark the beginning of classical economics. The most famous and outstanding representatives of classical school are: Adam Smith (1723-1790), David Ricardo (1772-1823), Thomas Malthus (1766-1834), Karl Marx (1818- 1883), John Stuart Mill (1808-1873), Jean-Baptiste Say (1767-1832) and others. The fundamental message in Smith's influential book was that the wealth of nations was based not on gold, but on trade: As when two parties freely agree to exchange things of value, because both see a profit in the exchange, total wealth increases. Classical economists observe that markets generally regulate themselves, when free of coercion. Adam Smith referred to this as a metaphorical "invisible hand", which moves markets toward their natural equilibrium, when buyers are able to choose between various suppliers, and companies which do not successfully compete are allowed to fail. Smith warned repeatedly of the dangers of monopoly, and stressed the importance of competition (Smith, 1776).

Adam Smith linked the increase in wealth of people with the improvement of the output of the factors of production (land, labour and capital), which is reflected in the growth of labour productivity and an increase in the size of functioning capital. Great attention was attached to population growth, to the increase in the share of workers in the sphere of material production, to investment and geographical discoveries, which contributed to extensive growth. Smith believed that population growth is endogenous and depends on the available means of subsistence. Investment was also recognized as endogenous and depended on hardworking and savings of the capitalists, and by savings meant the sum of reserves used not for personal consumption, but for industrial purposes. The output growth from land was linked to geographical discoveries and technological improvements in existing land fertility (Lavrov and Kapoguzov, 2006). The main driving force behind increased productivity by Smith was the division of labour and improvement of technology. Smith saw competition at the heart of

economic sector and the national economy as a whole, and believed that the economy can grow rapidly thanks to technological advances, part of which is the division of labour. Smith considered competition as a factor of bringing the system to equilibrium, despite the fact that the results of the process of balancing systems are preferred and positive for society (Reid, 1989).

In light of the views of Thomas Malthus (1766-1834) on the economic growth, describing the growth of population and the increase in production turned out to be pessimistic. From the standpoint of Malthus, in the case the proportions between population growth and means of subsistence remains, when the population is growing exponentially, and the means of subsistence grow - arithmetically, we will face the imminent depletion of the Earth, and therefore a bitter struggle for limited resources, the growth of wars, epidemics, hunger, mass disease and so on (Lavrov and Kapoguzov, 2006). As a way out of this problem, Malthus proposed to restrain the growth of the population by the "call to prudence", especially the poorest and the birth of children only if they were provided by the means of subsistence for a decent life. Despite the fact that the calculations of Malthus were not quite correct (he distributed data on the growth of the population in the United States as a global trend, without considering the obvious fact of a large migration of people from Europe to USA, and also failed to predict the degree of development of scientific and technical progress in the field of agriculture), his idea of diminishing returns of factors of production was actively used in the 20th century, in the frame of the theory of population growth endogenization (Lavrov and Kapoguzov, 2006). David Ricardo (1772-1823) was a British political economist, was one of the most influential of the classical economists. Perhaps his most important legacy is his theory of comparative advantage, which suggests that a nation should concentrate its resources solely in industries where it is most internationally competitive and trade with other countries to obtain products no longer produced nationally.

David Ricardo argued the idea of the existence of a natural market wages and assumed that the introduction of new technologies leads to a decrease in labor demand, based on special forms of technological innovations. Just as Malthus, Ricardo stressed the need to respect the proportions and singled out the negative and the positive performance of the capital (Rostow & Kennedy, 1990). The merit of John Stuart Mill (1808-1873) in systematization of the classical school, he largely summed up the previous studies in the framework of the "classics". In particular, he completed the classical theory of economic dynamics that considers the long-term economic trends. At the heart of this concept is the idea of the continuous accumulation of capital. According to the theory, the increase in capital leads to an increase in labour demand, that the stable population causes an increase in real wages, which stimulates long-term population growth. If the accumulation of capital is faster than the increase in the workforce, both of these processes can, in principle, last forever. Growth in the number of workers represents at the same time increasing the number of "mouths", thus the increase in demand for consumer goods and especially for food. Food produced in agriculture, which, as we know, characterized by decreasing returns to scale. As a result, problems of declining marginal productivity of capital arise and the fall of incentives to invest.

2.2.2 Innovative Growth Theory

A significant contribution to growth theory was introduced by Joseph Alois Schumpeter (1883-1950), primarily due to his work "Theory of Economic Development", first published in 1911. Schumpeter introduced into the economics the term "innovation" and in a new way considered the significance of the entrepreneur in terms of economic growth (Lavrov & Kapoguzov, 2006). The starting point, according to Schumpeter, was condition of pure equilibrium or steady state of economy. According to his view, the engine of "development" was the changes in the economic sphere. They were due to various reasons (for example sudden discovery of new sources of supply), but the main was entrepreneurial innovation, which caused the

development. The driving force of development in Schumpeter's theory is the businessman and entrepreneur, innovator, a creative person. He is characterized as being initiative, foresight and risky. Monopoly, from the point of view of Schumpeter, is a positive thing, as it is achieved by the implementation of new combinations of factors of production, revolutionary changes in technology, in production technology, creation of new products, entering new markets, and so on (Lavrov and Kapoguzov, 2006).

Schumpeter described the nature of economic development as the "carrying out of new combinations", which he defined rather widely as follows (Maddison, 1982):

a. Introduction of new goods;

b. Introduction of new methods of production;

c. Opening a new market;

d. Conquest of a new supply of raw materials;

e. New organization of an industry. These specific forms of economic changes he viewed as development.

2.2.3 Keynesian Growth Theory

Keynesian growth theories have a considerable list of representatives, which includes John Maynard Keynes (1993-1946), Roy Harrod (1900-1978), Evsey Domar (1914-1997), Joan Robinson (1903-1983), Nicholas Kaldor (1908-1986), Luigi Pasinetti (1930-till now), James Meade (1907-1995). "The General Theory of Employment, Interest and Money" of Keynes was in the basis of all the following Keynesian growth theories. A key factor in the Keynesian model is the effective demand, specifically that the expansion of aggregate effective demand should contribute to economic growth. These theories have arisen as a result of development and critical processing of Keynesian macroeconomic equilibrium. Based on economic values such as national income, consumption, savings and investments, Keynes developed a theory designed to explain changes in the level of economic activity. He proved that during the

recession and rising of unemployment, reduction of income causes decrease in consumption, savings and investments. Therefore, according to John Keynes, in an environment where there is no market leverage to increase the aggregate demand for reviving business activity in the economy, the government should intervene by implementing macroeconomic, namely, fiscal policy, using measures such as: tax cuts or increases in government spending (UN, 2011). Keynes argued that the solution to the Great Depression was to stimulate the economy ("inducement to invest") through some combination of two approaches; a reduction in interest rates (monetary policy) and Government investment in infrastructure (fiscal policy).

By reducing the interest rate at which the central bank lends money to commercial banks, the government sends a signal to commercial banks that they should do the same for their customers. Investment by government in infrastructure injects income into the economy by creating business opportunities, employment and demand; thereby reversing the effects of the aforementioned imbalance.

What is the essence of Keynesian growth theories?

(i) There theories are based on the main postulate by John Keynes - aggregate demand. The decisive condition for balanced economic growth in these theories is the increase in aggregate demand.

(ii) Investment is considered as the main factor of economic growth that increases income (multiplier effect) or increases under the influence of the accelerator together with income growth. All other production factors, such as increased employment, the degree of equipment use, better organization of production are not taken into account.

Keynesian approach considers short-term periods and the specific situation of a depressive economy. However, the followers of Keynes expanded his approach for the long term.

2.2.4 Post-Keynesian (Neo-Keynesian) Growth Theory

Post-Keynesian (Neo-Keynesian) theory of economic growth has been formulated by American economist of Polish origin Evsey Domar and the British economist Roy Harrod. Their results were so close to each other that they subsequently became known in science as the theory of Harrod Domar.

Evsey Domar clarified and supplemented the theory of John Keynes - in his theory, investment is a factor not only of income, but also a factor in creation of production capacities, and therefore, the factor of development within production and supply of goods. Domar's theory determines the tempo at which investment should grow in order to ensure growth of revenue. This tempo is directly dependent on share of savings in national income (the marginal propensity to savings) and the average efficiency of investments.

Hence an important conclusion was made for economic policy: only ever-growing accumulation of capital, i.e. investment growth, provides economy with dynamic balance between aggregate demand and aggregate supply. In order to maintain balanced growth of investments, the state can influence the share of savings in national income or the rate of technological progress, thus determining the productivity of capital. Roy Harrod's theory is devoted to the study of the growth trajectory of the economy. Therefore, it is based on the theory of the accelerator, which allowed to determine the ratio of investment growth to growth in income. R. Harrod's theory describes the mechanism of balanced growth, based not only on the functional relationship between income, savings and investments, but also on the analysis of the expectations of entrepreneurs.

The actual growth rate in R. Harrod's theory is determined by the growth rates of labour and capital productivity. If the actual growth rate coincided with a guaranteed (guaranteed growth by Harrod - growth with full utilization of existing capital resources), the economy would have a sustainable continuous development. The maximum possible rate of economic growth with

full utilization of labour force is called in the R.Harrod's theory a natural rate. Stable dynamic equilibrium of the economic system is achieved with equality of guaranteed and natural growth rate in condition of full employment. However, maintaining such equality is possible only with active state intervention.

Thus, during the analysis, R. Harrod arrived at conclusions similar to those obtained by E.Domar. Often their theories, as already noted, are combined into a single theory entitled Harrod Domar. It implies that, in the technical conditions of production, economic growth is determined by the marginal propensity to save, and the dynamic equilibrium in the market system is inherently unstable, so that maintaining it at full employment requires active and purposeful actions of the state. The limitations of the theory of Harrod-Domar are as follows: Firstly, they require a prerequisite for building the analysis within the theory: economic growth depends on the growth of investment, and this dependence is a linear function; economic growth does not depend on the growth in the use of labour; Theory does not take into account technological progress.

Secondly, the limitations of the theory are explained by historical conditions. This theory could adequately describe the actual processes of economic growth in the 1930th and the post-war period, when economic growth really mainly depended on growth of production capacities utilization. However, in the 50th-70th production development prospects depended mainly on qualitative and technological changes, which is reflected in neoclassical theories of economic growth.

2.2.5 Neoclassical Growth Theories

The first neoclassical growth theories emerged in 1950s – 1960s, when attention to the problems of dynamic equilibrium weakened and to the fore came the problem of achieving potential growth not so much due to unused capacity, as through the introduction of new

technology, improving productivity and improving the organization of production. The main representatives of this school are Alfred Marshall (1842-1924), Carl Menger (1840- 1921), Friedrich von Wieser (1851-1926), Leon Walras (1834-1910), John Bates Clark (1847 –1938), William Stanley Jevons (1835-1882), Irving Fisher (1867-1947) and others. The American economist Robert Solow (1924-present) together with other scholars opposed the state's intervention in the economy and were up for allowing large firms to achieve their growth potential in a competitive market, by using most of the resources available to them. The methodological basis of their theories was based on the classical theory of the factors of production, regarding labor, capital and land as independent factors of the formation of national product, as well as on the theory of marginal productivity, according to which, the income derived by owners of the factors of production are determined by the marginal products of these factors.

Neoclassical theorists criticized the neo-Keynesian growth theory on three points (UN, 2011): Firstly, because they are focused on only one growth factor - capital accumulation, (i.e. investment growth), ignoring all other factors, and in particular those associated with technological progress: the growth of education, skills, improving the organization of production, etc. Secondly, because they originate from the immutability of the capitals share in income. Neoclassical model, taking into account capital and labour, and assuming their interchangeability, allow the possibility of change in the coefficient of capital. Hence, even in current technical equipment of production it is possible to achieve certain output volume just by applying different combinations of resources; Thirdly, because the Neo-Keynesians underestimated the ability of the market mechanism for automatic rebalancing. Neoclassical economists, on the other hand, believed that the only competitive market system is able to provide balanced economic growth. This condition also applies to stable monetary system. So,

they opposed inflationary government spending, considering state intervention to the economy as a factor of stability violations.

Solow's theory was outlined for the first time in an article entitled "A Contribution to the Theory of Economic Growth" (1956), and then developed in the "Technical Change and Aggregate Production Function"(1957). In 1987, for its development, the author was awarded with the Nobel Prize in Economics. R. Solow proceeds from the assumption that a necessary condition for equilibrium of the economic system is the equality of aggregate demand and aggregate supply. In his theory, aggregate supply is determined on the basis of the production function of Cobb-Douglas, which expresses the functional dependence between production volumes on the one hand, and the factors used and their combinations, on the other. Solow's theory can reveal interconnections between three sources of economic growth - investments, workforce and technological progress. The theory shows that the savings rate is a key factor in determining the level of capital intensity. A higher savings rate provides a greater stock of capital (i.e., growth of investments), and hence a higher level of production. Population growth in the Solow's theory is also one of the reasons for continued economic growth in the stable condition of the economy. However, if population growth is not accompanied by an increase in investments, this leads to a reduction in the capital stock per worker. Thus, the theory of R. Solow explains that countries with higher population growth rates have lower capital-labour ratio, and hence - lower incomes. The third source of economic growth after investments and increase in the number of employees is technical progress. It should be noted that in neoclassical theory by technological progress they do not mean the replacement of human labour by machines, but qualitative changes in the production, such as: increasing the educational level of workers, the improvement of the organization, growth of production scales and so on. It should be emphasized that R. Solow, out of all his contemporaries-economists came to a closer and better understanding of the economic efficiency of production as a

relatively independent factor of economic growth and material source of social progress in the last quarter of the 20th century. In the theory of Solow, the technical progress is the only condition for continuous growth of living standards, measured as per capita income. Moreover, R. Solow proposed a formula of "golden rule of accumulation", which determines the optimal level of capital intensity. An equilibrated economic growth is compatible with various norms of savings, but the optimal one will be that norm, which provides economic growth with the highest level of consumption. Unlike traditional approaches, the highest consumption is not determined by the largest possible amount of capital, but by its optimum size and cost effectiveness - capital productivity per unit of product (marginal productivity). Thus, the theory of R.Solow highlights technological progress as the sole basis for sustainable growth of welfare and allows you to find the optimal variant of growth, providing maximum consumption.

2.2.6 Theory of Endogenous Economic Growth

A new stage in the development of the theory of economic growth occurred in the 80-90s., which allowed to talk about the "new growth theory". It reflects the relationship of imperfect competition and the role of possible changes in the profit rate. And most importantly; the scientific and technical progress has been considered as an endogenous, growth factor generated by internal causes. For the first time, in formal mathematical and economic models, the American economists Paul Romer (1955-till now) and Robert Lucas (1937- till now) hypothesized about the endogenous character of the most important technological innovations based on investment (contribution) in technological development and in human capital. Endogenous growth models look similar to the neo-classical ones, but they differ significantly in initial assumptions and conclusions (UN, 2011). On the basis of the Solow model, it is the state with the help of economic policy instruments (such as changes in taxation, government spending) is not able to provide long-term impact on the growth rate. The impact of the state on economic growth is only possible through the impact on the savings rate. As noted by

P. Romer: "In terms of advice to politicians, the growth theory had little to offer. In theory, with exogenous technological change and exogenous population growth did not matter what the government does" (Romer, 1989a, p.51). Endogenous growth theory overcomes this shortcoming of neoclassical theory. First of all, they reject the neoclassical premise of diminishing marginal productivity of capital, assume the possibility of production scale effect throughout the economy, and often focus on the impact of external effects on the profitability of investments. Positive externalities act as an important prerequisite.

In the theories of endogenous growth, technological progress is not the only possible cause of economic growth in the long term. The value of intensive, high-quality determinants of economic growth (parameter A in neoclassical theory) is defined in the theories of endogenous growth.

The endogenous growth is based on the quality of human capital, which depends on investment in human development (education, health); creation of the necessary conditions and prerequisites for the protection of intellectual property rights in the conditions of imperfect competition; state support for the development of science and technology; the role of government in creating a favorable investment climate and attracting new technologies.

Therefore, the theories of endogenous growth in contrast to neoclassical ones are in favor of state's intervention in the development process. These theories can be divided into two groups. The first group includes theories in which human capital emerges as an important determinant of economic growth. These are the theories of P. Romer (1989b) and R. Lucas (1988).

A key factor in the endogenous growth theory of Paul Romer is the variable called "knowledge" or "information". It assumes that the information contained in the inventions and discoveries are available to everyone and can be used at the same time. The Romer's theory assumes that the total amount of human capital remains constant during the considered time interval. It is

only possible its redistribution between the sphere of production and R & D (research and development activities) in accordance with the function of consumer preferences. The basic idea of the theory of Romer is as follows: "there is an exchange between consumption today and knowledge that can be used for the expansion of consumption tomorrow." He formulates the idea as "research technology," which produces "knowledge" from the past consumption. Thus, the rate of economic growth is in theory of Romer directly dependent on the value of human capital, focused in obtaining new knowledge. In reality, this means that the sphere of research affects the economy not only directly through the application and development of new ideas. Its existence is a necessary (but not sufficient) condition for economic growth, because it provides human capital accumulation. The theory of Romer implies that countries with greater accumulation of human capital will have higher rates of economic growth. Therefore, according to this theory, the development of free international trade will also contribute to higher growth, since the exchange of products expands the boundaries of the economic system and thus leads to an increase in the total human capital.

In contrast to the Romer's theory, in the theory of Robert Lucas, accumulation of human capital is a strong economic process that requires certain resources, and is the cause of alternative costs. Lucas suggests that people can choose one of two ways to spend the time: to participate in current production or to accumulate human capital. In fact, the allocation of time between these alternative ways determines the rate of economic growth. For example, a decrease in time spent on production, leads to a reduction in the current product output, but at the same time with accelerated investment in human resources increases the product output growth. Thus, the distinguishing feature of theories of this group is the inclusion of the education factor and human capital in the production function.

In the second group of theories, R&D is a key factor of growth. So, the theory of J.Grossman (1953–till now) and E.Helpman (1946–till now) describes the effect of endogenous high-tech

innovations to economic growth rates (UN, 2011). On the example of two countries trading with each other, these authors, in particular, have shown that subsidies for R&D in a country that has a relatively scientific and technical excellence, there will be recorded an increase in the overall rate of economic growth. Protectionist trade policy can contribute to economic growth of countries with a lower level of R & D, however, has the opposite effect if it is carried out in the country with a high scientific and technical potential. The theory takes into account the possibility of inflow/outflow of capital for R & D funding and predicts under certain conditions, the formation of transnational corporations. This group also includes the theory of endogenous technological progress of P.Aghion (1956 – till now) and P.Howitt (1946 – till now). According to this theory, economic growth is driven by technological progress, which in turn is ensured by competition between firms, generating and implementing long-term products and technological innovation. Each innovation brings to market new interim goods (product, technology), which can be used in a more effective production of goods than it was before. The main motivation for the firms within the research sector is the prospect of monopoly rents in the case of successful patenting of innovations. This rent covers costs associated with the development and implementation of innovations. Thus, a critical role in determining the rate of economic growth plays the arising endogenously flow of professionals between the sector of interim goods production and the R & D sector.

Thus, endogenous growth theories allowed formalizing the relationship between the mechanisms of economic growth and the process of obtaining and accumulating new knowledge, which is materialized in technological innovations. These theories examine the reasons for the differences in growth rates of different countries, the effectiveness of various measures of the state's scientific, technical and industrial policies, as well as the impact of the processes of international integration and trade on economic growth.

2.3 Empirical Review

According to Stigliz (2001) in his study, "globalization and its discontents" averted that globalization has a large potentials for the world economy and can be of huge benefit to underdeveloped countries and even a viable plan for the development of underdeveloped economies of the world suggesting various reform of the international economic and financial institution and a fundamental transformation of the governance process of especially underdeveloped countries as a necessary condition for a positive impact of globalization on the development process of underdeveloped countries. The methodology used was United Nation Data Report. He found out that the reforms mentioned above are contingent on the developed economies that are satisfied with the ways and manner globalization is being conducted and have being active in sustaining it. He concluded that the artificial construction of world economy by the industrialized countries is meant to serve the purpose of economic and political dominance of the group of industrialized countries, over the countries, but they need to establish a convergence among them in order to minimize the likely effect of undermining each other.

In respect to Ihonvbere (2002) in his study, ''how is globalization doing?'' he said that globalization is a myth construed by capital at the expense of corrupt and weakened politician and government to commercialized and privatized all spheres of human activity. The methodology adopted in carrying out his study was thorough research through World Wide Web. He found out that globalization is not doing well. Ihovbere opined that rather than improve on social, political and economic condition, globalization has increased; poverty in both rural and urban areas; real earning fell drastically; unemployment and underemployment rose sharply; hunger and famine became endemic; dependence on food aid and food import intensified; disease, including the dreaded HIV/AIDS decimated population and became a real threat to the very process of growth and development. Moreover, because of the inadequate

response and realistic strategies to tackle the problems listed above, Ihonvbere concluded that globalization is not doing well.

Onyeonoru (2003) in his study, "globalization and industrial performance" aimed to verify if the globalization project was associated with a process of deindustrialization. The methodology used in carrying out his objective was Radical organization Theory outlined by Burell and Morgan. It was selected for its usefulness for explaining the relationship between the economic crisis and macro socio economic element of globalization. The food, beverage and tobacco industry were selected as the case study. The findings of his research theory are that, the globalization activities in the structural adjustment program (SAP) period accounted for the depreciation in the value of the naira. The steep devaluation of the naira during SAP period introduced high rate of inflation, which adversely affects industrial operations-especially in the manufacturing sector. The conclusion of his study is that globalization programmers have been associated with a period of de-industrialization.

According to Aluko, *et al.* (2003) in their study "globalization and the manufacturing sector: a case study of selected textile firm min Nigeria" aimed to examine the impact of globalization on the manufacturing sector in Nigeria, and then, suggested appropriate socio- economic reform measures of that will enable the country benefit maximally from the current globalization trend in the world economy. A case study approach was applied and three textile mills were selected as case studies. Data was collected by means of pre-tested questionnaire. From the analysis above, it was observed that Association of Nigeria (MAN) Report, (1996) stated that capacity utilization for the manufacturing sector fell below 40% of installed capacities. In conclusion, it was stated that for a country to maximally enjoy the benefits and minimize the risk associated with globalization, it as to develop and strengthen its capacity to timely identify both internal and external shocks, and to initiate, design and implement appropriates policies to forestall their destabilizing efforts.

The study by Feridun, Olusi & Folorunso (2006) they examined the effect of globalization on economic growth in Nigeria over the period 1986-2003. The study employed the econometric techniques of Johansen cointegration and error correction modeling (ECM) in carrying out its objectives. The results show that trade openness has significant positive effect on economic growth in Nigeria whereas financial integration has negative but insignificant effect on economic growth in Nigeria.

According to Onwuka and Eguavoen (2007) studied globalization and its implications for the growth process of the Nigeria economy for the period 1985-2001. Using descriptive method of analysis, the study revealed that Nigeria has not benefited from globalization due to mono-cultural export, inability to attract increased foreign investment and huge indebtedness.

Ezike and Ogege (2012) studied the impact of Nigerian foreign trade policy on non-oil exports for the period 1970-2010 using both correlation analysis and least square techniques and found a negative and insignificant relationship between openness (proxy for trade policy) and non-oil export. They concluded that trade liberalization adopted in the country has not promoted the performance of non-oil exports.

Okpokpo, Ifelunini & Osuyali (2014) through their study interrogated globalization as a potent driver of economic growth in Nigeria using the non-oil (agricultural and manufacturing) export as reference point from 1970–2011. The study employed the ADF unit root test and OLS technique and found that globalization has no significant impact on non-oil export and that globalization has not been a potent driver of growth of the non-oil export in Nigeria.

Nwakanma & Ibe (2014) examined the causal relationship between globalization and economic growth in Nigeria from 1981 to 2012. In carrying out the study, Johansen cointegration and Granger causality tests were employed. The results show that there is a positive and insignificant relationship between financial integration, human resource development and trade

openness, while gross fixed capital formation was negative and insignificant. The results further showed that a unidirectional causality runs from financial integration to gross fixed capital formation.

In respect to Utuk (2015) who analyzed the impact of globalization on economic growth in Nigeria in terms of trade and capital flows from 1970-2011. Using descriptive method of analysis, the study found that increased trade and capital flows engendered by globalization can enhance the country's growth performance.

Adesoye, Ajike & Maku (2015) examined the impact of economic globalization on output growth of the Nigerian economy over the period 1970-2013. The study employed EngleGranger cointegration and error correction model and found that a higher exchange rate and inflation rate, an increase in foreign direct investment, growth in trade and openness and a lesser interest rate enhance the growth rate of output in Nigeria.

Shuaib, Ekeria & Ogedengbe (2015) examined the impact of globalization on the growth of the Nigerian economy over the period 1960-2010. The study employed the Johansen cointegration and error correction model and found that growth of external debt ratio was inversely related to economic growth in Nigeria.

Felix Uchechukwu Konyeaso (2016) in his research work on "impact of globalization on Nigeria economy", he made use of a quantitative method of data collection from 1986 to 2013, data analysis technique was multiple regression analysis. Through his model he established that there is a positive relation between globalization and economic growth. He concluded that Nigerian economy is gaining from globalization mainly due to Foreign Direct Investment (FDI) and trade openness. Since Nigeria has opened up to international trade and foreign investment it has achieved a better economic growth. He also recommended that for Nigeria to benefit more from globalization there is need to integrate further into international trade by

diversifying her exports. He further said that a better business environment is required to attract more foreign investment.

Egberi Kelvin Agbarha & Samuel Ajiri Peter (2017), in their research work on "globalization and economic growth in Nigeria: a cointegration approach", The paper covered the period between 1980 and 2015. The cointegration and Error correction mechanism were adopted. The result showed that current FDI and one period lagged FDI, one period lagged exchange rate, current Balance of Payment and two period lagged openness of the economy to the outside world have a positive and significant impact on the level of economic growth in Nigeria. The ECM shows a satisfactory speed of adjustment. The Johansson cointegration test indicates a long run equilibrium relationship among the variables. The result recommends policy to expand FDI and an increase in the level of trade liberalization

According to Letswa Ahmed Mohammed, Raji Shittu Adewole & Edita Muhammad Nma (2018), there research work examines the effects of globalization on African economic development: the Nigerian experience, they argued that incorporation of third World countries into the global capitalist economy was characterized by both economic fortunes and frustrations on the part of the third Worlds. Based on their analysis from various quarters indicated that globalization benefits are not evenly distributed across the African region in general and Nigeria in particular. The country still serves as importer of finished goods and exporter of raw material thus making the country as the market in the global completive economy.

Chioma Chidinma & George-Anokwuru (2018), there paper examines the effect of globalization on economic growth in Nigeria for the period 1981-2016. They investigate the relationship between Imports, Exports, Foreign Direct Investment and Gross Domestic Product. The paper applies the bounds cointegration tests and the Short and Long Run

Dynamics Autoregressive Distributed Lag (ARDL) test for the study period. The short and Long run form of the model indicates that import is negatively related to Gross Domestic Product but also has a significant impact on growth, while the short and long run impact of export on Gross Domestic Product is positive and significant, indicating that export increased growth of the Nigerian economy by 10.98 percent. Foreign Direct Investment was found to negatively influence Gross Domestic Product. This finding suggests that Foreign Direct Investment is ineffective in driving actual growth in Nigeria. The findings of this paper indicate that Nigeria is not yet enjoying the full benefits of Globalization. This paper recommends that the authorities in Nigeria should formulate and implement policies that will reduce the level of import into the country and also undertake policy measures and reforms as well as providing sound macroeconomic policies, that will create a more stable and conducive environment for investment and the expansion of economic activity to strive ensuring e that Foreign Direct Investment impacts positively on Economic Growth.

Adedapo Odebode & Osman Nuri Aras (2019), there study examine the impact of globalization on manufacturing output in Nigeria. Using structural vector autoregressive (SVAR) approaches, from 2010Q1 to 2018Q4, their finding revealed that manufacturing output and transportation responded significantly to the foreign shocks emanating from globalization. The study established that the manufacturing output reacted negatively to exchange rate fluctuations, implying that exchange rate is very important to manufacturing sector in Nigeria. On the same vein, transportation, financial integration and globalization respectively were affected positively and significantly by exchange rate fluctuations to manufacturing sector.

Peter N., Anthony Orji, Donald Chukwumaeze, & Onyinye Anthony-Orji (2019) examines the relationship between trade openness and industrial output growth in Nigeria using time series data, endogenous growth framework as well as export-led growth model. The adopted framework contends that domestic policies on trade liberation cannot be avoided but harnessed

for optimal benefit of the economy. The empirical results show that trade openness contribute positively to industrial output growth and supports general economic diversification. In the short-run, the dynamic impact of trade openness on industrial output growth is insignificant while its long-run impact is significant.

According to the Nigeria Economic submit group on May 2020, the outbreak of the coronavirus pandemic with its attendant restriction on economic activities and severe impact on the oil market is set to reverse Nigeria's growth of 2.3% achieved in 2019. The first quarter of 2020 shows that the effect of the pandemic and the slump in crude oil price is evident on Nigeria's Purchasing Managers' Index (PMI), which tracks the performance of the business aspect of the economy. The Manufacturing PMI, though still on the expansionary benchmark, slid to 51.1 points in March 2020 from 60.8 points recorded in December 2019. On the other hand, the non-manufacturing sector contracted as its PMI slid to 49.2 points in March 2020 from 62.1 points recorded in December 2019. This suggests a significant slowdown in economic activities in Q1'2020.

2.4 Gaps in the Literature

It is clear from the foregoing that several empirical studies have been carried out on either the relationship between globalization and economic growth, or impact of globalization on economic growth in Nigeria. These studies mostly relied on the traditional econometric methods in carrying out their various empirical investigations. Given the flaws of the traditional econometric methods used in the previous studies coupled with the divergent results offered by these studies, there is need for further researches on the impact of globalization on economic growth using contemporary econometric techniques.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

This research work is based on the contemporary econometric techniques of cointegration and error correction mechanism within the framework of the Pesaran et al. (2001). ARDL model to examine the impact of globalization on economic growth in Nigeria. Using annualized time series data from 1980 to 2018, the study reveals that trade openness; and foreign direct investment have significant positive impact on economic growth in Nigeria.

3.2 Theoretical Framework

Globalization has been identified in literature as a key to economic growth. Also, a vast empirical literature concludes that globalization contributes significantly to economic growth. Three variables namely: trade openness; foreign direct investment and gross fixed capital formation have been identified in both theoretical and empirical literature to be the major drivers of that contribution. The concept of globalization has a very sound theoretical framework.

This study is anchored on Mankiw, Romer, and Weil (1992) theoretical framework. It provides an appealing framework for comparing the implications of the Solow model with the cross-country data. It is shown that their framework is potentially more fruitful than they claim, in that it can be used to evaluate essentially any growth model that admits a balanced growth path (BGP). Indeed, as we will show, the MRW framework can be thought of as consisting of two parts: a general structure that is applicable to any model admitting a balanced growth path (BGP), and a set of restrictions imposed on this structure by the specific growth model (such as the Solow model).

3.3 Model Specification

This study is based on the growth model developed by Mankiw, Romer, and Weil (1992), henceforth known as MRW growth model. This is also in respect of standard neoclassical production function which begins from a premise that changes in quantities of factors of production (i.e. Labour and capital) account for growth. According to MRW model, economic growth is a function of physical capital (K), human capital (H) and labour (L).

The model in use is:

$Y = A K^{\alpha} H^{\beta} L^{1-\alpha\beta}$ ---------- 3.1

Where A is the index of technical change that varies overtime but for this moment held constant, K is the capital stock, L is the labour supply and H is the stock of human capital. It is important to point out here that the parameters α and β are assumed to lie between 0 and 1 and that $(\alpha + \beta) < 1$, implying that there are decreasing returns to all capital. Theoretically, the aggregate increase in human capital accumulation would likely improve the productivity of workers which will translate to economic growth.

3.3.1 Definition of Variables

In line with the above, our model is fully specified in its natural logarithm form as follows:

$LGDP = \beta_0 + \beta_2 LOPN + \beta_3 LFDI + \beta_1 LGCF + \mu$ ---------- 3.2

Where LGDP = natural log of real gross domestic product;

LOPN = natural log of trade openness (ratio of export plus import to GDP);

LFDI = natural log of foreign direct investment;

LGCF = natural log of gross fixed capital formation;

μ = stochastic error term;

β_0 = intercept term and

$\beta_1 - \beta_3$ = partial regression coefficients.

In this research work the A Priori expectation should be: $\beta_1, \beta_2, \beta_3 > 0$.

3.4 Nature and Source of Data

The specific data required for this were from secondary source of data only. This implies quantitative data obtained from the World Bank IBRD IDA 2020 data.

3.5 Method of Data Collection

This study will make use of secondary data extracted from the World Bank IBRD IDA 2020 data. The dataset is a nationally representative of Nigeria based on cross-sectional data collated through various economic activities in the country and it will give a viable result for this research work. The data used for both dependent (GDP) and independent variables (trade openness, foreign direct investment, and gross fixed capital formation) will be obtained from World Bank IBRD IDA 2020 data.

3.6 Method of Data Analysis

The data from the World Bank IBRD IDA 2020 dataset will be processed by using EViews 10 which is statistical software. The regression analysis, specifically, the ARDL cointegration and ECM will be used for the study. The first stage in the estimation is to describe the variables using the descriptive statistics. This is followed by the unit root test. The Augmented Dickey Fuller (ADF) and Philip-Person (PP) unit root test will be used also.

The most important types of data used in empirical works is time series data. These empirical works that are based on time series data always assume that the underlying time series are stationary. However, it is widely known that most economic time series are non-stationary and the regression of a non-stationary time series on another non-stationary time series may lead to spurious regression. In order to overcome the problem of spurious regression, there is need for unit root test (that is, to test whether a variable is stationary or not). However, it should be noted

that stationarity test is not a customary practice when using ARDL bound test for cointegration analysis, but the need to carry out stationarity test in this study is to ensure that none of the variables is I(2) as ARDL becomes meaningless in the face of I(2) variables. For stationarity test, the study employed the Augmented Dickey-Fuller (ADF) and Philip-Person (PP) tests. The ADF test consists of estimating the following equation:

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \sum_{i-1}^{m} \alpha_i \Delta Y_{t-1} + \varepsilon_t \quad \text{---------- 3.3}$$

Where ε_t is a pure white noise error term;

t is time trend;

Y_t is the variable of interest;

$\beta 1$, $\beta 2$, δ and α_i are parameters to be estimated; and

Δ is the difference operator.

In ADF approach, we test whether $\delta = 0$. The PP test is based on estimating the following statistic:

$$\tilde{t}_\alpha = t_\alpha \left(\frac{\gamma_0}{f_0}\right)^{1/2} - \frac{T(f_0 - \gamma_0)(se(\tilde{\alpha}))}{2 f_0^{1/2} s} \quad \text{---------- 3.4}$$

Where $\tilde{\alpha}$ is the estimate;

t_α and t-ratio of α, $se(\tilde{\alpha})$ is the coefficient standard error (t-ratio is the same as that of ADF statistics); and

s is the standard error of the test regression;

γ_0 is a consistent estimate of the error variance of the ADF (calculated as (T-k) s^2 / T, where k is the number of regressors);

f_0 is the estimator of the residual spectrum at frequency zero.

Following the stationarity tests, cointegration test was carried out using the Autoregressive Distributed Lag (ARDL) bound testing approach to cointegration as proposed by Pesaran et al (2001). This procedure has numerous advantages over the alternative methods (i.e. Engle-

Granger (1987), Johansen and Juselius (1990), and Philip and Hansen (1990)). Apart from its better small sample properties, other advantages of ARDL framework include:

(i) it is based on estimating an unrestricted ECM which seems to take satisfactory lags that captures the data generating process in a general-to-specific framework of specification (Nwogwugwu, Maduka & Madichie 2015; Laurenceson & Chai, 2003);

(ii) unlike other cointegration techniques (e.g. Johansen's procedure which require certain pre-testing for unit roots and that the underlying variables to be integrated of the same order), the ARDL model provides an alternative yet a simple test for examining a long-run relationship irrespective of whether the underlying variables are purely I(0) or I(1), or fractionally integrated;

(iii) while the traditional cointegration methods may also suffer from the problems of endogeneity bias, the ARDL method can distinguish between dependent and explanatory variables in a single-equation set-up.

Thus, estimates obtained from the ARDL method of cointegration analysis are unbiased and efficient, since they avoid the problems that may arise in the presence of endogeneity bias. In line with the model of this study, the ARDL bounds testing procedure consists of estimating the following generic form of an unrestricted error correction model:

$$\Delta LGDP_t = \alpha + \Sigma\beta_i\Delta LGDP_{t-i} + \Sigma\gamma_m\Delta LOPN_{t-m} + \Sigma\theta_n\Delta LFDI_{t-n} + \Sigma\delta_j\Delta LGCF_{t-j} + \delta_1 LGDP_{t-1} + \delta_3 LOPN_{t-1} + \delta_4 LFDI_{t-1} + \delta_2 LGCF_{t-1} + \mu \quad \text{---------- 3.5}$$

The above equation shows the unrestricted ECM version of ARDL model specification. The bounds test is mainly based on the joint F-statistic whose asymptotic distribution is nonstandard under the null hypothesis of no cointegration (Pesaran et al. 2001). The first step in the ARDL bounds test approach is to estimate equation (3.5), which tests for the existence of a long-run relationship among the variables by conducting an F-test for the joint significance of the

coefficient of the lagged level of the variables. Thus, the null hypothesis of no cointegration for equation (3.5) is stated as follows:

H0: $\delta_1 = \delta_2 = \delta_3 = \delta_4 = 0$, against H1: $\delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq 0$

Our F-statistic which normalizes on LIMP is denoted with F_{LGDP} (LGDP/ LOPN, LFDI, LGCF).

The F-test has a nonstandard distribution which depends upon:

(i) whether variables included in the ARDL model are I(0) or I(1);

(ii) the number of regressors; and

(iii) whether the ARDL model contains an intercept and/or a trend.

Two sets of critical values are reported in Pesaran et al. (2001): one set is calculated assuming that all variables included in the ARDL model are I(0) and the other is estimated considering that the variables are I(1). We reject the null hypothesis of no cointegration when the F-statistic exceeds the upper critical bounds value. We do not reject the null hypothesis if the F-statistic is lower than the lower bounds. Finally, the decision about cointegration is inconclusive, if the calculated F-statistic falls between the lower and upper-bound critical values.

Furthermore, if a stable long run relationship is confirmed from the ARDL bound test, then we shall estimate the short run dynamic model through the following error correction model:

$$\Delta LGDP_t = \alpha + \Sigma\beta_i\Delta LGDP_{t-i} + \Sigma\gamma_m\Delta LOPN_{t-m} + \Sigma\theta_n\Delta LFDI_{t-n} + \Sigma\delta_j\Delta LGCF_{t-j} + \Psi ECM(-1) + \mu_t \quad \text{---------- 3.6}$$

where ECM_{t-1} is the error correction term resulting from the verified long-run equilibrium relationship and Ψ is a parameter indicating the speed of adjustment to the equilibrium level after any shock. The sign of ECM_{t-1} must be negative and significant to ensure effective convergence of short-run dynamics to the long-run equilibrium. The value of the coefficient, Ψ, which signifies the speed of convergence to the equilibrium process, usually ranges from -

1 to 0. The value of -1 signifies perfect and instantaneous convergence while 0 means no convergence after a shock in the process.

Above all, as pointed out by Pesaran (1997), it is imperative to ascertain the constancy of the long-run multipliers by testing the above error-correction model for the stability of its parameters. The commonly used procedures for stability test are the cumulative sum (CUSUM) and the cumulative sum of squares (CUSUMQ), both of which have been introduced by Brown et al. (1975) and used extensively in many empirical researches.

3.7 Justification of the Model

This study looks into the Autoregressive Distributed Lag (ARDL) approach to cointegration testing in terms of its application, estimation and interpretation. Given this, the following findings were made:

(i) ARDL cointegration technique is adopted irrespective of whether the underlying variables are I(0), I(1) or a combination of both, and cannot be applied when the underlying variables are integrated of order I(2). However, to avoid crashing of the ARDL technique and, effort in futility, it is advisable to tests for unit roots since variables that are integration of order I(2) leads to the crashing of the technique.

(ii) From the bound test result, if the variables are cointegrated, specify both short-run (ARDL) and long-run (VECM) models.

(iii) By applying the ARDL technique, unbiased long-run estimates are obtained.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation

The study which covered the period between 1980 to 2018 adopted the ex-post facto research design because the study utilized historical data which are time series in nature. Here, the discussion will begin with the estimation that is to describe the variables using the descriptive statistics. This is followed by the unit root test. The Augmented Dickey Fuller (ADF) unit root test will be used for this purpose. The Autoregressive Distributed Lag (ARDL) multivariate cointegration technique will form the basis for analyzing the long run relationship among the variables.

4.2 Data Analysis

It has been stated in the previous section that unit root testing is not a customary practice when using ARDL bound test for cointegration as the approach assumes that variables are either I(0) or I(1) or fractionally integrated. However, it becomes necessary to carry out this test to ensure that none of the variables is I(2) as ARDL bound test makes no meaning in the face of I(2) variables. The ADF and PP unit root tests will be been carried out on levels and differences of the series. The tests assume intercept with no trend in both ADF and PP unit root specifications while the optimal lag length will be determined based on SIC automatic selection. Error correction model (ECM) would be carried out to determine the long run causality in the situation that cointegration exist.

4.2.1 Descriptive Statistics

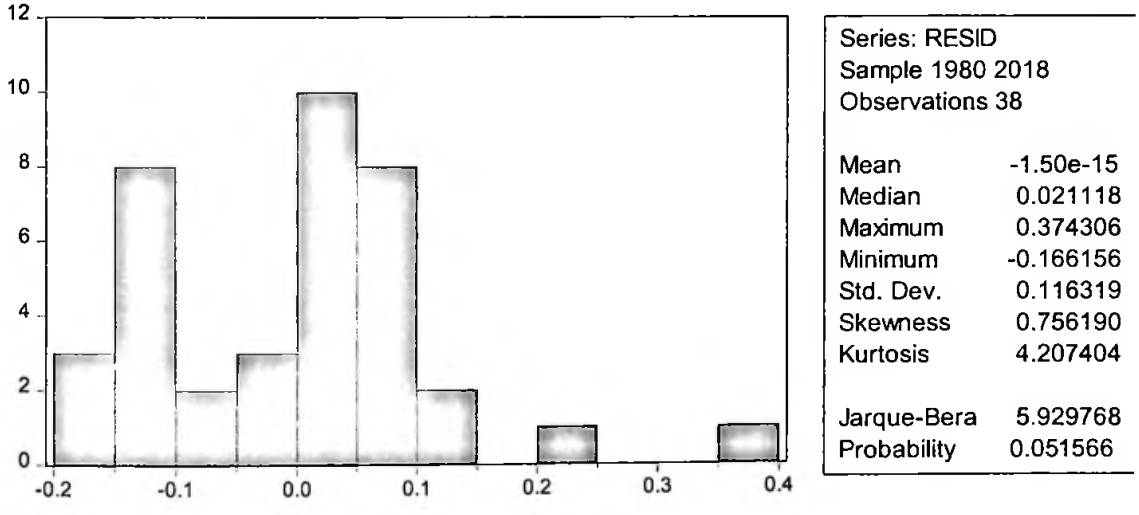
Table 4.1 provides the descriptive statistics of the variables in terms of their mean, median standard deviation, skewness, kurtosis, and Jarque-Bera t-statistics

Table 4.1: Descriptive Statistics Results

	LGDP	LOPN	LFDI	LGFCF
Mean	7.443700	3.372484	0.176264	3.450911
Median	7.344674	3.524901	0.232703	3.563678
Maximum	7.849285	3.975523	1.756279	4.492965
Minimum	7.188637	2.212206	-1.357039	2.651037
Std. Dev.	0.238318	0.499591	0.771292	0.538451
Skewness	0.517032	-1.072397	-0.117949	0.024985
Kurtosis	1.657000	3.121136	2.506562	1.991724
Jarque-Bera	4.548816	7.306786	0.473620	1.613602
Probability	0.102858	0.025903	0.789141	0.446284
Sum	282.8606	128.1544	6.698027	131.1346
Sum Sq. Dev.	2.101437	9.234870	22.01101	10.72740
Observations	38	38	38	38

Source: Author's Computation 2020, using EVIEWS 10.0

Figure 4.1: Descriptive Statistics



Source: Author's Computation 2020, using EVIEWS 10.0

It can be observed that log of real GDP per capita has an average level of 7.44 and was at its highest peak in 2014 at 7.85. Trade openness has log averaged 3.37 and reached its maximum in 2011 at 3.98. Foreign direct investment in log averaged 0.18 and reached its maximum in 1994 at 1.76. Gross fixed capital formation with log averaged 3.45 and reached its maximum in 1981 at 4.49. The standard deviation for each variable is also found low as compared to its

mean value. Similarly, the low numeric of skewness confirms normality. The result of the kurtosis with standard value of 3 shows that the variables are in line with the assumption of normality distribution. It can also be observed that the probability values of the Jarque-Bera statistic suggest that the variables are not normally distributed since the probability value of the residual is not greater than 5%.

4.2.2 Trend Analysis

The analysis below will show the trend of the variables, in order to check if the variables have unit root and to know if they are stationary at levels or at the first difference.

Table 4.2: Augmented Dickey Fuller Unit Root Test on LGDP at level

Null Hypothesis: LGDP has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-2.274411	0.4364
Test critical values	1% level 5% level 10% level	-4.234972 -3.540328 -3.202445	
C			0.0284
Trend			0.0673

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.2 shows the trend and intercept option at the level, the hypothesis of a unit root cannot be rejected at the 5% level given that t-statistic of -2.274411 at a probability value of 0.4364 and also only the intercept is statistically significant at 5% while the trend is not significant at 5%. Therefore, it is nonstationary with intercept and without trend at the level.

Table 4.3: Augmented Dickey Fuller Unit Root Test on DLGDP at 1st difference

Null Hypothesis: D(LGDP) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-3.564753	0.0479
Test critical values	1% level 5% level 10% level	-4.243644 -3.544284 -3.204699	
C			0.5265
Trend			0.9573

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.3 shows the trend and intercept option at the 1st difference, the hypothesis of a unit root is rejected at the 5% level given that t-statistic of -3.564753 at a probability value of 0.0479 while both the intercept and trend are not significant at 5%. Therefore, it is stationary at the first difference without intercept and trend.

Table 4.4: Augmented Dickey Fuller Unit Root Test on DLGDP at 2nd difference

Null Hypothesis: D(LGDP, 2) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-10.15875	0.0000
Test critical values	1% level 5% level 10% level	-4.234972 -3.540328 -3.202445	
C			0.1038
Trend			0.1309

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.4 shows the trend and intercept option at the 2nd difference, the hypothesis of a unit root is rejected at the 5% level given that t-statistic of -10.15875 at a probability value of 0.0000 while both the intercept and trend are not significant at 5%. Therefore, it is stationary at the second difference without intercept and trend.

Table 4.5: Augmented Dickey Fuller Unit Root Test on LOPN at level

Null Hypothesis: LOPN has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-2.870811	0.1828
Test critical values	1% level 5% level 10% level	-4.219126 -3.533083 -3.198312	
C			0.0146
Trend			0.0676

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.5 shows the trend and intercept option at the level, the hypothesis of a unit root cannot be rejected at the 5% level given that t-statistic of -2.870811 at a probability value of 0.1828 and also only the intercept is statistically significant at 5% while the trend is not significant at 5%. Therefore, it is nonstationary with intercept and without trend at the level.

Table 4.6: Augmented Dickey Fuller Unit Root Test on DLOPN at 1st difference

Null Hypothesis: D(LOPN) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-7.224576	0.0000
Test critical values	1% level 5% level 10% level	-4.226815 -3.536601 -3.200320	
C			0.6710
Trend			0.7506

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.6 shows the trend and intercept option at the 1st difference, the hypothesis of a unit root is rejected at the 5% level given that t-statistic of -7.224576 at a probability value of 0.0000 while both the intercept and trend are not significant at 5%. Therefore, it is stationary at the first difference without intercept and trend.

Table 4.7: Augmented Dickey Fuller Unit Root Test on DLOPN at 2nd difference

Null Hypothesis: D(LOPN, 2) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-4.653882	0.0049
Test critical values	1% level 5% level 10% level	-4.339330 -3.587527 -3.229230	
C			0.5223
Trend			0.7292

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.7 shows the trend and intercept option at the 2nd difference, the hypothesis of a unit root is rejected at the 5% level given that t-statistic of -4.653882 at a probability value of 0.0049 while both the intercept and trend are not significant at 5%. Therefore, it is stationary at the second difference without intercept and trend.

Table 4.8: Augmented Dickey Fuller Unit Root Test on LGFCF at level

Null Hypothesis: LGFCF has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-2.313146	0.4168
Test critical values	1% level 5% level 10% level	-4.226815 -3.536601 -3.200320	
C			0.0363
Trend			0.0596

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.8 shows the trend and intercept option at the level, the hypothesis of a unit root cannot be rejected at the 5% level given that t-statistic of -2.313146 at a probability value of 0.4168 and also only the intercept is statistically significant at 5% while the trend is not significant at 5%. Therefore, it is nonstationary with intercept and without trend at the level.

Table 4.9: Augmented Dickey Fuller Unit Root Test on DLGFCF at 1st difference

Null Hypothesis: D(LGFCF) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-5.627045	0.0003
Test critical values	1% level 5% level 10% level	-4.234972 -3.540328 -3.202445	
C			0.0347
Trend			0.1639

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.9 shows the trend and intercept option at the 1st difference, the hypothesis of a unit root is rejected at the 5% level given that t-statistic of -5.627045 at a probability value of 0.0003 while intercept is significant but trend is not significant at 5%. Therefore, it is stationary at the first difference with intercept and without trend.

Table 4.10: Augmented Dickey Fuller Unit Root Test on DLGFCF at 2nd difference

Null Hypothesis: D(LGFCF, 2) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-8.983534	0.0000
Test critical values	1% level 5% level 10% level	-4.252879 -3.548490 -3.207094	
C			0.9076
Trend			0.8062

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.10 shows the trend and intercept option at the 2nd difference, the hypothesis of a unit root is rejected at the 5% level given that t-statistic of -8.983534 at a probability value of 0.0000 while intercept and trend are not significant at 5%. Therefore, it is stationary at the first difference without intercept and trend.

Table 4.11: Augmented Dickey Fuller Unit Root Test on LFDI at level

Null Hypothesis: **LFDI** has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-2.960298	0.1566
Test critical values	1% level 5% level 10% level	-4.226815 -3.536601 -3.200320	
C			0.7931
Trend			0.8528

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.11 shows the trend and intercept option at the level, the hypothesis of a unit root cannot be rejected at the 5% level given that t-statistic of -2.960298 at a probability value of 0.1566 while both the intercept and trend are not significant at 5%. Therefore, it is nonstationary without intercept and trend at the level.

Table 4.12: Augmented Dickey Fuller Unit Root Test on DLFDI at 1st difference

Null Hypothesis: D(LFDI) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-9.491140	0.0000
Test critical values	1% level 5% level 10% level	-4.234972 -3.540328 -3.202445	
C			0.1713
Trend			0.1606

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.12 shows the trend and intercept option at the 1st difference, the hypothesis of a unit root is rejected at the 5% level given that t-statistic of -9.491140 at a probability value of 0.0000 while both intercept and trend are not significant at 5%. Therefore, it is stationary at the first difference without intercept and trend.

Table 4.13: Augmented Dickey Fuller Unit Root Test on DLFDI at 2nd difference

Null Hypothesis: D(LFDI, 2) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic-based on SIC, maxlag=9)

		t-Statistic	Prob.
Augmented Dickey-Fuller test statistic		-7.077334	0.0000
Test critical values	1% level 5% level 10% level	-4.252879 -3.548490 -3.207094	
C			0.7960
Trend			0.7495

Source: Author's Computation 2020, using EVIEWS 10.0

The Table 4.13 shows the trend and intercept option at the 2nd difference, the hypothesis of a unit root is rejected at the 5% level given that t-statistic of -7.077334 at a probability value of 0.0000 while intercept is significant but trend is not significant at 5%. Therefore, it is stationary at the second difference without intercept and trend.

4.2.3 Unit Root Analysis

In order to analyze the relationship between globalization and economic growth in Nigeria, firstly, it is examined whether the variables included in the model prediction using the Augmented Dickey Fuller (ADF) unit root test were stationary over time. The results of ADF unit root test are shown in Table 4.14.

Table 4.14: ADF and PP Unit Root Test Results

Variables	ADF		Order of integration	PP		Order of integration
	Levels	1st Diff.		Level	1st Diff.	
LGDP	-1.2215	-4.2121 ***	I(1)	-0.8291	-4.2659***	I(1)
LOPN	-2.1671	-7.3504 ***	I(1)	-2.4438	-7.4002 ***	I(1)
LGFCF	-1.8384	-5.4152 ***	I(1)	-1.8506	-5.4114 ***	I(1)
LFDI	-3.1659 **	-9.2454 ***	I(0)	-2.9946 **	-9.7656 ***	I(0)

Source: Author's Computation 2020, using EVIEWS 10.0

Notes: (*) Significant at the 10%; (**) Significant at the 5%; (***) Significant at the 1%. And (no) Not Significant. Lag length is based on SIC automatic selection.

From the results in Table 4.14 shows that be variable LGDP is not integrated at order zero I(0) but I(I) and not stationary at the 5% levels but with 1% stationary at first difference in the ADF unit root, it is not stationary at the 5% levels but with 1% stationary at first difference according PP unit root tests.

The result in Table 4.14 shows that be variable LOPN is not integrated at order zero I(0) but I(I) and not stationary at the 5% levels but with 1% stationary at first difference in the ADF unit root, it is not stationary at the 5% levels but with 1% stationary at first difference according PP unit root tests.

The result in Table 4.14 shows that be variable LFDI is not integrated at order zero I(0) but I(I) and not stationary at the 5% levels but with 1% stationary at first difference in the ADF unit root, it is not stationary at the 5% levels but with 1% stationary at first difference according PP unit root tests.

The result in Table 4.14 shows that be variable LGFCF is integrated at order zero I(0) and stationary at the 5% levels with 1% stationary at first difference in the ADF unit root, it is also stationary at the 5% levels with 1% stationary at first difference according PP unit root tests.

However, ADF and PP tests were not conclusive about the exact order of integration of all the variables. It has also been argued that PP unit root test has advantage over the ADF test in some ways which include:

(i) ADF has weak power in the face of structural break and as such, its results could be biased and

(ii) The ADF result is affected by the sample size. In passing, it should be noted that none of the variables is I(2) as all variables were either I(0) or I(1). This provides justification for the use of ARDL bound test for cointegration due to some abnormality in some data.

The results of the unit root tests show that the chosen variables are I(1), I(0) and none is I(2). This implies that we can safely proceed to the ARDL bound test for cointegration analysis. The results of the ARDL bound tests are reported in Table 4.15 below.

4.2.4 ARDL Bound Test for Cointegration Analysis

Co-integration test is carried out in order to determine the long-run relationship between the dependent and independent variables when one or all of the variables is/are non-stationary at level which means they have stochastic trend. The most appropriate cointegration test for series

that are of different order of integration is the one proposed by Pesaran, Shin and Smith (2001) defined as bounds cointegration test. The result of the bounds test regression is provided below:

Table 4.15: ARDL Bound Test for Cointegration

Dependent Variables	F-Statistics	Critical Value Bounds at 1% and 5%	
		Lower Bound (Upper Bound) 1(0)	Lower Bound (Upper Bound) 1(1)
ΔLGDP	10.10102 *	2.72(4.29)	3.77(5.61)
ΔLOPN	6.361098 *	2.72(4.29)	3.77(5.61)
ΔLFDI	12.53947 *	2.72(4.29)	3.77(5.61)
ΔLGFCF	4.165002	2.72(4.29)	3.77(5.61)

Source: Author's Computation 2020, using EVIEWS 10.0

Note: (*) indicates significant at 1% level (**) indicates significant at 5%, (***) indicates significant at 10%.

From Table 4.15, shows that the null hypothesis of no cointegration is rejected for LGDP variable when it is made the dependent variable. This is because the F-statistic of 10.10102 for the joint significance of the lagged of level variables is greater than the upper bound critical value at 1% and 5% levels of significance. This shows evidence of cointegration when the variable is made dependent, meaning that some of the variables are endogenous variables.

The Table 4.15, shows that the null hypothesis of no cointegration is rejected for LOPN variable when it is made the dependent variable. This is because the F-statistic of 6.3610947 for the joint significance of the lagged of level variables is greater than the upper bound critical value at 1% and 5% levels of significance. This shows evidence of cointegration when the variable is made dependent, meaning that some of the variables are endogenous variables.

The Table 4.15, shows that the null hypothesis of no cointegration is rejected for LFDI variable when it is made the dependent variable. This is because the F-statistic of 12.53947 for the joint significance of the lagged of level variables is greater than the upper bound critical value at 1% and 5% levels of significance. This shows evidence of cointegration when the variable is made dependent, meaning that some of the variables are endogenous variables.

From Table 4.15 the null hypothesis of no cointegration is accepted for LGFCF variable when it is made the dependent variable. This is because the F-statistic of 4.165002 for the joint significance of the lagged of level variables is less than the upper bound critical value at 1% and 5% levels of significance. This shows evidence of no cointegration when the variable is made dependent.

Furthermore, it is a customary practice to report the Granger causality test with respect to the variable of interest (LGDP).

4.2.5 Granger Causality Test

Causality implies that past values of one variable has a predictive ability in determining the present values of another variable. The pairwise granger causality test result is provided in table 14.16 below.

Table 4.16: Granger Causality Test

Pairwise Granger Causality Tests

Sample: 1980-2018

Lags: 2

Null Hypothesis:	Observations	F-Statistic	Probability
LOPN does not Granger Cause LGDP	37	3.67201	0.0367*
LGDP does not Granger Cause LOPN		2.97656	0.0652
LGFCF does not Granger Cause LGDP	36	5.02948	0.0128*
LGDP does not Granger Cause LGFCF		0.89491	0.4189
LFDI does not Granger Cause LGDP	36	1.63513	0.2113
LGDP does not Granger Cause LFDI		2.15981	0.1324

Source: Author's Computation 2020, using EVIEWS 10.0
NB: * indicates significant at 5% level.

From Table 4.16, it shows that there is pairwise causal relationship between LOPN and LGDP at the 5% significance level and the null hypothesis is therefore rejected.

Furthermore Table 4.16, shows that there is pairwise causal relationship between LGFCF and LGDP at the 5% significance level and the null hypothesis is therefore rejected. While LGDP to LOPN, LGDP to LGFCF, LFDI to LGDP, and LGDP to LFDI of pairwise Granger causality test will accept the null hypothesis.

4.2.6 ARDL Normalized Long run Coefficients

Table 4.17: ARDL Normalized Long run Coefficients (Dependent Variable: LGDP)

Variables	Coefficients	Std. Error	t-Statistics	Prob.
LOPN	-0.015229	0.018901	-0.805695	0.4322
LFDI	0.007030	0.007658	0.918016	0.3722
LGFCF	-0.104686 *	0.043864	-2.386605	0.0297
C	3.099680	0.727062	4.263295	0.0006
R-squared	0.996549			
Adjusted R-squared	0.991567			
F-statistic	251.8496			
Prob(F-statistic)	0.000000			
Breusch-Godfrey Serial Correlation LM Test:				
F-statistic	0.541291	Pro. F (5,12)		0.5937

Source: Author's Computation 2020, using EVIEWS 10.0
NB: * indicates significant at 5% level.

From Table 4.17 above, the long run model is grossly robust, meaning that all the explanatory variables taken together have significant impact on the dependent variable (LGDP). This is occasioned by the fact that the F-statistic (with its p-value) is statistically significant at 5% level. Thus, all the explanatory variables (gross fixed capital formation, trade openness and foreign direct investment) jointly explain variations in the dependent variable (gross domestic product). Also, there is goodness of fit as all the explanatory variables account for about 99.7% of total variations in the dependent variable (LGDP) based on the value of R-squared. The Breusch-Godfrey Serial Correlation LM Test (a test for the presence of autocorrelation in the residuals) confirms that the model is not plagued by autocorrelation of any order as the F-value with its associated p-value is statistically insignificant at any level. This implies that our model could be relied upon for drawing inferences.

The result showed that LOPN has no significant on economic growth and it as negative impact on the economic growth in the long-run. The result showed that LFDI has no significant on economic growth and it as positive impact on the economic growth in the long-run. The result

also showed that LGFCF has significant on economic growth at 5% levels of significance and it as negative impact on the economic growth in long-run.

4.2.7 Error Correction Model Analysis

Table 4.18: Parsimonious ECM version of the ARDL Model

Variables	Coefficients	Std. Error	t-Statistics	Prob.
D(LGDP(-1))	0.421619	0.113761	3.706170	0.0019
D(LOPN)	-0.015229	0.015204	-1.001623	0.3314
D(LOPN(-1))	0.049385	0.013956	3.538564	0.0027
D(LFDI)	0.007030	0.006204	1.133155	0.2738
D(LFDI(-1))	0.011646	0.006353	1.833033	0.0855
D(LGFCF)	-0.104686	0.034367	-3.046096	0.0077
D(LGFCF(-1))	0.147018	0.040949	3.590315	0.0024
CointEq(-1)	-0.3129090	0.049727	-6.292554	0.0000

Source: Author's Computation 2020, using EVIEWS 10.0

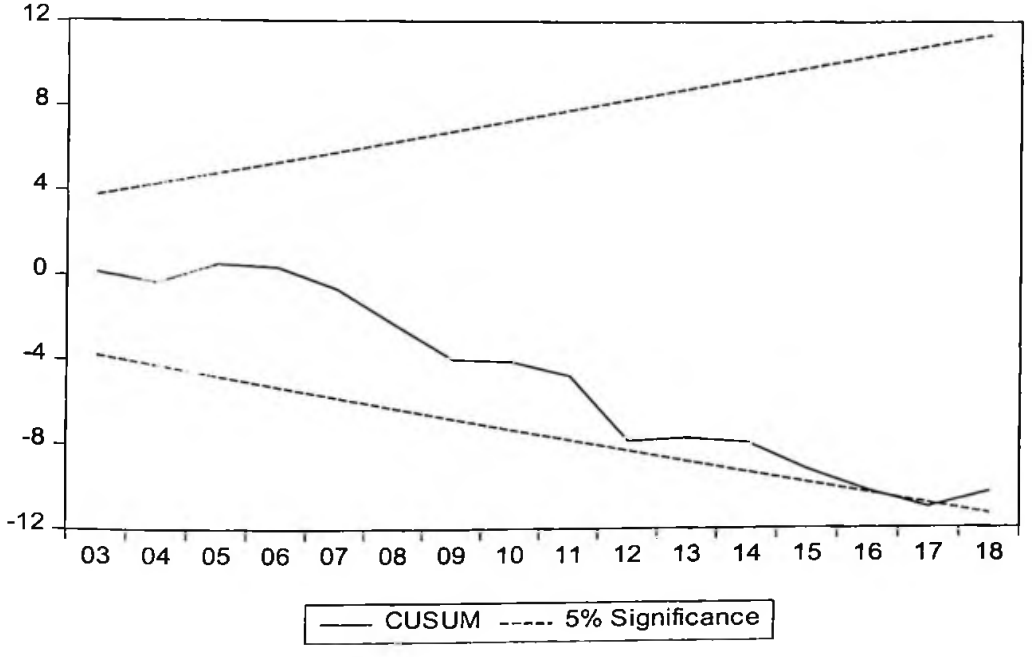
The result in Table 4.18 is the parsimonious ECM version of the ARDL model for the short run dynamics. The parsimonious model was arrived at through the automatic selection of SIC in ARDL model provided in EVIEWS 10.0, following a maximum lag length of 5.

The result in Table 4.18 shows that LOPN has a negative impact on economic growth. Which means that a 1% increase in trade openness will decrease economic growth by 1.52%. However, the t-statistic shows that trade openness has no significant impact on economic growth in Nigeria. The decision is made based on the probability level of trade openness which is greater than 0.05 (p- value > 0.05).

The result in Table 4.18 shows that LFDI has a positive impact on economic growth. Which means that a 1% increase in LFDI will increase economic growth by 0.7%. However, the t-statistic shows that LFDI has no significant impact on economic growth in Nigeria. The decision is made based on the probability level of LFDI which is greater than 0.05 (p-value > 0.05).

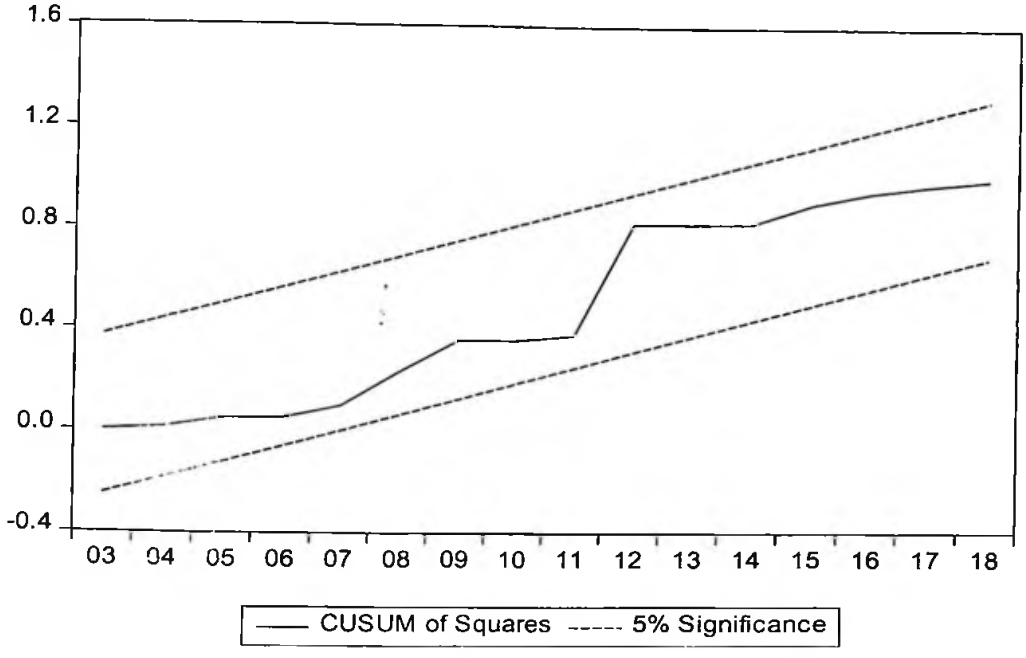
The LGFCF has a negative impact on the economic growth, the t-statistic shows that LGFCF has significant impact on economic growth in Nigeria. The decision is made based on the probability level of LGFCF which is less than 0.05 (p-value < 0.05).

Figure 4.2: Stability Test (Cusum)



Source: Authors' Computation 2020, using EVIEWS 10.0

Figure 4.3 Stability Test (Cusum of Squares)



Source: Authors' Computation 2020, using EVIEWS 10.0

The stability tests reported in Figure 4.2 & 4.3 show that the estimates of the ARDL model is dynamically stable over the long run as the fitted line falls within the 5% critical regions for both cumulative sum and cumulative sum of squares.

4.3 Discussion of Findings

This study investigated the impact of globalization on the Nigerian economy from 1980 through to 2018. The parsimonious ECM version of the ARDL model for the short run dynamics relationship among the variables used for the study. The error correction model (CointEq(-1)) coefficient revealed a correct sign and statistically significant which measure the speed of adjustment of dependent variables at which the equilibrium is achieved. The result showed that 31% of any disequilibrium in the economic growth could be adjusted within a lag (a year in the study).

The study showed that trade openness has a negative impact on economic growth, it means that any decision taken at 1% increase in trade openness will decrease economic growth by 1.52%.

However, the t-statistic shows that trade openness has no significant impact on economic growth in Nigeria due to the fact that the p-value is greater than 0.05%.

The study showed that foreign direct investment has a positive impact on economic growth, it means that any decision taken at 1% increase in foreign direct investment will increase economic growth by 0.7%. However, the t-statistic shows that foreign direct investment has no significant impact on economic growth in Nigeria due to the fact that the p-value is greater than 0.05%.

The study also showed that gross fixed capital formation has a negative impact on economic growth, it means that any decision taken at 1% increase in gross fixed capital formation will decrease economic growth by 10.5%. However, the t-statistic shows that gross fixed capital formation has significant impact on economic growth in Nigeria due to the fact that the p-value is less than 0.05%.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Major Findings

This section entails the summary of various empirical findings, conclusion and recommendations which could be useful for future research findings. The study examined the impact of globalization on economic growth in Nigeria. Specifically, the study employed the contemporary econometric technique of cointegration and error correction mechanism within the framework of the Pesaran et al. (2001) ARDL model to investigate the impact of trade openness; foreign direct investment and gross fixed capital formation (which are driven by globalization) on economic growth in Nigeria. Using annualized secondary time series data from 1980 to 2018, the study reveals that trade openness; and foreign direct investment have significant positive impact on economic growth in Nigeria. Thus, adequate mechanism should be put in place to ensure that globalization brings about the desired pace of economic growth in Nigeria. The research work discovered the following:

(i) The trade openness has no significant impact on economic growth in Nigeria due to the fact that the p-value is greater than 0.05%.

(ii) The foreign direct investment has no significant impact on economic growth in Nigeria due to the fact that the p-value is greater than 0.05%.

(iii)The gross fixed capital formation has significant impact on economic growth in Nigeria due to the fact that the p-value is less than 0.05%.

5.2 Conclusion

The study reveals that gross fixed capital formation has significant impact on economic growth in Nigeria in the long run while trade openness and foreign direct investment were not having significant impact on economic growth in Nigeria in the long run. This shows that any decision

made on the gross fixed capital formation will have a strong causality effect at 10.5% decrease to the economy growth of Nigeria.

5.3 Recommendations

Nigeria should move from shackle of exploitation in the name globalization, the country must be assertive or aggressive with the following recommendations;

(i) The trade openness should be regulated by government, from the result an increase in trade openness caused a decrease in our GDP, it can be inferred that trade openness decreases GDP through reduction in the supply of domestic goods as a result the killing of infant industries. This shows that infant industries should be encouraged with adequate resources in order to be able export her finished products and making sure that such products are up to international standard.

(ii) There should be new policies and infrastructures in place in order to facilitate the potentials of FDI for economic growth. The local industries and businesses should be encouraged through schemes and platforms that would ensure good and welcoming business climate to thrive on. Policies that would bring about the stability of the economy should be pursued. The government should support the local companies and the local workforce towards achieving world standards. There should be more effective planning for FDI in the long-run.

(iii)Government should ensure that both money and capital markets in Nigeria are adequately functioning in order to enhance investors' confidence as the source of start-up capital. This will lead to capital formation and thereby enhances economic growth.

5.4 Limitations of the Study

This study has potential limitations, this may be based on the effect estimates in the model are based on intervention and prospective observation studies. They are therefore subject to biases and confounding that may have influenced the model estimate. There may be issue of sample

bias or selection bias based on the data collected from different sources, this can be during collection, respondent bias and collation; this might not give the true picture of the analysis. There are also transportation issues during the gathering of this data, most especially based on the epidemic period led to increase in prices of transportation that made this research to be microscopic in gathering of the data. The data gotten online are not adequately updated based on the resent year and this made the year range to span from 1980 to 2018. There is also factor of time constraint in such that there are time lapses that the research most be submitted.

5.5 Contribution to Knowledge

This research work enables us to know the impact of globalization to the growth of Nigeria economy, such as trade openness and foreign direct investment does not have significant impact on economic growth while gross fixed capital formation has significant impact on economic growth in Nigeria.

5.6 Suggestion for Further Studies

There should be more research to know if other index of globalization like labour force, human capital, and financial integration can have significance impact on economic growth in Nigeria in the long run.

REFERENCES

Adesoye, A. A., Ajike, E. O. & Maku, O. E. (2015); Economic Globalization and Economic Growth in the Developing Economies: A Case of Nigerian Economy. *International Journal of Economics, Commerce and Management, 3(7), 340-355.*

Aimiuwu, L. E. (2004); Globalization: The human resource challenge, management in Nigeria. *Journal of Nigerian Institute of Management,* 39/40(1/2): 19-28.

Alimi, O. Y. & Atanda, A. A. (2011); Globalization, business cycle and economic growth in Nigeria. *Africa Journal of Scientific Research vol. 7, No. 1.*

Barrett M. (1991); The Politics of Truth: from Marx to Foucault. *Cambridge: Polity Press.*

Felix Uchechukwu (2016); Impact of Globalization on Nigerian Economy: *Pyrex Journal of Business and Finance Management Research, Vol 2 (10) pp.109-121 December, 2016.*

Feridun, M., Olusi, J. O. & Folorunso, B. A. (2006); Analysis of The Impact of Globalization on Economic Development in Developing Economies: An Application of Error Correction Modeling (Ecm) To Nigeria. *Applied Econometric and International Development, 6(3), 173-182.*

Giddens, A. (1990); The Consequences of Modernity, Cambridge and Oxford: *Polity and Blackwell.*

Held, D. et al. (1999); Global Transformations: Politics, Economics and Culture, California: *Stanford University Press.*

M. Shuaib, Ekeria O. Augustine and Ogedengbe A. Frank (2015); The Impact of Globalisation on the Growth of Nigerian Economy from 1960-2010: Error Correction Model Analysis. *British Journal of Economics, Management & Trade, 7(1): 63-73, Article no. BJMET. 2015.072 ISSN: 2278- 098X*

Jelilov, Gylych; Chidigo, Mary; Onder, Evren. (2016); Firm Size and Firm Growth: Testing Gibrat's Law on 17 Nigeria Manufacturing Industry (2000-2011). *The International Journal of Social Sciences and Humanities Invention, 1869-1879.*

Jelilov, Gylych; Muhammad Yakubu, Maimuna; (2015); Economic Growth and Energy Consumption in Nigeria. *The Empirical Economics Letters, 1187-1196.*

Jelilov, G. (2015); An Outlook of the Recent Entrepreneurship and Economic Problems in Nigeria: *An Expatriate Perspective. British Journal of Advance Academic Research, 78-85.*

Jelilov, G. (2016); The Impact of Interest Rate on Economic Growth Example of Nigeria. *African Journal of Social Sciences, 51-64.*

Johansen S, Juselius K. (1990); Maximum Likelihood Estimation and Inference on Cointegration with Application to the Demand for money: *Oxford Bullentin of Economics and Statistics. 52(2): 162- 210.*

Langhorne (2001); The Coming of Globalization: Its Evolution and Contemporary Consequences. *New York: Palgrave.*

Maduka, A. C; Madichie, C. V & Eze, E. A (2017); Globalization and Economic Growth: Evidence from Nigeria.

Nwavcama, P.C. and Ibe, R.C. (2014); "Globalization and Economic Growth. An Econometric Dimension Drawing Evidence from Nigeria". *International Review of Management and Business Research, 3 (2).*

Nwogwugwu, U. C., Maduka, A. C. & Madichie, C. V. (2015); Price and Income Elasticities of Import Demand in Nigeria: evidence from the bound testing procedure. *International Journal of Development and Economic Sustainability, 3(4), 91-103.*

Oguh C. (2016, December 7). Why Nigeria no longer attract foreign direct investment. Retrieved from *http://financingnigeria.com/why-nigeria-no-longer-attractforeign-direct-investment-blog-194.html.*

Okafor, V. I., Egiyi, M. A. & Eyisi, A. S. (2017). Relationship between FDI, capital market and Nigerian economy. *Journal of Economics and Sustainable Development, 8(14), 254 – 265. Retrieved from* https://pdfs.semanticscholar.org/63b3/9c00cbd69404a2481076b687c326b715798d.pdf

Okpokpo, G. U., Ifelunini, I. A. & Osuyali, F. (2014); Is Globalization a Potent Driver of Economic Growth? Investigating the Nigerian Non-oil Exports. *Asian Economic and Financial Review, 4(6), 781-792.*

Oloyede J.A. Fundamentals of investment analysis Lagos: *Lion Press; 2001.*

Omolade, A., Morakinyo, A. & Ifeacho, C. (2013); Globalization and economic development in Nigeria. *Journal of Research in Humanities and Social Science, 1(4), 06-14.*

Onwuka, E. C. & Eguavoen, A. (2007); Globalization and Economic Development: The Nigerian Experience. *Journal of Social Science, 14(1), 45-51.*

Pesaran, M. H. Shin, Y. & Smith, R. J. (2001); Bounds Testing Approaches to the Analysis of Level Relationships. *Journal of Applied Econometrics, 16(3), 289-326.*

Schirato and Webb (2003); Understanding Globalization SAGE, London.

Stiglitz J. (2001); Globalization and its Discontents, W. W Norton, USA.

Todaro, M. P. & Smith S. C. (2003); Economic development. 8th edition. Singapore: *Pearson Education.*

Todaro MP, Smith SC. (2006); Economic development in the World, 9th edition, England: *Pearson Education Limited.*

Utuk, I. O. (2015). Globalization and Economic Growth: the Nigerian Experience. *Journal of Law, Policy and Globalization, 36, 18-28.*

Wohlmuth K., (2001); Africa's growth prospects in the era of globalization: the optimists versus the pessimists, Bremen, *Institute für Weltwirtschaft und International Management.*

World Bank (2002); Globalization, Growth and Poverty: building an inclusive world economy. *Washington D. C: Oxford University Press.*

APPENDIX

Data on the Required Variables

Year	GDP	TOPN	FDI	GFCF
1980	2059.991	48.57131	-1.150856	NA
1981	1741.715	18.17173	0.329732	89.38613
1982	1581.562	13.77983	0.301613	85.94140
1983	1373.537	10.04497	0.375338	75.75651
1984	1324.297	9.380541	0.257422	58.95629
1985	1367.119	10.39198	0.658453	46.39545
1986	1332.805	9.135846	0.352544	54.94827
1987	1339.813	19.49534	1.159070	50.04989
1988	1400.734	16.94061	0.762696	43.75477
1989	1390.805	34.18262	4.282088	52.48744
1990	1515.013	30.92474	1.087951	53.12219
1991	1482.221	37.02160	1.450318	48.40018
1992	1512.248	38.22739	1.876018	43.77439
1993	1444.846	33.71975	4.847790	44.47636
1994	1383.689	23.05924	5.790847	42.06784
1995	1348.681	39.52838	0.762196	37.20593
1996	1370.726	40.25773	0.977521	36.58167
1997	1376.302	51.46101	0.862276	38.42226
1998	1377.090	39.27861	0.548616	40.55340
1999	1350.984	34.45783	1.692558	38.27800
2000	1383.666	48.99560	1.641739	34.04928
2001	1429.197	49.68050	1.608284	30.03794
2002	1607.238	40.03517	1.964727	26.76866
2003	1682.100	49.33496	1.911463	28.37090
2004	1791.262	31.89587	1.374086	26.06325
2005	1857.926	33.05946	2.828830	24.96612
2006	1919.724	42.56657	2.056024	26.16650
2007	1993.097	39.33693	2.189934	20.18004
2008	2072.273	40.79684	2.431643	18.85977
2009	2179.989	36.05871	2.930908	21.11545
2010	2292.445	43.32076	1.658475	16.81501
2011	2350.337	53.27796	2.154611	15.67631
2012	2384.954	44.53237	1.539030	14.21112
2013	2476.864	31.04886	1.080240	14.16873
2014	2563.900	30.88519	0.825653	15.08353
2015	2563.149	21.44693	0.619546	14.82718
2016	2456.306	20.72252	1.099404	14.72496
2017	2412.367	26.34760	0.932280	14.71562
2018	2396.311	33.00126	0.502803	19.01460

Source:- World Bank IBRD IDA 2020 data.

Log of Variables

	LGDP	LOPN	LFDI	LGFCF
1980	7.630457	3.883033	NA	NA
1981	7.462626	2.899867	-1.109475	4.492965
1982	7.366168	2.623206	-1.198610	4.453666
1983	7.225145	2.307072	-0.979927	4.327524
1984	7.188637	2.238637	-1.357039	4.076796
1985	7.220461	2.341034	-0.417863	3.837201
1986	7.195041	2.212206	-1.042579	4.006392
1987	7.200286	2.970175	0.147618	3.913020
1988	7.244752	2.829714	-0.270895	3.778601
1989	7.237638	3.531717	1.454441	3.960574
1990	7.323179	3.431557	0.084296	3.972595
1991	7.301297	3.611502	0.371783	3.879504
1992	7.321353	3.643552	0.629151	3.779049
1993	7.275758	3.518084	1.578523	3.794958
1994	7.232508	3.138066	1.756279	3.739283
1995	7.206882	3.677019	-0.271552	3.616468
1996	7.223096	3.695302	-0.022736	3.599547
1997	7.227156	3.940824	-0.148179	3.648637
1998	7.227728	3.670680	-0.600356	3.702620
1999	7.208588	3.539736	0.526241	3.644875
2000	7.232492	3.891730	0.495756	3.527809
2001	7.264868	3.905613	0.475168	3.402461
2002	7.382273	3.689758	0.675353	3.287232
2003	7.427798	3.898633	0.647869	3.345364
2004	7.490675	3.462477	0.317789	3.260526
2005	7.527216	3.498308	1.039863	3.217520
2006	7.559937	3.751069	0.720774	3.264480
2007	7.597445	3.672164	0.783872	3.004694
2008	7.636402	3.708605	0.888567	2.937031
2009	7.687075	3.585148	1.075312	3.050005
2010	7.737374	3.768632	0.505898	2.822272
2011	7.762314	3.975523	0.767610	2.752151
2012	7.776935	3.796216	0.431152	2.654025
2013	7.814748	3.435562	0.077184	2.651037
2014	7.849285	3.430277	-0.191581	2.713604
2015	7.848992	3.065581	-0.478769	2.696462
2016	7.806414	3.031221	0.094768	2.689544
2017	7.788364	3.271377	-0.070122	2.688909
2018	7.781686	3.496546	-0.687556	2.945207

Source:- Author's Computation 2020, using EVIEWS 10.0

Table 4.1 Descriptive Statistics Results

	LGDP	LOPN	LFDI	LGFCF
Mean	7.443700	3.372484	0.176264	3.450911
Median	7.344674	3.524901	0.232703	3.563678
Maximum	7.849285	3.975523	1.756279	4.492965
Minimum	7.188637	2.212206	-1.357039	2.651037
Std. Dev.	0.238318	0.499591	0.771292	0.538451
Skewness	0.517032	-1.072397	-0.117949	0.024985
Kurtosis	1.657000	3.121136	2.506562	1.991724
Jarque-Bera	4.548816	7.306786	0.473620	1.613602
Probability	0.102858	0.025903	0.789141	0.446284
Sum	282.8606	128.1544	6.698027	131.1346
Sum Sq. Dev.	2.101437	9.234870	22.01101	10.72740
Observations	38	38	38	38

Source: Author's Computation 2020, using EVIEWS 10.0

Table 4.2 Augmented Dickey Fuller Unit Root Test on LGDP at level

Null Hypothesis: LGDP has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 2 (Automatic – based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.274411	0.4364
Test critical values:	1% level	-4.234972	
	5% level	-3.540328	
	10% level	-3.202445	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LGDP)
Method: Least Squares
Date: 07/14/20 Time: 06:38
Sample (adjusted): 1983 2018
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGDP(-1)	-0.125345	0.055111	-2.274411	0.0300
D(LGDP(-1))	0.222907	0.155677	1.431856	0.1622
D(LGDP(-2))	0.273027	0.143805	1.898597	0.0670
C	0.886932	0.385775	2.299090	0.0284
@TREND("1980")	0.002588	0.001365	1.895851	0.0673

R-squared	0.455830	Mean dependent var	0.011542
Adjusted R-squared	0.385614	S.D. dependent var	0.045068
S.E. of regression	0.035325	Akaike info criterion	-3.720181
Sum squared resid	0.038684	Schwarz criterion	-3.500248
Log likelihood	71.96326	Hannan-Quinn criter.	-3.643419
F-statistic	6.491866	Durbin-Watson stat	1.826460

Prob(F-statistic)	0.000646

Augmented Dickey Fuller Unit Root Test on DLGDP at 1st difference

Null Hypothesis: D(LGDP) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 2 (Automatic – based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.564753	0.0479
Test critical values:	1% level	-4.243644	
	5% level	-3.544284	
	10% level	-3.204699	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LGDP,2)
Method: Least Squares
Date: 07/14/20 Time: 07:58
Sample (adjusted): 1984 2018
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGDP(-1))	-0.611848	0.171638	-3.564753	0.0012
D(LGDP(-1),2)	-0.128850	0.186581	-0.690581	0.4951
D(LGDP(-2),2)	0.091711	0.157992	0.580478	0.5659
C	0.010343	0.016141	0.640787	0.5265
@TREND("1980")	3.98E-05	0.000737	0.054041	0.9573

R-squared	0.484467	Mean dependent var	0.003838
Adjusted R-squared	0.415729	S.D. dependent var	0.046281
S.E. of regression	0.035376	Akaike info criterion	-3.714010
Sum squared resid	0.037544	Schwarz criterion	-3.491817
Log likelihood	69.99517	Hannan-Quinn criter.	-3.637309
F-statistic	7.048047	Durbin-Watson stat	2.047742
Prob(F-statistic)	0.000399		

Table 4.4 Augmented Dickey Fuller Unit Root Test on DLGDP at 2nd difference

Null Hypothesis: D(LGDP,2) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic – based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-10.15875	0.0000
Test critical values:	1% level	-4.234972	
	5% level	-3.540328	
	10% level	-3.202445	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LGDP,3)
Method: Least Squares
Date: 07/14/20 Time: 09:24
Sample (adjusted): 1983 2018
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGDP(-1),2)	-1.498780	0.147536	-10.15875	0.0000
C	0.025787	0.015413	1.673075	0.1038
@TREND("1980")	-0.001035	0.000668	-1.549177	0.1309

R-squared	0.758225	Mean dependent var	-0.001667
Adjusted R-squared	0.743572	S.D. dependent var	0.080498
S.E. of regression	0.040763	Akaike info criterion	-3.482412
Sum squared resid	0.054834	Schwarz criterion	-3.350452
Log likelihood	65.68341	Hannan-Quinn criter.	-3.436354
F-statistic	51.74537	Durbin-Watson stat	1.968603
Prob(F-statistic)	0.000000		

Table 4.5 Augmented Dickey Fuller Unit Root Test on LOPN at level

Null Hypothesis: LOPN has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic – based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.870811	0.1828
Test critical values:	1% level	-4.219126	
	5% level	-3.533083	
	10% level	-3.198312	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOPN)
Method: Least Squares
Date: 07/14/20 Time: 09:38
Sample (adjusted): 1981 2018
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOPN(-1)	-0.316405	0.110214	-2.870811	0.0069
C	0.875511	0.340756	2.569321	0.0146
@TREND("1980")	0.009467	0.005019	1.886212	0.0676

R-squared	0.197025	Mean dependent var	-0.010171
Adjusted R-squared	0.151141	S.D. dependent var	0.323686
S.E. of regression	0.298223	Akaike info criterion	0.493709
Sum squared resid	3.112801	Schwarz criterion	0.622992

Log likelihood	-6.380466	Hannan-Quinn criter.	0.539707
F-statistic	4.293961	Durbin-Watson stat	1.642693
Prob(F-statistic)	0.021492		

Table 4.6 Augmented Dickey Fuller Unit Root Test on DLOPN at 1st difference

Null Hypothesis: D(LOPN) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic – based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.224576	0.0000
Test critical values:	1% level	-4.226815	
	5% level	-3.536601	
	10% level	-3.200320	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOPN,2)
Method: Least Squares
Date: 07/14/20 Time: 09:43
Sample (adjusted): 1982 2018
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOPN(-1))	-1.076152	0.148957	-7.224576	0.0000
C	0.043600	0.101744	0.428522	0.6710
@TREND("1980")	-0.001437	0.004483	-0.320489	0.7506

R-squared	0.608050	Mean dependent var	0.032658
Adjusted R-squared	0.584995	S.D. dependent var	0.451140
S.E. of regression	0.290628	Akaike info criterion	0.444062
Sum squared resid	2.871806	Schwarz criterion	0.574677
Log likelihood	-5.215156	Hannan-Quinn criter.	0.490110
F-statistic	26.37293	Durbin-Watson stat	2.161887
Prob(F-statistic)	0.000000		

Table 4.7 Augmented Dickey Fuller Unit Root Test on DLOPN at 2nd difference

Null Hypothesis: D(LOPN) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic – based on SIC, maxlag=9)

	t-Statistic	Prob.*

Augmented Dickey-Fuller test statistic		-7.224576	0.0000
Test critical values:	1% level	-4.226815	
	5% level	-3.536601	
	10% level	-3.200320	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOPN,2)
Method: Least Squares
Date: 07/14/20 Time: 09:43
Sample (adjusted): 1982 2018
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOPN(-1))	-1.076152	0.148957	-7.224576	0.0000
C	0.043600	0.101744	0.428522	0.6710
@TREND("1980")	-0.001437	0.004483	-0.320489	0.7506

R-squared	0.608050	Mean dependent var	0.032658
Adjusted R-squared	0.584995	S.D. dependent var	0.451140
S.E. of regression	0.290628	Akaike info criterion	0.444062
Sum squared resid	2.871806	Schwarz criterion	0.574677
Log likelihood	-5.215156	Hannan-Quinn criter.	0.490110
F-statistic	26.37293	Durbin-Watson stat	2.161887
Prob(F-statistic)	0.000000		

Table 4.8 Augmented Dickey Fuller Unit Root Test on LGFCF at level

Null Hypothesis: LGFCF has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic – based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.313146	0.4168
Test critical values:	1% level	-4.226815	
	5% level	-3.536601	
	10% level	-3.200320	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LGFCF)
Method: Least Squares
Date: 07/14/20 Time: 09:50
Sample (adjusted): 1982 2018
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGFCF(-1)	-0.361543	0.156299	-2.313146	0.0269
C	1.514247	0.694630	2.179933	0.0363
@TREND("1980")	-0.015174	0.007785	-1.949110	0.0596

R-squared	0.179717	Mean dependent var	-0.041831
Adjusted R-squared	0.131465	S.D. dependent var	0.116226
S.E. of regression	0.108318	Akaike info criterion	-1.529895
Sum squared resid	0.398911	Schwarz criterion	-1.399280
Log likelihood	31.30305	Hannan-Quinn criter.	-1.483847
F-statistic	3.724553	Durbin-Watson stat	1.663258
Prob(F-statistic)	0.034465		

Table 4.9 Augmented Dickey Fuller Unit Root Test on DLGFCF at 1st difference

Null Hypothesis: D(LGFCF) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic – based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.627045	0.0003
Test critical values:	1% level	-4.234972	
	5% level	-3.540328	
	10% level	-3.202445	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LGFCF,2)
Method: Least Squares
Date: 07/14/20 Time: 09:55
Sample (adjusted): 1983 2018

Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGFCF(-1))	-1.062208	0.188768	-5.627045	0.0000
C	-0.100574	0.045666	-2.202396	0.0347
@TREND("1980")	0.002710	0.001903	1.423832	0.1639

R-squared	0.494157	Mean dependent var	0.008211
Adjusted R-squared	0.463500	S.D. dependent var	0.160807
S.E. of regression	0.117785	Akaike info criterion	-1.360257
Sum squared resid	0.457819	Schwarz criterion	-1.228297
Log likelihood	27.48462	Hannan-Quinn criter.	-1.314199
F-statistic	16.11883	Durbin-Watson stat	1.880280
Prob(F-statistic)	0.000013		

Table 4.10 Augmented Dickey Fuller Unit Root Test on DLGFCF at 2nd difference

Null Hypothesis: D(LGFCF,2) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic – based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.983534	0.0000
Test critical values:	1% level	-4.252879	
	5% level	-3.548490	
	10% level	-3.207094	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LGFCF,3)
Method: Least Squares
Date: 07/14/20 Time: 09:54
Sample (adjusted): 1985 2018
Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGFCF(-1),2)	-2.247742	0.250207	-8.983534	0.0000
D(LGFCF(-1),3)	0.604262	0.149657	4.037655	0.0003
C	0.006111	0.052193	0.117090	0.9076
@TREND("1980")	0.000547	0.002209	0.247500	0.8062

R-squared	0.799508	Mean dependent var	0.011221
Adjusted R-squared	0.779459	S.D. dependent var	0.268978
S.E. of regression	0.126317	Akaike info criterion	-1.189918
Sum squared resid	0.478677	Schwarz criterion	-1.010346
Log likelihood	24.22861	Hannan-Quinn criter.	-1.128679
F-statistic	39.87743	Durbin-Watson stat	2.134018
Prob(F-statistic)	0.000000		

Table 4.11 Augmented Dickey Fuller Unit Root Test on LFDI at level

Null Hypothesis: LFDI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.960298	0.1566
Test critical values:	1% level	-4.226815	
	5% level	-3.536601	
	10% level	-3.200320	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LFDI)
Method: Least Squares
Date: 07/14/20 Time: 11:15
Sample (adjusted): 1982 2018
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LFDI(-1)	-0.432457	0.146086	-2.960298	0.0056
C	0.058962	0.223077	0.264310	0.7931
@TREND("1980")	0.001938	0.010368	0.186950	0.8528

R-squared	0.223418	Mean dependent var	0.011403
Adjusted R-squared	0.177736	S.D. dependent var	0.687264
S.E. of regression	0.623203	Akaike info criterion	1.969715
Sum squared resid	13.20498	Schwarz criterion	2.100330
Log likelihood	-33.43973	Hannan-Quinn criter.	2.015763
F-statistic	4.890791	Durbin-Watson stat	2.323395
Prob(F-statistic)	0.013589		

Table 4.12 Augmented Dickey Fuller Unit Root Test on DLFDI at 1st difference

Null Hypothesis: D(LFDI) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.491140	0.0000
Test critical values:	1% level	-4.234972	
	5% level	-3.540328	
	10% level	-3.202445	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(LFDI,2)

Method: Least Squares

Date: 07/14/20 Time: 11:15

Sample (adjusted): 1983 2018

Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LFDI(-1))	-1.468223	0.154694	-9.491140	0.0000
C	0.325201	0.232560	1.398355	0.1713
@TREND("1980")	-0.014512	0.010111	-1.435207	0.1606

R-squared	0.732146	Mean dependent var	-0.014675
Adjusted R-squared	0.715912	S.D. dependent var	1.174565
S.E. of regression	0.626042	Akaike info criterion	1.980857
Sum squared resid	12.93364	Schwarz criterion	2.112817
Log likelihood	-32.65542	Hannan-Quinn criter.	2.026914
F-statistic	45.10066	Durbin-Watson stat	2.058567
Prob(F-statistic)	0.000000		

Table 4.13 Augmented Dickey Fuller Unit Root Test on DLFDI at 2nd difference

Null Hypothesis: D(LFDI,2) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.077334	0.0000
Test critical values:	1% level	-4.252879	
	5% level	-3.548490	
	10% level	-3.207094	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(LFDI,3)

Method: Least Squares

Date: 07/14/20 Time: 11:16

Sample (adjusted): 1985 2018

Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LFDI(-1),2)	-2.301619	0.325210	-7.077334	0.0000
D(LFDI(-1),3)	0.343449	0.175540	1.956529	0.0598
C	0.089850	0.344525	0.260795	0.7960
@TREND("1980")	-0.004699	0.014581	-0.322289	0.7495

R-squared	0.872838	Mean dependent var	0.004213
Adjusted R-squared	0.860121	S.D. dependent var	2.229460
S.E. of regression	0.833826	Akaike info criterion	2.584546
Sum squared resid	20.85795	Schwarz criterion	2.764118
Log likelihood	-39.93728	Hannan-Quinn criter.	2.645785
F-statistic	68.63967	Durbin-Watson stat	2.135121
Prob(F-statistic)	0.000000		

Table 4.14 ADF and PP Unit Root Test Results

UNIT ROOT TEST TABLE (PP)

At Level

		LGDP	LOPN	LFDI	LGFCF
With Constant	t-Statistic	-0.8291	-2.4438	-2.9946	-1.8506
	Prob.	***0.7992***	***0.1371***	***0.0447***	***0.3511***
		n0	n0	**	n0
With Constant & Trend	t-Statistic	-4.0260	-3.2088	-2.7306	-2.2435
	Prob.	***0.0161***	***0.0980***	***0.2310***	***0.4528***
		**	*	n0	n0
Without Constant & Trend	t-Statistic	0.2559	-0.4921	-3.0396	-2.5233
	Prob.	***0.7551***	***0.4963***	***0.0034***	***0.0131***
		n0	n0	***	**

At First Difference

		d(LGDP)	d(LOPN)	d(LFDI)	d(LGFCF)
With Constant	t-Statistic	-4.2659	-7.4002	-9.7656	-5.4114
	Prob.	***0.0018***	***0.0000***	***0.0000***	***0.0001***
		***	***	***	***
With Constant & Trend	t-Statistic	-3.9568	-7.3014	-20.2909	-5.5704
	Prob.	***0.0193***	***0.0000***	***0.0000***	***0.0003***
		**	***	***	***
Without Constant & Trend	t-Statistic	-4.1742	-7.5954	-9.8777	-4.8725
	Prob.	***0.0001***	***0.0000***	***0.0000***	***0.0000***
		***	***	***	***

UNIT ROOT TEST TABLE (ADF)

At Level

		LGDP	LOPN	LFDI	LGFCF
With Constant	t-Statistic	-1.2215	-2.1671	-3.1659	-1.8384
	Prob.	***0.6544***	***0.2211***	***0.0303***	***0.3568***
		n0	n0	**	n0
With Constant & Trend	t-Statistic	-2.2744	-2.8708	-2.9603	-2.3131
	Prob.	***0.4364***	***0.1828***	***0.1566***	***0.4168***
		n0	n0	n0	n0
Without Constant & Trend	t-Statistic	1.7956	-0.4948	-3.0396	-2.4733
	Prob.	***0.9805***	***0.4952***	***0.0034***	***0.0148***
		n0	n0	***	**

At First Difference

		d(LGDP)	d(LOPN)	d(LFDI)	d(LGFCF)
With Constant	t-Statistic	-4.2121	-7.3504	-9.2454	-5.4152
	Prob.	***0.0021***	***0.0000***	***0.0000***	***0.0001***
		***	***	***	***
With Constant & Trend	t-Statistic	-3.5648	-7.2246	-9.4911	-5.6270
	Prob.	***0.0479***	***0.0000***	***0.0000***	***0.0003***
		**	***	***	***
Without Constant & Trend	t-Statistic	-2.9717	-7.4704	-9.3689	-4.8676
	Prob.	***0.0041***	***0.0000***	***0.0000***	***0.0000***
		***	***	***	***

Notes: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1%. and (no) Not Significant
*MacKinnon (1996) one-sided p-values.

This Result is The Out-Put of Program Has Developed By:
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Table 4.15 ARDL Bound Test for Cointegration

ARDL Long Run Form and Bounds Test
Dependent Variable: D(LGDP)
Selected Model: ARDL(1, 1, 5, 5)
Case 3: Unrestricted Constant and No Trend
Date: 06/29/20 Time: 22:22
Sample: 1980 2018
Included observations: 33

Conditional Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.586090	0.840445	0.697357	0.4950
LGDP(-1)*	-0.085495	0.084260	-1.014653	0.3245
LOPN(-1)	0.091633	0.025251	3.628882	0.0021
LFDI(-1)	-0.043208	0.015612	-2.767593	0.0132
LGFCF(-1)	-0.075592	0.046015	-1.642769	0.1188
D(LOPN)	0.019174	0.024196	0.792455	0.4390
D(LFDI)	0.005077	0.008476	0.599037	0.5570
D(LFDI(-1))	0.051238	0.012188	4.203977	0.0006
D(LFDI(-2))	0.040823	0.010550	3.869321	0.0012
D(LFDI(-3))	0.056071	0.009877	5.676639	0.0000
D(LFDI(-4))	0.025047	0.009162	2.733670	0.0141
D(LGFCF)	-0.014439	0.048440	-0.298091	0.7692
D(LGFCF(-1))	0.069855	0.060808	1.148781	0.2666
D(LGFCF(-2))	-0.091024	0.049905	-1.823943	0.0858

D(LGFCF(-3))	-0.141346	0.049364	-2.863373	0.0108
D(LGFCF(-4))	-0.072346	0.046614	-1.552011	0.1391

* p-value incompatible with t-Bounds distribution.

Levels Equation

Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOPN	1.071801	1.270532	0.843585	0.4106
LFDI	-0.505385	0.602797	-0.838400	0.4134
LGFCF	-0.884174	0.369558	-2.392514	0.0286

EC = LGDP - (1.0718*LOPN -0.5054*LFDI -0.8842*LGFCF)

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
		Asymptotic: n=1000		
F-statistic	10.10102	10%	2.72	3.77
k	3	5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61
Actual Sample Size	33	Finite Sample: n=35		
		10%	2.958	4.1
		5%	3.615	4.913
		1%	5.198	6.845
		Finite Sample: n=30		
		10%	3.008	4.15
		5%	3.71	5.018
		1%	5.333	7.063

t-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
t-statistic	-1.014653	10%	-2.57	-3.46
		5%	-2.86	-3.78
		2.5%	-3.13	-4.05
		1%	-3.43	-4.37

ARDL Long Run Form and Bounds Test
Dependent Variable: D(LOPN)
Selected Model: ARDL(1, 5, 4, 4)
Case 3: Unrestricted Constant and No Trend
Date: 06/29/20 Time: 22:25
Sample: 1980 2018
Included observations: 34

Conditional Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.23887	6.837350	2.813790	0.0125
LOPN(-1)*	-0.983885	0.200885	-4.897760	0.0002
LGDP(-1)	-1.692078	0.716254	-2.362400	0.0312
LFDI(-1)	0.643398	0.207020	3.107907	0.0068
LGFCF(-1)	-0.950426	0.378822	-2.508897	0.0233
D(LGDP)	2.227546	1.811931	1.229377	0.2367
D(LGDP(-1))	2.024167	1.568334	1.290648	0.2152
D(LGDP(-2))	-0.046144	1.427680	-0.032321	0.9746
D(LGDP(-3))	-1.056640	1.746286	-0.605078	0.5536
D(LGDP(-4))	-2.636917	1.862634	-1.415692	0.1760
D(LFDI)	0.132818	0.113370	1.171539	0.2585
D(LFDI(-1))	-0.332968	0.113990	-2.921032	0.0100
D(LFDI(-2))	-0.178624	0.106670	-1.674541	0.1135
D(LFDI(-3))	-0.147214	0.103556	-1.421590	0.1743
D(LGFCF)	0.118916	0.486640	0.244361	0.8101
D(LGFCF(-1))	1.409410	0.554239	2.542963	0.0217
D(LGFCF(-2))	1.588027	0.642026	2.473462	0.0250
D(LGFCF(-3))	1.726442	0.526426	3.279553	0.0047

* p-value incompatible with t-Bounds distribution.

Levels Equation
Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGDP	-1.719793	0.650818	-2.642512	0.0177
LFDI	0.653937	0.191976	3.406349	0.0036
LGFCF	-0.965993	0.357764	-2.700085	0.0158

EC = LOPN - (-1.7198*LGDP + 0.6539*LFDI -0.9660*LGFCF)

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
		Asymptotic: n=1000		
F-statistic	6.361098	10%	2.72	3.77
k	3	5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61
		Finite Sample: n=35		
Actual Sample Size	34	10%	2.958	4.1
		5%	3.615	4.913
		1%	5.198	6.845

	Finite Sample: n=30	
10%	3.008	4.15
5%	3.71	5.018
1%	5.333	7.063

t-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
t-statistic	-4.897760	10%	-2.57	-3.46
		5%	-2.86	-3.78
		2.5%	-3.13	-4.05
		1%	-3.43	-4.37

ARDL Long Run Form and Bounds Test
Dependent Variable: D(LFDI)
Selected Model: ARDL(1, 5, 3, 3)
Case 3: Unrestricted Constant and No Trend
Date: 06/29/20 Time: 22:26
Sample: 1980 2018
Included observations: 34

Conditional Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.705616	14.95792	-0.247736	0.8071
LFDI(-1)*	-1.160149	0.168828	-6.871764	0.0000
LGDP(-1)	0.032500	1.535950	0.021160	0.9834
LOPN(-1)	0.085434	0.371814	0.229777	0.8209
LGFCF(-1)	0.933474	0.809042	1.153801	0.2637
D(LGDP)	-0.730830	2.998573	-0.243726	0.8102
D(LGDP(-1))	-1.189273	2.883703	-0.412412	0.6849
D(LGDP(-2))	1.892101	2.545368	0.743351	0.4669
D(LGDP(-3))	7.434079	2.700268	2.753090	0.0131
D(LGDP(-4))	7.893701	2.709294	2.913564	0.0093
D(LOPN)	0.193368	0.338117	0.571897	0.5745
D(LOPN(-1))	-0.309556	0.355051	-0.871863	0.3948
D(LOPN(-2))	0.428290	0.336038	1.274528	0.2187
D(LGFCF)	-1.000651	0.911183	-1.098189	0.2866
D(LGFCF(-1))	-1.817750	0.872944	-2.082321	0.0519
D(LGFCF(-2))	-2.839252	0.908591	-3.124896	0.0059

* p-value incompatible with t-Bounds distribution.

Levels Equation
Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.

LGDP	0.028014	1.323597	0.021165	0.9833
LOPN	0.073641	0.318184	0.231441	0.8196
LGFCF	0.804615	0.682581	1.178784	0.2538

EC = LFDI - (0.0280*LGDP + 0.0736*LOPN + 0.8046*LGFCF)

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
		Asymptotic: n=1000		
F-statistic	12.53947	10%	2.72	3.77
K	3	5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61
Actual Sample Size	34	Finite Sample: n=35		
		10%	2.958	4.1
		5%	3.615	4.913
		1%	5.198	6.845
		Finite Sample: n=30		
		10%	3.008	4.15
		5%	3.71	5.018
		1%	5.333	7.063

t-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
t-statistic	-6.871764	10%	-2.57	-3.46
		5%	-2.86	-3.78
		2.5%	-3.13	-4.05
		1%	-3.43	-4.37

ARDL Long Run Form and Bounds Test
Dependent Variable: D(LGFCF)
Selected Model: ARDL(1, 2, 4, 0)
Case 3: Unrestricted Constant and No Trend
Date: 06/29/20 Time: 22:28
Sample: 1980 2018
Included observations: 35

Conditional Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.461347	2.208982	2.925034	0.0074
LGFCF(-1)*	-0.424130	0.123515	-3.433836	0.0022
LGDP(-1)	-0.612234	0.229781	-2.664422	0.0136

LOPN(-1)	-0.140201	0.059141	-2.370613	0.0261
LFDI**	-0.016055	0.030343	-0.529136	0.6016
D(LGDP)	-1.666300	0.545079	-3.056986	0.0054
D(LGDP(-1))	0.586247	0.504860	1.161206	0.2570
D(LOPN)	-0.034926	0.071154	-0.490847	0.6280
D(LOPN(-1))	0.120580	0.068639	1.756733	0.0917
D(LOPN(-2))	0.130986	0.074903	1.748747	0.0931
D(LOPN(-3))	0.161442	0.059225	2.725911	0.0118

* p-value incompatible with t-Bounds distribution.

** Variable interpreted as Z = Z(-1) + D(Z).

Levels Equation

Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGDP	-1.443505	0.208989	-6.907094	0.0000
LOPN	-0.330562	0.118874	-2.780782	0.0104
LFDI	-0.037855	0.074450	-0.508464	0.6158

EC = LGFCF - (-1.4435*LGDP -0.3306*LOPN -0.0379*LFDI)

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	4.165002	10%	2.72	3.77
k	3	5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61
			Finite Sample: n=35	
Actual Sample Size	35			
		10%	2.958	4.1
		5%	3.615	4.913
		1%	5.198	6.845

t-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
t-statistic	-3.433836	10%	-2.57	-3.46
		5%	-2.86	-3.78
		2.5%	-3.13	-4.05
		1%	-3.43	-4.37

Table 4.16 Granger Causality Test

Pairwise Granger Causality Tests
Date: 07/14/20 Time: 22:55
Sample: 1980 2018
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
LOPN does not Granger Cause LGDP	37	3.67201	0.0367
LGDP does not Granger Cause LOPN		2.97656	0.0652
LGFCF does not Granger Cause LGDP	36	5.02948	0.0128
LGDP does not Granger Cause LGFCF		0.89491	0.4189
LFDI does not Granger Cause LGDP	36	1.63513	0.2113
LGDP does not Granger Cause LFDI		2.15981	0.1324
LGFCF does not Granger Cause LOPN	36	0.06221	0.9398
LOPN does not Granger Cause LGFCF		0.35007	0.7074
LFDI does not Granger Cause LOPN	36	2.84437	0.0734
LOPN does not Granger Cause LFDI		0.82285	0.4485
LFDI does not Granger Cause LGFCF	36	0.39048	0.6800
LGFCF does not Granger Cause LFDI		0.34234	0.7128

Table 4.17 ARDL Normalized Long run Coefficients (Dependent Variable: LGDP)

Dependent Variable: LGDP
Method: ARDL
Date: 06/30/20 Time: 06:43
Sample (adjusted): 1986 2018
Included observations: 33 after adjustments
Maximum dependent lags: 2 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (5 lags, automatic): LOPN LFDI LGFCF
Fixed regressors: C
Number of models evalulated: 432
Selected Model: ARDL(2, 4, 5, 2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LGDP(-1)	1.108710	0.145503	7.619825	0.0000
LGDP(-2)	-0.421619	0.137050	-3.076396	0.0072
LOPN	-0.015229	0.018901	-0.805695	0.4322
LOPN(-1)	0.041604	0.018802	2.212678	0.0418
LOPN(-2)	-0.023531	0.021213	-1.109271	0.2837
LOPN(-3)	0.025367	0.019577	1.295748	0.2134

LOPN(-4)	-0.051220	0.017642	-2.903400	0.0104
LFDI	0.007030	0.007658	0.918016	0.3722
LFDI(-1)	0.004838	0.007870	0.614799	0.5473
LFDI(-2)	0.003451	0.007642	0.451584	0.6576
LFDI(-3)	0.017404	0.007524	2.313121	0.0343
LFDI(-4)	-0.019195	0.008022	-2.392790	0.0293
LFDI(-5)	-0.013305	0.009490	-1.402107	0.1800
LGFCF	-0.104686	0.043864	-2.386605	0.0297
LGFCF(-1)	0.049141	0.048368	1.015978	0.3248
LGFCF(-2)	-0.147018	0.045515	-3.230082	0.0052
C	3.099680	0.727062	4.263295	0.0006

R-squared	0.996549	Mean dependent var	7.466593
Adjusted R-squared	0.993098	S.D. dependent var	0.244637
S.E. of regression	0.020325	Akaike info criterion	-4.647589
Sum squared resid	0.006609	Schwarz criterion	-3.876661
Log likelihood	93.68522	Hannan-Quinn criter.	-4.388195
F-statistic	288.7559	Durbin-Watson stat	2.290276
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model selection.

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.541291	Prob. F(2,14)	0.5937
Obs*R-squared	2.368638	Prob. Chi-Square(2)	0.3060

Table 4.18 Parsimonious ECM version of the ARDL Model

ARDL Error Correction Regression
Dependent Variable: D(LGDP)
Selected Model: ARDL(2, 4, 5, 2)
Case 3: Unrestricted Constant and No Trend
Date: 06/30/20 Time: 07:17
Sample: 1980 2018
Included observations: 33

ECM Regression
Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.099680	0.491779	6.302998	0.0000

D(LGDP(-1))	0.421619	0.113761	3.706170	0.0019
D(LOPN)	-0.015229	0.015204	-1.001623	0.3314
D(LOPN(-1))	0.049385	0.013956	3.538564	0.0027
D(LOPN(-2))	0.025854	0.015234	1.697110	0.1090
D(LOPN(-3))	0.051220	0.013607	3.764362	0.0017
D(LFDI)	0.007030	0.006204	1.133155	0.2738
D(LFDI(-1))	0.011646	0.006353	1.833033	0.0855
D(LFDI(-2))	0.015096	0.006745	2.238254	0.0398
D(LFDI(-3))	0.032501	0.007682	4.231020	0.0006
D(LFDI(-4))	0.013305	0.007648	1.739629	0.1011
D(LGFCF)	-0.104686	0.034367	-3.046096	0.0077
D(LGFCF(-1))	0.147018	0.040949	3.590315	0.0024
CointEq(-1)*	-0.312909	0.049727	-6.292554	0.0000

R-squared	0.850150	Mean dependent var	0.017007
Adjusted R-squared	0.747622	S.D. dependent var	0.037126
S.E. of regression	0.018651	Akaike info criterion	-4.829407
Sum squared resid	0.006609	Schwarz criterion	-4.194526
Log likelihood	93.68522	Hannan-Quinn criter.	-4.615789
F-statistic	8.291831	Durbin-Watson stat	2.290276
Prob(F-statistic)	0.000027		

* p-value incompatible with t-Bounds distribution.

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	8.336051	10%	2.72	3.77
K	3	5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61

t-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
t-statistic	-6.292554	10%	-2.57	-3.46
		5%	-2.86	-3.78
		2.5%	-3.13	-4.05
		1%	-3.43	-4.37

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The world has witnessed increased interdependence in the last two decades, thanks to globalization. The main driving forces of this process are technology, policy, competition and its subordinate domestic economies to global market conditions and practices. Developed nations are the most beneficiaries of globalization as their share of world trade and finance has been expanded at the expense of developing countries like Nigeria. Thus, the process gave birth to inequality between the world's regions and poverty in the developing world. Nigeria has not benefited much from globalization due to monocultural export, inability to attract increased foreign investments and huge indebtedness. But globalization can be domesticated in the country through diversification of exports, debt reduction and expanded development cooperation with other countries. The Nigerian state also need to be strengthened as a rampart against the dictates of foreign capital. All this accomplished, Nigeria could join the league of nations enjoying the benefits of globalization.

Globalization connotes the tendency of moving towards the integration of a nation into the world economy (Okpokpo, Helenian and Osuyali 2014). Globalization entails the links among enterprises, institution as well as citizens across national borders. Thus, as a historical process, globalization it is the result of innovation and technological progress by humans (Nwakama and Ibe, 2014). Globalization involves the movement of goods and services across national borders. Nsavcama and Ibe (2014) also noted that globalization has cultural, political and technological perspectives. Thus, all things being equal globalization ought to have brought efficiency, technological breakthrough as well as competitiveness to the economy. This has however not been the case due to the mono production base of the Nigerian economy which

rely mostly on the exports of crude oil for her foreign exchange. This has led to the neglect of all other sectors like the manufacturing and agricultural sectors. This has deprived the country of the supposed benefits from globalization.

The impact of globalization has not been felt in the Nigerian economy. This is because, currently, Nigeria exports crude oil and imports refined products due to the inability of local refineries to meet the domestic demand despite the huge money spent on the Turn Around Maintenance (TAM) of the four local refineries. The exports from Nigeria thus have very high import content. This has made the Nigeria economy to be industrially underdeveloped. For example, in 1960, Nigeria's oil exports were just 2.6 percent of the total exports. In 1965 it rose to 25.4 percent and 57 .5 percent in 1970. By the 2000 it has increased to 98.7 percent and reduced to 96.4 percent in 2010 (Sede and Izilein, 2013). Since 2010 the percentage of oil exports in total exports has not fallen below 90 percent since then. This paints a grim picture of the impact of globalization on the Nigerian economy which is currently in recession with the exchange rate of the naira to the dollar being higher than ever before in the history of the country. Some developing countries including Nigeria has blamed the failure to achieve the supposed benefit of globalization on the harsh trade policies of the Western world.

Globalization in recent times involves lots of investment. Globalization whether for or against remains a subject on which there has been comprehensive and unyielding misunderstanding especially concerning the constraints that it does not place on the power of government. The emergence of Nigeria into globalization started significantly with the advent of Structural Adjustment Programme (SAP) in collaboration with the International Monetary Fund (IMF) and World Bank which led towards external liberation focusing on market oriented economic system, export-led strategy and stability of the growth in the economy. Nigeria as an economy cannot experience growth in isolation. Therefore, efforts must be geared towards removing

factors that hinder effective integration of Nigeria to the global economy and improving benefits derivable from globalization (Alimi & Atanda, 2011).

Globalization as an economic concept has been viewed at differently by different academic scholars, to represent so many things. However, globalization has been defined by John Vogi (Vanguard 2003) to mean a word that is liberalized of barriers to trade and invest where cooperation can produce and sell almost any service and can produce anywhere. Globalization is a state whereby the world is becoming a global village where the country can come together to have great benefits. Moreover, since globalization also means the growing inter-dependence and inter-connectedness of the modern world, it boosts the growth in the economic which birth to development in the country.

Furthermore, any nation or country globalization sets in the economy of that nation starts waxing strong. According to Ajodele (1995), the increase in movements of goods, services, capital and information access, national borders is rapidly creating a single global economy. The process is drawn by technological advancement and reduction in the cost of international transactions, raise the share of trade in the world of production and increase the mobility of capital. According to Jack Show, British Foreign secretary in a write up the international Guardian of September 10, 2011, he said attempts to manage change in global levels are in their infancy. To him global market, world wide access to each other and information both give us a sense of belonging.

Steward (1990), noted that the impact of globalization on poor people varies widely both between countries and within them, depending on initial circumstance and on the policies that government pursue. For instance, in China poor people living in coastal province have benefited more from increased export and investment than those in land provinces.

Globalization however has continued to agender enormous debate controversy, protest and demonstrations that are sometimes violent in nature. The reaction to the concept of globalization and its application to human development have been significantly more pronounced in the relationship between the developed western world which are owners of the new technologies and the poor developing countries which are by and large consumers of the new capitalist economy. Nigeria is in the global village hence is an importer of goods and services.

The growing global economy which was fastened mostly by international trade and technology has no doubt created a global dual phenomenon where regions continued to experience economic growth at the expense of others. This research work looks into the third world countries of Africa if they are fully incorporated into global capitalist economy, the benefit of this inescapable global phenomenon is not evenly distributed. Secondary sources of data were used as essential methodology for this work. The features that characterize globalization include interconnection of sovereign countries through trade and capital flow; harmonization of the economic rules that govern the interaction or relationship between these sovereign nations; create structures to support and facilitate dependence and interconnection; and creation of a global market place. However, globalization brings about advancement in information, technology, harmonization of different cultures and belief and harmonization of the political systems of different countries of the world.

Globalization has led to the intensification of the world social relations which link distant localities in such a way that local happenings are shaped by events occurring many Kilometers away and vice versa. The components of globalization include: movement of people, goods and services across the world, interdependence of economic transaction, belief on the efficacy of the market, public and private sector growth.

1.2 Statement of the Problem

From time immemorial, there have been studies to address the issue of impact of globalization on the economic growth in different region of other countries that are developed, leaving some developing countries out like Nigeria; this has led to improvement in such regions. The developing country like Nigeria are left out without addressing the issue pertaining to impact of globalization on the economic growth; not addressing the factors of globalization that affect the economic growth especially in Nigeria. Some researchers as also looked into impact of globalization on economic development; researchers in Nigeria as also looked into the concept of globalization in different perspective but some factors of globalization like trade openness, foreign direct investment and gross fixed capital formation that can play a major role in the area of economic growth in Nigeria are not properly looked into.

It is expected that countries with more trade openness will relatively outperform those with less openness. From this perspective, developing countries have much to gain by trading with advanced countries. It is mainly in view of these expected gains that international institutions and donor governments routinely recommend trade liberalization policies to developing countries in the hope of opening up and integrating them into the global market. These policies were fueled by the failure of import-substitution industrialization strategy and also by findings from empirical studies showing that more outward-oriented economies record higher economic growth rates. Trade openness needed to be encouraged in respect to decrease in import and export tariffs and non-tariff barriers should be in place.

The foreign direct investment inflows targeted the oil and gas, real estate, communications and consumer goods sectors of Nigeria's economy Oguh C. (2016). According to Onuba I. (2016) & Okafor V.L. *el al.* (2017), the Nigerian economy recorded its worst investment inflow in 10 years with the country attracting a total investment of $5.12bn in the 2016 fiscal period. These was based on economic crisis faced during this period and the weak value of the naira. Nigerian

government has put in place certain measures and policies to encourage foreign investment in Nigeria economy. The measures put in place by the government include the Privatization enacted by the Public Enterprise Act of 1995, Foreign Exchange Decree of 1995, the Nigerian Enterprises promotion Decree (NEPD) of 1989 which repealed or relaxed that of 1972 and 1977.

The capital formation in Nigeria has been characterized by fluctuations which may be responsible for lack of inadequate social infrastructure such as roads, power supply and health facilities. The speed and the strength of economic growth in Nigeria has not been satisfactory which contributes equally to the decline in capital formation over time Oloyede J.A. (2001). There can be consistency in the rapid rate of capital formation in the country, if smaller proportion of the community's current income or output is partly devoted to consumption and the other part is saved and invested in capital or industrial equipment in order to bring about improvement in the country.

Given the fact above, this research work will look into the extent to which the trade openness has been in the country whether it has been of great influence on the economic growth in Nigeria. The study will find out the impact of FDI on the Nigerian economy from 1980 to 2018; in order to highlight its trend and status on the Nigeria economy. This study will check if there is consistency in the capital formation in the country.

1.3 Research Questions

(i) What effect does trade openness has on economic growth in Nigeria?

(ii) To what extent does foreign direct investment have effect on the economic growth in Nigeria?

(iii) What is the effect of gross fixed capital formation on the economic growth in Nigeria?

1.4 Objectives of the Study

The major objective of the study is to determine the impact of globalization on economic growth in Nigeria.

Specifically, the study intends: -

(i) To identify if trade openness has effect on the economic growth in Nigeria.

(ii) To know the possible effect of foreign direct investment on the economic growth in Nigeria.

(iii) To ascertain the influence of fixed capital formation on the economic growth in Nigeria.

1.5 Research Hypothesis

(i) H0: The degree of trade openness does not have a significant effect on the Nigeria economy growth.

(ii) H0: Foreign direct investment does not have a significant effect on the Nigeria economy growth.

(iii) H0: Gross fixed capital formation does not have a significant effect on the Nigeria economy growth.

1.6 Scope of the Study

This research work is within geographical zone of Nigeria, the work span through the period of 1980-2018. The economy of Nigeria is a middle-income, mixed economy and emerging market, with expanding manufacturing, financial, service, communications, technology and entertainment sectors Nigeria Economy (2020). It is ranked as the 27th-largest economy in the world in terms of nominal GDP, and the 24th-largest in terms of purchasing power parity Nigeria Data (2020). According to manufacturing report in 2015, Nigeria has the largest economy in Africa; its re-emergent manufacturing sector became the largest on the continent

in 2013, and it produces a large proportion of goods and services for the West African subcontinent. In addition, update by Nigeria government shows that the debt-to-GDP ratio is 16.075 percent as of 2019.

Nigerian GDP at purchasing power parity (PPP) has almost tripled from $170 billion in 2000 to $451 billion in 2012. Correspondingly, the GDP per capita doubled from $1400 per person in 2000 to an estimated $2,800 per person in 2012 (again, with the inclusion of the informal sector, it is estimated that GDP per capita hovers around $3,900 per person). (Population increased from 120 million in 2000 to 160 million in 2010).

According to financial times in 201, oil revenues contribute 2/3 of state revenues, oil only contributes about 9% to the GDP. Nigeria produces only about 2.7% of the world's oil supply. Although the petroleum sector is important, as government revenues still heavily rely on this sector, it remains a small part of the country's overall economy.

Since 2015, economic growth remains muted. Growth averaged 1.9% in 2018 and remained stable at 2% in the first half of 2019. Domestic demand remains constrained by stagnating private consumption in the context of high inflation (11% in the first half of 2019). On the production side, growth in 2019 was primarily driven by services, particularly telecoms. Agricultural growth remains below potential due to continued insurgency in the Northeast and ongoing farmer-herdsmen conflicts. Industrial performance is mixed. Oil GDP growth is stable, while manufacturing production is expected to slow down in 2019 due to a weaker power sector performance. Food and drink output are expected to increase, likely in response to import restrictions. Construction continues to perform positively, supported by ongoing megaprojects, higher public investment in the first half of the year, and import restrictions.

The research work will look into how independent variables (i.e. trade openness, foreign direct investment and gross fixed capital formation) have effect on dependent variable (i.e. GDP which is the proxy to economic growth) in Nigeria. The data for the work shall be restricted to

secondary data released by the World Bank national accounts data, and OECD National Accounts data files.

1.7 Significance of the Study

The outcome of this research work will be of significant to the government as means of policy formulation that will bring about improvement in the economy, it will help businesses to plan in the area of production and utilizing the available resources in the country and more also it will help the consumer to save for investment that will enhance his standard of living in the future. Also, it will be of great importance to the ministry of education, ministry of foreign affair, finance minister among others. Above all, it will be a foundation for economist, students and researchers who have interest on globalization and its impacts on Nigeria economic growth

1.8 Organization of the Study

This research work is organized into five chapters. Chapter one is concern with the introduction, which consist of the overview of the study, statement of problem, objectives of the study, research question, significance or the study, research methodology, and historical background of the study. Chapter two highlight the theoretical framework on which the study its based, and the review of related literature. Chapter three deals with research design and methodology adopted in the study. Chapter four concentrate on the data presentation and analysis and discussion of findings. Chapter five gives summary, conclusion, and recommendations of the study.