Linkages between Foreign Direct Investment, Domestic Investment and Economic Growth: Evidence from Nigeria

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ABSTRACT

FDI is the purchasing of an existing company or establishing a new company in a foreign country Rutherford (1992), according to modernization theories FDI can enhance growth in less developed countries but the dependency theorists contend that dependence on foreign investment is expected to affect the growth and income distribution negatively. Also FDI can crowd out or crowd in domestic investment depending on the sector FDI is allocated to and also depending on the country. This research is conducted base on this argument. This research empirically analyzed the linkages between foreign direct invest, domestic investment and economic growth in Nigeria.

The research is conducted using annual time series data from the period of 1980 to 2013. The study employs Johansen multivariate cointegration test and Vector Error Correction model (VECM) as the estimations techniques. The result of the study reveals that foreign direct investment (FDI) domestic investment (DI) and economic growth have a long-run equilibrium relationship according to the Johansen Multivariate cointegration test. And the VECM result shows that the speed of adjustment of the variables towards their long-run equilibrium is 52.55%.

Keywords: Foreign Direct Investment (FDI), Domestic Investment (DI), Economic growth, Nigeria, Time series, Cointegration, Vector error correction model (VECM).

ÖZ

DYY, mevcut bir şirketin satın alınması veya yabancı bir ülkede yeni bir şirket kurmasıdır Rutherford (1992), Modernleşme teorilerine göre DYY az gelişmiş ülkelerde büyümeyi artırabilir ancak bağımlılık teorisyenleri, yabancı yatırıma bağımlılığın büyüme ve gelir dağılımını olumsuz etkilemesi beklenmektedir. Ayrıca, doğrudan yabancı yatırımlar, ülkeye bağlı olarak ve doğrudan yabancı yatırıma tahsis edilen sektöre bağlı olarak, yerli yatırımlarda kalabalığa veya kalabalığa neden olabilir. Bu araştırma, bu kanıta dayanarak yürütülmektedir. Bu araştırma, doğrudan yabancı yatırım, yerli yatırım ve Nijerya'daki ekonomik büyüme arasındaki bağlantıları deneysel olarak analiz etmiştir. Araştırma 1980'den 2013'e kadar olan yıllık zaman serisi verilerini kullanarak gerçekleştirildi. Araştırma, tahmin teknikleri olarak Johansen çok değişkenli eş-bütünleşme testi ve Vektör Hata Düzeltme Modeli (VECM) kullanmaktadır. Araştırmanın sonucunda, yabancı doğrudan yatırım (DYY) yerel yatırımın (DI) ve ekonomik büyümenin, Johansen Çok Değişkenli eş bütünleşme testine göre uzun dönemli bir denge ilişkisine sahip olduğu ortaya çıkmaktadır. Ayrıca VECM sonucu, değişkenlerin uzun dönem dengelerine doğru hızlanma oranının% 52.55 olduğunu göstermektedir.

Anahtar kelimeler: Doğrudan yabancı yatırımı (DYY), yurtiçi yatırım(DI), Ekonomik büyüme, Nijerya, zaman serisi, eşbütünleşme, vektör düzeltme modeli(VECEM).

DEDICATION

I dedicated this work to Almighty Allah, and to the family of Alhaji Hamza Ibrahim Ringim

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ADF	Augment Dickey Fuller
CBN	Central Bank of Nigeria
DI	Domestic Investment
ECT	Error Correction Term
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GDP	Real Gross Domestic Product
JJ	Johansen and Juselius
KPSS	Kwiatkowski Phillip Schmidt and Shin's
MNCs	Multinational Cooperation's
OLS	Ordinary Least Squares
PACF	Partial Autocorrelation Function
PP	Phillip-Perron
SSA	Sub-Saharan Africa
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
VECM	Vector Error Correction Model
WDI	World Bank Development Indicators

Chapter 1

INTRODUCTION

1.1 Background of the Study

Since the publication on the function of capital in sustainable development by Schumpeter (1911), the literature grew rapidly worldwide with broad empirical research mostly conducted in the less developed countries, to test the relationship between growth and capital, focusing more on foreign capital. Partially, these researches have been prompted in an effort to give an explanation for empirically the hunt amongst developing nations or growing economies in constantly bring in capital from foreign countries into their countries, this foreign capital is a major instrument and a key impetus for financial development and growth. This economic choice for foreign capital is primarily in view of the fundamental presumption that foreign capital facilitates to enhance domestic investment capital-hole, enhances productiveness and improves rivalry, and also managerial and technological overflows in the receiving economy or home country.

From the early 1980s the global economy has encountered towering FDI streams**.** In resentment own changes and disproportional dispersion, foreign direct investment has become speedier than either world output or international trade. According to Padma and Karl (1999), amid 1980–98, worldwide FDI outpourings expanded at a normal rate of around 13% annually, in comparison with normal rates of 7% for world fares of merchandise, non-factor services and that of world nominal GDP.

This expansion in FDI, as indicated by economic history specialists, is ascribed to basic advancement of domestic economy and financial markets, and in addition the change of demeanor by most of the countries policy makers from antagonistic vibe to foreign direct investment accommodating manners. (Anyanwu: 2011).

In any case, in spite of the expanding stream of foreign direct investment, its dissemination has been unequal. According UNCTAD World Investment Report the industrially developed nations is taking the lion share of the global foreign direct investment while the developing nations are getting, moderately, a little segment of aggregate foreign direct investment collectively. The uneven dispersion of foreign direct investment is more obvious and boisterous if the developing nations or economies are decay into provincial coalitions. Africa's portion of foreign direct investment is moderately minimal, while Asia is receiving a significant share. According to UNCTAD report (2010), foreign direct investment inflows has encountered the quickest ratio of development in Asia, 20% of the continent's foreign direct investment streams goes to China, that is around 12% of the world aggregate FDI which is about 30% of FDI flowing to developing countries or developing economies.

In the case of Africa, specifically the Sub-Saharan Africa (SSA) the boom of FDI does not benefit the region. Around 1970s Africa has experienced not much increase in FDI flows (Adeolu, 2007). Nevertheless some countries in the region have a comparative advantage of large market size and presence of natural resource which encourages the flow of FDI, this makes the countries hot spot of the Africa's FDI. Considering this attestation it couples with the 2006 UNCTAD world investment report information which discovers Angola, Nigeria and South Africa as the biggest

beneficiaries of foreign direct investment because of their enrichments of natural resource, about 30% of Africa's foreign direct investment goes to this three countries.

FDI stream into Nigeria is recognizably little contrasted with most countries in Europe, America and Asia. A large portion of Nigeria's aggregate investment is constituted by FDI, with lighting up and magnificent account in the country's oil extractive, telecommunication and manufacturing sectors. According to UNCTAD (2006), Nigeria receives about 11% of aggregate FDI inflows to Africa and over 70% of West African sub-region FDI inflow. Nigeria fails to take cognizant and ponder steps that will empower foreign direct investment flows at the early post-independence period. In the late 60s and early 70s Nigeria embraced the indigenization policy and Import substitution strategy which was the opposite of FDI. Because of these strategies there was less foreign investment in the country and no possession of Greenfield by foreigners in the economy. Oil revenue was used to maintain these policies; there was abundance in investment in both public and private capital.

1.2 Statement of the Problem

Given the monoculture nature of the economy of Nigeria which heavenly rely on oil sector, the late seventies crash in the oil market prompted to genuine in capital of investment, social investment project takes the vast majority of 3rd and 4th development plans between 1975 to 1985 relinquished. According to Anyanwu (2011), the disorder in Nigeria's economy caused by the crash of oil market impacted Nigerian policy makers to leave on a quick and broad look for substitute capital, and executed a plan of strategy that will draw the attention of foreign investor, for

example, actualization of Structural Adjustment Program (SAP) by increasing the level of economy openness, changing the financial system and financial market, deserting the ISS policy and government selling some of its enterprises and capital to private individuals, adjustments of domestic material advancement and tax reduction. Likewise, new institutions were built up to manage FDI persistent streams and create enabling environment that will attract foreign investor to invest in the economy and also increase their confidence. According to Anyanwu (2011), these incorporate the Industrial Development Coordinating Committee (IDDC) in the year 1988 later supplanted by the Nigerian Investment Promotion Commission in the year 1995, two policies implemented in the year 1991 which are; the Nigerian Export-Import Bank and Export Processing zones. The effect of these programs and policies all together was overpowering. There was a huge expansion of FDI inflows from 1975 to 1990 from 2.3 million naira to 10.4 million naira, from that point; FDI inflows began blooming and expanding at a humble rate. Currently Nigeria is swallowing over 15% of aggregate FDI streams into Africa, making the country to be the most beneficiary of foreign capital (UNCTAD, 2012).

However, considering the credibility of the hypothetically likely advancement radiating from foreign direct investment, global economies, specifically less developed economies or countries, have been struggling in attempting to draw in a huge percentage of world FDI streams, subsequently creating exceedingly competition in FDI market. This means for a country to benefit from FDI, measures that will attract FDI should be put in place. There is proof from collection of empirical literature that discovers FDI streams to an economy or country is affected by some key factors determining FDI streams which are needed by country to

succeed in attracting FDI. There is no consensus empirically in the literature on the essential factors impacting FDI streams; majority of the factors that determine FDI inflows have been investigated empirically (Anyanwu, 1998; 2011, Padma et al 1999; Borensztein, Laura, 2003; 1998 Dinda, 2009 Obida and Abu, 2010). Nevertheless the impact of domestic investment has not been given much attention in the literature, particularly in Nigeria. De-Mello (1999), discovers the degree to which foreign direct investment embellish growth relies upon the level of substitution or complementary among domestic investment and foreign direct investment Supporting this finding, Ekpo (1997) noticed that private investment is precisely impacted by public investment. In that capacity the government should create empowering domain for nonpublic investors by putting more resources in infrastructural development which will make the Nigerian economy to become attractive to foreign investors.

Considerable measures has been putting in place by Nigerian government in attempting to make an empowering, less expensive environment that advances investments hopes by infrastructural improvement, amiable market strategies, and forming of correlative investment to increase domestic resources required by local firms; however government investment only comprises some portion of aggregate investment. Majority of researches on domestic investment as an element of FDI consider it as combined variable, aside breaking down domestic investment to its two divisions-public and private, so knowing FDI can be impacted by public and private domestic investment separately. Similar researches have been conducted on private domestic investment and foreign direct investment. These researches verifiably accepted that FDI is an important determinant of domestic firms' efficiency.

However, domestic investment can also be an important determinant of foreign investor's efficiency. This research departs from prior researches evidence in Nigerian case study (Verick, 2008; Ekpor, 1997 and Anyanwu, 1998) by investigating the impact of FDI on economic growth and also separately investigating the impact of domestic investment on economic growth.

1.3 Objective of the Research

This study is intended to investigate the linkages between foreign direct investment, domestic investment and economic growth evidence from Nigeria. The study is aimed to provide answers to the following questions:

1. Does foreign direct investment crowd in or crowd out domestic investment?

2. What are the effects of foreign direct investment and domestic investment on Nigerian economy?

1.4 Research Methodology

This study makes use of time series analysis to examine the relationship between foreign direct investment, domestic investment and Nigeria's economic growth. 35 years (1980-2015) were reviewed; for testing the level of stationarity of the variables used in the research we conducted unit roots test with the broadly employed Augmented Dickey Fuller (ADF) and Philips-Peron (PP) methods. There is an empirically proof that majority of macroeconomics variables are always not stationary at level form more especially GDP. VECM test is employed to examine the long-run relationship of the variable and the long-run equilibrium.

1.5 Organization Structure

This research work is make-up of six chapters. The first chapter comprises of; the introduction, research background, statement of the problem, objective of the research, research methodology and the organizational structure.

The second chapter is the literature review; which comprises of definitions of foreign direct investment, theories linking FDI, DI and Domestic investment and the empirical literature.

The third chapter is about Nigerian domestic investment profile and history of foreign direct investment in Nigeria. The fourth chapter entails the data analysis nature of data, data collection and research methodology.

The fifth chapter focuses on the presentation of data, analysis of data, interpretation of outcomes and discussions of findings. Finally the sixth chapter comprises of summary, conclusion and policy implication from the research.

Chapter 2

REVIEW OF THE LITRATURE

This chapter consists of the definitions of FDI, theories linking FDI and economic growth and review of the related literature in the research area conducted by other researchers.

An FDI-related review is a standout amongst the broadest research areas in capital movement and global finance. Empirical and insightful studies have concentrated significantly of determinant of FDI-growth links. The sub sequential has been widely concentrated barely, going from broad study to nation specifics examples, i.e., absolutely following the conceivable medium via which foreign direct investment affect the home nation. Examining the literature Anyanwu (2011) noticed that there are different conclusions by experienced analysts on the relationship between economic growth and foreign direct investment; FDI is positively related to economic growth if it crowds in domestic investment and has a negative relationship if it crowds out domestic investment local business enterprise. Likewise, there is existence of a consistent agreement among empirical researches over the accuracy of the determinants of FDI. However the fact that regional or country minutiae impacts FDI inflows has been upheld by researchers.

2.1 What is Foreign Direct Investment (FDI)?

Scholastic researchers, organizations and institutions has given distinctive definitions to foreign direct investment, however, all that really matters remains unchanged. FDI is defined as ‘a business organization that administers and has the charge production exercises in two or more countries' Corollary et al. (2009). According to Rutherford (1992), FDI is the ‘purchasing of an existing company or establishing a new company in a foreign country’. Supporting this, Paul Krugman describes FDI as' global capital streams that enable a company to build or extends his business in a foreign country'. FDI is 'investing in a business or possession of an enterprise situated in a particular country and successfully being managed by a foreigner' (United Nations). FDI is ‘the venture made to secure an enduring administration enthusiasm (generally 10% of the voting stock) in running a company or business in a foreign country (World Bank, 1996).

In the same vein, the United Nations Conference on Trade Agreement and Development (UNCTAD) characterizes FDI as ‘funding, administrating and controlling of a business in a country by a citizen of another country’. FDI alludes to a circumstance in which a citizen of one country invest at least ten percent capital of a business enterprise or company in another country which gives him power and say in controlling and managing the enterprise (OECD, 1992).

Multinational corporations (MNCs) are the lead drivers of FDI in LDCs. Multinational corporations are companies that have their head office or main factory generally in developed economy or nation and have more branches operating in other countries, both developed and less developed countries with net sales of about

$100million and above (Jhingan, 2007). FDI is the major or most important feature of MNC: therefore both FDI and MNC are important actors in the world economy; the theory of MNC is also the theory of FDI. Considering this FDI is more than just relocation of capital from one country to another but entails the expansion of companies or enterprises from their country of origin to other countries (host nations).

2.2 Theories Linking FDI and Economic Growth

Two principle theoretical points of view have been applied to clarify the effect of foreign direct investment on home nations' economies. The theories are modernization and dependency.

According to modernization theories FDI can enhance growth in less developed countries, this means dependency theory is built on autogenously and neoclassical growth theories. The modernization point of view depends on a major assumption in economics that investment in capital is the key to economic growth.

According to the viewpoint of the modernized growth theories, the moving of technology to less developed countries via FDI is particularly critical on the grounds that most developing nations do not have the basic infrastructure particularly in liberalized markets, social and economic soundness, and literate population that are required for novelty to be growth enhancing (Sanchez-Robles and Calvo, 2002). As noted by Pradhan and Kumar (2002), aside from capital and technology, foreign direct investment generally streams as a bunch of assets, inclusive of managerial and administrative abilities, Market Avenue through the promoting systems of MNEs and

showcasing know-how. Accordingly, FDI plays a binary capacity by adding to accumulation of capital also by expanding aggregate factor output (Nath, 2005).

While the dependency point of view contends that there is a negative relationship on income distribution and economic growth if an economy depends on foreign investment.

As opposed to the modernization point of view, dependency theorists contend that dependence on foreign investment is expected to affect the growth and income distribution negatively. According to Chase-Dunn Bornschier (1985) an industrial design in which a single owner overshadows all, is formed by foreign investment, prompting to what they portray as "underutilization of productive forces." The assumption which says an economy regulated by nonnatives of a country will not grow naturally, but will fairly develop in a disordered way (Amin, 1974). Africa's natural resource sector receives the lion share of FDI (Pigoto, 2000) this is why the entry has significant hindrances.

A collection of empirical proofs recommends a robust positive relationship between FDI and domestic investment. Foreign direct investment and domestic investment has a bi-directional relationship Ndikumana and Verick (2008). They additionally affirm that immense return to capital is an indication of immense private domestic investment, while the cost of investment or business is decrease due to immense public investment which leads to the satisfactory of public infrastructure. Hence, immense domestic investment aids in drawing the attention of foreign investors.

Cost lessening and intensifies competition theory is use to comprehend the impact of domestic on foreign direct investment. On this note, we hypothesize that domestic investment enhance competition and lessen operation expense. Comparing two countries with different domestic investment, it is conceivably sensible to contend firms in the country with full-fledge public services experience a reduction in operational expense in respect to the other country. These facilities in mode of social infrastructure help businesses in the creation and dispersion of goods and services. Without these production helps, firms have the contrasting option of accommodating themselves, in this way expanding the cost of business and absence of business visionary motivating forces. Foreign capital and foreign investor are less captivated, because of the less business commitment in the country's economy, vice versa. This link is firmly corresponded with public domestic investment.

Nevertheless, the impact of private domestic investment on foreign direct investment streams is more complicated. FDI inflows into a country can be stimulate or discouraged by private domestic investment. It relies upon the particular relationship among foreign and private domestic firms and additionally how well-established is the domestic private sector. In a circumstance where nearly all private firms are functioning in most extreme specialized and economic effectiveness and have a great international ranking, the possibilities of market rivalry is practically depleted, foreign firms look at this area as unfruitful, in this manner pushing them away. In any case, in circumstance of less rivalry among private firms, FDI is attracted.

In an alternate focal point, a country where generous private domestic investment was made in the downstream area will experience capital inflow from foreign

investors. This is alluded to as the rearward relation impact between private domestic investment and FDI. The source of domestic material is taking into consideration by foreign firms before establishing their factory, since their capital project is a long-term investment. Foreign investors will practically import all part needed in their production process if sufficient domestic investment in the downstream sector has not been made in the host-country, it will be more beneficial to them if they build their production factory in their own country and export the finished goods or services to other countries. This situation nonappearance of a well-established downstream area- is FDI-discouraging.

2.3 Relationship between Domestic Investment Foreign irect Investment Inflows in Nigeria

Nigeria is an open economy considering the total world output Nigeria can be classified as a small economy, with a welcoming propensity and well-designed international relations. From 1986, Nigeria has turned into a friendly clime for investors from all around the world; this has been empirically verified in many studies. As embraced before on the relationship between foreign direct investment and domestic investment, particularly on the one way direction of domestic investment flow, few empirical studies were done one this, however this is not imply that foreign direct investment is detached to domestic investment; the truth is that domestic investment impacts foreign direct investment in a range of manners. As recognized by Anyanwu (1998), with other factors included in his study, he affirmed that Nigerian domestic investment is a significant determinant affecting FDI inflows positively, despite the fact that he was not precise on which of the component of DI has the higher edge.

2.4 Empirical Literature

The passionate move by less developed countries to pull in FDI into their econmy has produced enough empirical researches to assess the motive being the reason for FDI, and investigate the assimilative limits which must be satisfied by the home country. Nevertheless, majority of the prior studies on FDI determinants have made a small or almost no consideration regarding domestic investment. However, the few works that addressed it did it in brief or considered it as a one way flow, from foreign direct investment to domestic investment. Moses et al (2013) identifies that both public and private investment are negatively related to FDI inflows, so also FDI inflows is negatively related to market size and human capital, while openness to trade and natural resources are positively related to FDI. He further noted that FDI flows into Nigeria is relatively small compare to that of countries in America Europe and Asia, however FDI constitutes an important share of the country's total investment more especially in energy, manufacturing and telecommunication sectors. Abdulmumini and Tukur (2012) used a non-probability sampling method in selection of sample size and years (1981 to 2010) to examine the relationship between domestic investment and economic growth evidence from Nigeria. Their findings suggest that domestic investment and economic growth have a long-run positive relationship, and also exports have a long-term positive relationship with economic growth in Nigeria.

Luiz R et al. (1997) investigates FDI in less developed countries and growth: A selective analysis, noted that a definitive effect of FDI on GDP growth in the recipient country relies on upon the degree for effectiveness spillovers to local enterprise, by which FDI prompts to expanding returns in local production, and

increments in the value-added substance of FDI-associated production. In addition, in a similar study, Adams (2009) investigated the effects of foreign direct investments and domestic investment on economic growth in sub-Saharan Africa from 1990 to 2003. Employing OLS and fixed effects estimation discovered that domestic investment is decidedly and essentially corresponded with economic development, while FDI is significant and emphatically related to economic growth just in OLS estimation. He further finds that FDI has a short-run or originally negative impact on domestic investment and in the long-run the effect turns to be a positive effect. Similarly Zhang and Kevin (1999) studied FDI and Economic Growth of Ten East Asian countries and finds that FDI enhance economic growth in the short- run only in Singapore and in the long- run FDI improve the economic growth of 5 countries namely Japan, Hong Kong, Taiwan, China and Indonesia. Eleven Latin American and Asian countries where studied by Zhang (2001) between 1970 and 1997 and reported that FDI will most probably advance growth in Asia countries more than in Latin America countries, he additionally discovers that FDI has a tendency to advance economic growth when the home nation embraces liberalized trade policies, keep up macroeconomic stability and enhance education,. So also, Balasubramanyam et al. (1996), investigates 46 nations from the period of 1970 to 1985 noted that the FDI effects and growth improvement are more grounded in nations with immensely educated workforce and sought a strategy of export advancement instead of import replacement.

James (2009) investigates weather FDI and public domestic investment crowd in or crowd out private domestic investment in Malaysia for the time frame of 1960 to 2003, in his findings he realized that the effect of FDI on private domestic

investment can differ from one economy to another, contingent upon the type of foreign direct investment, the host country's trade strategies and qualities of the domestic firms. The result also suggests that private domestic investment is buttress by both public domestic investment and FDI in the long-run**.** He additionally finds that the impact of FDI on private domestic investment is more asserted than that of public investment. Ekpo(1997), investigates FDI in Nigeria. He claims that public domestic investment directly impacts private domestic investment, accordingly the government ought to put resources into infrastructure which prove an empowering domain for private local investors; thusly captivate foreign direct investment to Nigeria. In another research, Sumei Tang et al. (2008) investigates China's FDI, domestic investment and economic growth, employing VAR technique with ECM method for the period 1988–2003, The findings suggest that there is one way relationship running from FDI to domestic investment and also one way relationship from FDI to economic growth, and a bi-directional relationship between economic growth and domestic investment. FDI is also observed to be complementary or corresponding domestic investment. Hence, FDI has not just aided with conquering inadequacy of capital; it has additionally invigorated economic advancement through supplementing domestic investment in China. Using vector auto regression model David et al. (2003) empirically test weather foreign direct investment inflow crowd out domestic investment: Evidence from Korea, they finds that foreign direct investment has some beneficial impacts on economic growth but they are not significant. But economic growth is statistically significant and is also a strong determinant for long-run FDI flows; they further find that finds that FDI indicates solid element endogeneity to domestic macroeconomic conditions.

Gungor and Katircioglu (2010) empirically investigates the nexus of financial development, FDI and real income growth evidence from Turkey employing the annual data of 1960 to 2006, discovered the relationship between FDI, financial development and real income is a level relationship in long term Turkish economy, they further found that FDI, real income and financial development converge to the long term values generally at a higher levels, and finally suggested a feedback relationship between real income, FDI and financial development in Turkey. In a similar study Mohammed Omran & Ali Bolbol (2010) investigates FDI, financial development, and economic growth: Evidence from Middle East Arab economies, they pointed out that Arab FDI will favorably affect growth if associated with financial factors at a given edge stage of growth, it likewise finds that in developing nations FDI could Granger cause financial development, and conclude that domestic financial changes ought to precede policies enhancing FDI, investment measures ought to upgrade the environment for all investors foreign and local alike—and liberal commercial approaches ought to be planned as introductory measures to attract FDI.

Chapter 3

NIGERIAN DOMESTIC INVESTMENT PROFILE, FDI FLOWS AND NIGERIAN ECONOMY

3.1 The Profile of Nigerian Domestic Investment

Investment is the financial expenses on real resource like real estate, inventories, and factory plants, additionally inclusive of the supplying of socially alluring resources like healthcare services, education, communication and transportation among others. All other resources that are not devoted in the creation of goods and services are not considered as investment. The aggregate of both domestic and foreign investment in a country is the country's total investment.

$$\mathbf{I_d + I_f = I_t}$$

Where; $\mathbf{I_d}$ means domestic investment, $\mathbf{I_f}$ represents foreign direct investment and $\mathbf{I_t}$ represents total investment.

Public and private investments are the two segment of domestic investment. For many countries, particularly developed nations, the percentage of domestic investment is essentially huge, in some cases higher than foreign capital; this is, nonetheless, an obviously restricting element for many less developed countries, where domestically derived capital is inadequate and restrains focused on investment. In these countries, Nigeria specifically, public and private investment as a portion of the country's GDP is considerably little and the country's economy

depends vigorously on foreign capital. The net inflow of foreign direct investment (% of GDP) in Nigeria was last measured at 0.82 in 2014 by World Bank.

Amid the first decade immediately after independence, as % of Nigeria's GDP public domestic investment was below 5% on average. The rural regions were entirely detached from the net investment while the urban regions received largest share of the social capital projects. Following the disclosure of crude oil in enormous quantity in the Niger Delta region and favored with foreign desire for Nigerian syrupy crude oil, there was great rise in government capital expenditure because of the huge increase in the generation of the government revenue. According to empirical studies, public domestic investment as a percentage of GDP drastically increase from 3.6 to 14.9 between 1970 t0 1970 this mean there was almost 400 percent increase

This great record remained along these lines, continuously on a normal rate of 15% to the GDP, till the late 70s when the oil market smashed, which leads to the decrease in government revenue, and resulted to declining government expenditure that is reduction in public investment. Literally, public investment decline by 13% in 1982 to 9% in 1983. Despite the fact that it recorded an estimation of 12.3 percent in1986, coming about because of the expansion of domestic income by the World Bank and IMF, public domestic investment has remained less than 10% from that point, aside from an expected rise in the election period of 1998 and 1999. The global financial crisis in 2000s leads to fall in the global price of crude oil, which is major source of Nigerian government revenue; this resulted to poor rate of public investment. Net capital establishment which calculates aggregate investment attempted by private people in the local economy supplements public domestic investment. Correspondingly, Nigerian private domestic investment has drifted the

same way with public domestic investment. Nigerian public domestic investment was measure on average as 25% of GDP yearly in 1970s and 1980s, which was high than public domestic investment at that time. However, private investment has drastically dropped to less than 10% on average annually from 1995.

3.2 Historical Details: Formalize Details on Nigerian Economy and FDI Flows

Since from the colonial era, the economy of Nigeria has been commandeered by foreign forces, more especially the British and western countries, who found the country clime very accommodation for investment, this is why the country find it fairly troublesome to accomplish economic autonomy and self-managing social advance. The philosophy of free venture forced on the nation amid the colonial days and embraced from that point in the post-independence period assumed a basic part in integrating the country's economy into the world capitalism system, this open room for more foreign capital to flow into the country. Nigeria's non- oil sector takes the lion share of FDI inflow into the country's economy before getting independence from British colonial masters. The foundation of foreign investment was stately extension through installation of oversea branches of state business organizations (Edeogu, 2009). Leventis, United Africa Company (UAC), and so on are some of the foreign companies hosted by in Nigeria, the companies were engage in trading of cash crops. Notwithstanding, the nation's autonomy in the year 1960 was to transform a considerable measure of things economically, socially and politically. For the young country to survive, Nigeria made use of different economic and political approaches because the country's future is in her arms. Exportation of cash and food crops was the major source of revenue to Nigeria in the twelve years of independence, so the country was sustained by the revenue from agriculture.

Nigerian economy experienced a pattern inversion and start of an auxiliary move and specialist sectorial lopsidedness of the economy to oil sector suddenly after the disclosure of crude oil in the mid-70s (Edeogu, 2009). Extensive FDI began impending into the country with a specific goal to faucet from the tremendous crude oil deposits. In 1972, there was a reduction of investment in the non-oil sector of Nigerian economy to 34% and an increase of investment in the oil sector to 66% because of the increase in FDI inflow and development of MNCs from USA, Britain and other western countries in the oil sector, this is what makes the oil sector to be the strongest pillar of Nigeria's Economy. In 1974 the non-oil sector portion of FDI remained at 2.5% while the oil segment of FDI took a large portion of 97.5% (Central Bank of Nigeria, 2005). This higher fluctuation is followed by the tremendous increment in the price of crude oil in the repercussions of the war between Israeli and Arab in 1973. Nigeria's Economy became a monoculture economy due to this sectorial disproportion.

The enactment of imports swap strategy, attentively prescribed beneath private sector-led development, constrained the MNCs to build up production machineries in the country; nevertheless, this approach was not fully successful. The 1980's financial crises and the acknowledgment of the way that the recent import swap methodology was a disappointment combined with the significant effect of foreign direct investment in few nations, particularly the countries in South-East region of Asia, constrained the policy makers to return to the industrial strategies of before 1970 which devoted impressive consideration regarding drawing in foreign direct investment (Odusola, 2002). In order to address the irregularity and gross twists in Nigeria's economy, the Structural Adjustment Program was formed in the year 1986.

Sadly, the execution of the commendable Structural Adjustment Program approach dressed to support speculative and business exercises as opposed to diversifying the economy from a monoculture economy, along these lines urging foreign direct investment inflows to different areas.

In May 1999 a democratic elected government took over the leadership of Nigeria, there was high expectation of amending the social, natural and financial harm of the dictatorship under the military leadership. Nigeria started a steady movement approaching making a social and political atmosphere, auxiliary of collective social obligation and at last supportable advancement (Okomoh, 2004). Actually, Nigeria saw more prominent FDI inflow somewhere around 1999 and 2001. Another component in charge of the exceptional increment in FDI aside from economic approaches is the judicial administration and its relevant organizations needed for the formation of appropriate investment atmosphere and a market economy were desired public strategy plan of the nonmilitary government (new democratic government).

Chapter 4

DATA AND METHODOLOGY

Times series econometrics method is applied in this research to validate the aim of the study. The study traverses a time of 35 years (1980-2015). Our data is sourced from the Central Bank of Nigeria, IMF development indicators and World Bank development indicators. To stay away from a spurious regression analysis the study applies Augmented Dickey-Fuller (ADF) and Phillip-Perron (PP) stationarity tests. It is a well-accepted prove that majority of macro-economic data displays trend and seasonality. For testing the long-run relationship among our variable included in the study Johansen cointegration is conducted. The next test carried out is the VECM approach to apprehend the short-run possible equilibrium and the long-run speed of movement at which the variables of interest are aproaching their long- run values. The variables employed as a part of the Model specifications are RGDP which is used as the measure of economic growth as the dependent variable, FDI and DI are the explanatory variables while interest rate is a control variable.

4.1 Model Specification and Variables

To test the linkages between foreign direct investment, domestic investment and Nigeria's economic growth, two independent or explanatory variabes (FDI and DI) are considered and one control variable (interest rate) these selections are made base on the previous empirical studies and economic intuition. Economic growth (dependent variable) is measured by GDP. Data covers the period of 1980-2015 from world bank development indicators. Below is the formulation of the Model.

Statistical form: GDP= f(FDI, DI, INT) (1)

Econometrics form:

$\mathbf{Y}_t = \mathbf{X}\beta_t + \mathbf{Є}_t$

$\ln GDPt = \beta_0 + \beta_1 \ln FDI_t + \beta_2 \ln DI_t + \beta_3 \ln INT_t + Є_t$ (2)

where, our expected signs of β_1, β_2 and β_3 are all positive.

GDP= Gross Domestic Product

FDI= Foreign Direct Investment

DI = Domestic Investment

INT= Interest Rate

Є = Stochastic term

4.2 Stationarity Test

Time series data are mostly not stationary, meaning that its mean, variance and covariance are not time invariant Gujarati (2009). Econometricians confront troubles with non-stationary series since it prompts to deluding or spurious regression outcomes. Therefore it is necessary to conduct stationarity test for all the variable to verify the characteristics of the series. Stationarity test also give an avenue to know if the dependent variable and the independent variables in the model are intergrated in the same order.

Various methods are employed for statioarity test, both official and unofficial. The official or formal test methods are the broadly known Augmented Dickey-Fuller and Phillips-Perron tests. While the unofficial test methods comprises of graphical analysis of the order to get a sight of the discription of the order or series, or the

Partial Autocorrelation Correlogram (PACF) methods. In this study we make use of both Augmented Dickey-Fuller and Phillips-Perron tests and in additon we make use of Kwiatkowski Phillips Schmidt and Shin‟s (KPSS) test for validation of the outcomes of ADF and that of PP tests.

Augmented Dickey Fuller ADF Test

The AGF test is the adjusted version of Dickey-Fuller stationarity test, broached by Dickey and Fuller (1981). Dickey-Fuller test has some deficiences, DF can not seizure higher degree autocorrelation functions, in order to rectiy this deficiencies the ADF was formed.

ADF test prepares the modification of unit root test in situations when e_t is not a white noise, implying the possibily of having correlation in the stocastic term. Below is the equation for unit ADF test.

$$\Delta Y_t = \alpha + \beta t + \gamma Y_{t-1} + \sum_{i=1}^{r} \delta_i \, \Delta Y_{t-1} + \varepsilon_t$$

with

$$\delta_i = -\sum_{k-i-1}^{s} \gamma k \quad \text{And} \quad \gamma = \left(\sum_{i=1}^{s} \gamma_i\right) - 1$$

Where ε_t represents pure white noise disruption term as: $\Delta Y_{t-1} = (Y_{t-1} - Y_{t-2})$, where *t* represent the and

We empirically choose lagged difference so as to stay away from the trouble of serial correlation among our stochastic terms. In order to stay away from a biased evaluation of the error term. According to Greene (2003), the quality of ADF approach is that it takes into consideration the settlement of higher order auto

regressive procedure. ADF technique can be tested by employing the generally used model with trend and intercept or the one with trend only, or the minimal used model without trend and intercept. ADF test null hypothesis is H_0:= series has unit root (not stationary), while the alternative hypothesis is $H_{1=}$ series does not have unit root (stationary).

Phillips-Perron (PP) Test

Philips (1987) and Perron (1988) created method for unit root stationarity testing of series. PP test is a contrasting option to ADF test. The Philip-Parron test is a non-parametric technique for evacuating higher order serial correlation it is also used to find out the way toward creating PACF and AR (1) meaning the first order autoregressive model. It estimates the variance of the residual using the outstanding newly-west technique for adjusting autocorrelation and heteroscedasticity. Newey-west for PP test equation is as follows.

$\dot{\omega}_r = \frac{1}{T} \sum_{s=r+1}^{T} \ell_t \ell_{t-s}$ r = 0…. P = rth auto covariance of the residuals

$\dot{\omega}_0 = \left[\left((T-r)\right)/T\right] s^2$ Where $s^2 = \frac{\sum_{t=1}^{T} \ell_t^2}{T-K}$

$$\gamma = \dot{\omega}_o + 2 \sum_{r=t+1}^{n} \left(1 - \frac{r}{n+1}\right) \dot{\omega}_r$$

Where *n* stands for restricted lag for predicting the statistic of PP test and $\dot{\omega}_r$ represents the correlation of the changes in residuals

ADF and PP test are both use in order to accurately specify a model, to know the pattern of all the variables included in a model and test the existence of unit root. The null hypothesis in a unit root test expresses the presence of unit root (not stationary),

versus the alternative hypothesis which expresses the non-presence of unit root (stationary), in circumstances where we fail to reject the H_0 at the levels, we have to take the first difference in order to make the series stationary, in the case where the H_0 is rejected this means the series is stationary (Maddala, 1998).

Kwiatkowski Phillips Schmidt and Shins' (KPSS) Test

Kwiatkowski et al. (1992) created this technique, it is conducted to approve and brace the results of both ADF and PP tests. The null and alternative hypotheses of KPSS are directly the reverse of that of ADF and PP. KPSS null hypothesis says the series are stationary and the alternative states that the series are not stationary. To test the stationarity of the series we make use of the Lagrange Multiplier statistics. This can be accomplished by.

$$X_t = pt + r_t + n_t :$$

Where t = (1, 2)…., t stands for the tested series of X_t. r_t represents the computed random walk. To accept the H_0, random work's error term variance is predicted to be zero (Kwiatkowski et al.). Base on this the LM equation is as follows:

Where t = (2, 3)….t Represents tested series of Y_t. r_t portrays the calculated random walk as. To acknowledge the H_0, the random work's stochastic term variance of is anticipated to be zero (Kwiatkowski et. al.1992). Along these lines, LM estimate is obtained below:

$$lm = \sum_{t=1}^{T} s^2 \Big/ \sigma_e^2$$

The partial sum of the residual process is represented by *s*, as follows:

$$s_t = \sum_{i=1}^{t} \varepsilon_t$$

KPSS approach may be proved, with the model that has only trend or with the model that has both trend and drift

$$X_t = \alpha_0 + ut + K \sum_{i=1}^{t} \mathcal{E}_i + n_t$$

4.3 Cointegration Test

Most macroeconomic variables like GDP, FDI, DI and interest rate may display seasonality or trend this means they are not stationary at the level. A cointegration test should be employed to the long-run relationship among the variables included in the model. For testing the long run relationship between series, Engel and Granger (1993) and Granger (1981) suggested a cointegration test. The trace statistic of JJ test (1990) demonstrates the existence of cointegrating vector in the series. Engel-Granger (1987) methodology is another technique for cointegration test, and is widely recognized to be substandard to JJ test. In order to solve the problem of endogeneity of independent variable by permitting vector auto regressive and additionally error correction model that has lag limitations, we should use the Johansen and Juselius (J&J) statistics. Below is the JJ test with lags.

$$\Delta X_t = \gamma_1 \Delta Z_{t-1} + \cdots + \gamma_{k-1} \Delta Z_{t-r+1} + \prod Z_{t-r} + u + \varepsilon_t$$

$\prod$ depicts the total cointegrating level of vector; this is found by checking if the eigenvalues are not equals to zero (0). Johansen and Juselius (1990) and Johansen (1988) suggest of the eigenvalue of order Π from the highest to the lowest is for the

calculation of the trace statistics. Johansen cointergratin test may be conducted by contrasting H_0 with the trace statistics predicted value relevant critical value initiated by Osterwald-Lenum (1992). We reject the null hypothesis in situations where the trace statistics is greater than its critical value, which denotes that series are cointegrated, but if we agree with the alternative hypothesis or when we fail to reject the null this means we don't have cointegration vector.

In the event where the λtrace is more than the critical value, we reject the H_0 meaning the variables are cointegrated, else we do not to reject and we acknowledge H_1 which implies the absence of cointegrating vector. Below is the trace statistics (λ_{trace}):

$$\lambda_{trace} = -T\sum Ln(1-\lambda_i)$$

4.4 Error Correction Model

All variable should be co-integrated at a similar level form, for the long-run affiliation. The variables in the series may likely converge in the long-run at the first difference co-integration. By adjusting gradually the short-run equilibrium will possibly converge in the long-run. The VECM method is used with Error Correction Term. The Error Correction Term (ETC) is needed to be statistically significant and negative meaning the usefulness of the error correction system. It exhibit how fast the variables converge to their long-run equilibrium. Below is the ECT equation

$$\Delta Y_t = \theta(\Delta_t) + T(Y_{t-1} - \delta X_{t-1}) + \varepsilon_t$$

The equation above displays the deviation in Y_t is approaching its long-run value as it is developed by the relative deviation in X_t close it long-run trend. The following is the ECT:

$$= (Y_t - \delta X_{t-1})$$

Chapter 5

RESULTS AND DISCUSSIONS

The empirical results and discussion of this research are presented in this chapter. Unit root test, cointegration test and VECM are used in this research. The previously mentioned tests are done after fulfilling the essential conditions. The Unit root test is conducted to test the stationarity of the variable included in the model, the test was conducted by employing the famous ADF and PP techniques. This is conducted to avert a specious estimation.

Johansen cointegration test is additionally done to check whether there is long run connection between the variables included in the model and to discover the short-run connection among the variables and the adjustment speed at which the variable converge to their long-run trend, we employed the Error Correction Model technique.

Below are the unit root tests results:

Table 1: ADF, PP and KPSS Unit Root Test

STATISTICS (Level)	GDP	LG	FDI	LG	DI	LG	INT.	LG
ADF(t&i)	-1.1289	(0)	-2.0402	(1)	-1.9651	(0)	-5.1131	(0)
ADF(i)	0.7704	(0)	0.3522	(1)	-2.1501	(0)	-4.5811	(0)
ADF(n)	1.4802	(0)	1.8725	(1)	-0.4799	(0)	-4.6718	(0)
PP(t&i)	-1.1123	(2)	-4.1848	(1)	-1.8204	(2)	-5.1375	(4)
PP(t)	0.4686	(2)	-0.668148	(3)	-1.8204	(2)	-4.5844	(1)
PP(n)	1.1968	(2)	2.3787	(4)	-0.4322	(1)	-4.6744	(1)
KPSS(t&)	0.1807**	(4)	0.2160**	(2)	-0.4322**	(4)	0.104**	(3)
KPSS(t)	0.4396**	(4)	0.6208**	(4)	0.2239**	(4)	0.408**	(1)
STATISTICS (1^{ST} DIFFERENCE)	GDP	LG	FDI	LG	DI	LG	INT.	LG
ADF(t&i)	-4.5854**	(0)	-10.83**	(0)	-4.5728**	(0)	-6.784**	(1)
ADF(i)	-1.8119**	(0)	-10.65**	(0)	-6.6478**	(0)	-6.858**	(0)
ADF(n)	-1.616***	(9)	-10.023**	(0)	-6.7833**	(0)	-6.973**	(0)
PP(t&i)	-4.7851**	(2)	-10.795**	(1)	-6.6143**	(0)	-20.95**	(6)
PP(t)	-3.2272**	(1)	-10.646**	(0)	-6.6690**	(1)	-17.97**	(5)
PP(n)	-3.1782**	(1)	-9.490**	(2)	-6.8064**	(1)	-15.15**	(5)
KPSS(t&i	0.0806	(5)	0.3798	(4)	0.0784	(3)	0.0995	(5)
KPSS(t)	0.4560	(3)	0.4205	(4)	0.1463	(1)	0.1232	(4)

Note:
GDP represents Nigerian Gross Domestic product; FDI represents Foreign Direct Investment inflows to Nigeria; DI represents Nigerian Domestic investment;INT represents interest rate. (t&i): represents the the general model with rend and intercept, (t): represents the model with only trend, (n): stands for he most restricted model with no trend and intercept. The numbers in paranthesis represents the lag lengdths for removal of serial correlation in ADF residuals, and for PP the numbers in paranthesis represent the New-West Bandwith. * represents 1% rejection 0f H_0, ** represents 5% rejection of the H_0 and *** represents 10% rejection of H_0. The unit roots test were conducted in E-VIEW 9.0

From table1 above we observed that all variable are not stationary at the level form, using all the three models of ADF and PP, and two models of KPSS. In all the models we fail to reject H_0 of ADF and PP, meaning all our series are non stationary. But for the KPSS we reject the null hypothesis at 5% in both models which implies the series has unit root (non-stationary). Because the hypothesis of KPSS hypotheses are the inverse of that of ADF and PP.

The following step needed is to take the first difference in order to guarantee the all the varibles are stationary. After taking the first difference all the variables got to be distinctly stationary that is to assert, we rejected the null hypothesis of ADF and PP

at various critical levels. GDP is rejected at 5% critical level in the model with trend and intercept and in the model with only trend, and is also rejected at 10% cretical level in the model that does not have trend and intercept all in ADF test, further more GDP is rejected at 5% cretical level in all the three models in PP while FDI and DI are all rejected at 5% critical level in all the three models of both ADF and PP. We fail to reject the null hypotheses of the KPSS signifying the series are stationary, this result buttress the result of ADF and PP methods, because their hypotheses is the inverse of KPSS hypothesis. In brief, table one demostrate all variablese included in the model of this research are stationary at first difference. The next step is to confirm weather there may likely be long-run run relationship between the series.

5.1 Cointegration Result

In the previous step we notice that our series are not stationary at their level form, this necessitate us to take their first difference, at this level all series are stationary. The requirement for conceivable long run relationship among the variable will be build up with Johansen cointegration test.

Table 2: Multı-Varıate Johansen Coıntergratıon Result

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.782958	72.82410	63.87610	0.0073
At most 1	0.531411	31.57717	42.91525	0.4115
At most 2	0.271421	11.11036	25.87211	0.8689
At most 3	0.090477	2.560559	12.51798	0.9241

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.782958	41.24693	32.11832	0.0029
At most 1	0.531411	20.46681	25.82321	0.2174
At most 2	0.271421	8.549805	19.38704	0.7698
At most 3	0.090477	2.560559	12.51798	0.9241

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values.

Table two above demonstrates that there exist one cointegrating vectors in the model. This means there is a long run relationship between GDP which is our dependent variables in the model and FDI and DI which are our explanatory variables in the research area. Considering the result of the JJ test this qualifies us to run the Vector Error Correction Model.

5.2 Vector Error Correction Model (VECM) Estimation

The VECM technique is employed to test the short-run relationship and direction of our variables. The VECM method also help to discover the speed of adjustment or how fast the variables in the model are approaching their long-run equilibrium. To be certain abount the existance of the long-run relationship and long- run possbile convergence of our variable and also be sure of the effectiveness of the error correction technique, the ECT must be statistically significant and it coefficient must be negative.

Table 3: Vector Error Correctıon Estımates

Sample (adjusted): 1984 2009
Included observations: 26 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
GDP(-1)	1.000000
FDI(-1)	-7.40E+10
	(1.6E+10)
	[-4.53552]
DI(-1)	-1.10E+10
	(2.0E+09)
	[-5.49761]

INTERST(-1)	3.57E+08			
	(4.8E+08)			
	[0.74547]			
C	1.67E+12			

Error Correction:	D(GDP)	D(FDI)	D(DI)	D(INTERST)
CointEq1	-0.525462	-6.63E-13	8.75E-11	7.68E-11
	(0.15762)	(5.1E-12)	(3.0E-11)	(2.5E-10)
	[-3.33382]	[-0.13102]	[2.88818]	[0.31137]
D(GDP(-1))	-0.284463	8.23E-12	5.95E-11	5.34E-10
	(0.34311)	(1.1E-11)	(6.6E-11)	(5.4E-10)
	[-0.82907]	[0.74714]	[0.90182]	[0.99419]
D(GDP(-2))	0.692424	-1.47E-12	-8.82E-12	-3.02E-10
	(0.39116)	(1.3E-11)	(7.5E-11)	(6.1E-10)
	[1.77019]	[-0.11685]	[-0.11730]	[-0.49308]
D(FDI(-1))	-2.68E+10	-0.510192	3.439065	12.90170
	(1.1E+10)	(0.35883)	(2.14942)	(17.5000)
	[-2.39385]	[-1.42182]	[1.60000]	[0.73724]
D(FDI(-2))	-1.05E+10	0.082192	0.897108	0.752556
	(7.6E+09)	(0.24551)	(1.47063)	(11.9735)
	[-1.37936]	[0.33478]	[0.61001]	[0.06285]
D(DI(-1))	-2.18E+09	0.057326	0.295331	1.510003
	(1.5E+09)	(0.04737)	(0.28372)	(2.30999)
	[-1.47769]	[1.21029]	[1.04092]	[0.65368]
D(DI(-2))	-2.57E+09	-0.097589	0.212813	1.745024
	(1.2E+09)	(0.03812)	(0.22832)	(1.85888)
	[-2.16560]	[-2.56034]	[0.93210]	[0.93875]
D(INTERST(-1))	-756606.9	-7.32E-05	0.026061	-0.389627
	(1.6E+08)	(0.00519)	(0.03106)	(0.25287)

	[-0.00468]	[-0.01411]	[0.83907]	[-1.54079]
D(INTERST(-2))	-57902793	-0.010426	0.012405	-0.492771
	(1.3E+08)	(0.00421)	(0.02520)	(0.20518)
	[-0.44187]	[-2.47818]	[0.49225]	[-2.40165]
C	7.63E+09	0.145970	-0.707611	-1.783174
	(3.1E+09)	(0.09896)	(0.59279)	(4.82636)
	[2.47592]	[1.47500]	[-1.19369]	[-0.36947]
R-squared	0.580867	0.729537	0.505421	0.508681
Adj. R-squared	0.345105	0.577402	0.227221	0.232314
Sum sq. resids	2.53E+21	2.610691	93.67428	6209.452
S.E. equation	1.26E+10	0.403941	2.419637	19.70002
F-statistic	2.463782	4.795321	1.816752	1.840601
Log likelihood	-635.2237	-7.012143	-53.55485	-108.0769
Akaike AIC	49.63260	1.308626	4.888835	9.082839
Schwarz SC	50.11648	1.792510	5.372718	9.566722
Mean dependent	5.15E+09	0.121381	0.033654	1.039945
S.D. dependent	1.55E+10	0.621375	2.752469	22.48407

Determinant resid covariance (dof adj.)	3.06E+22
Determinant resid covariance	4.39E+21
Log likelihood	-795.4037
Akaike information criterion	64.56952
Schwarz criterion	66.69860

From table 3 above all coefficients were negative in accordance with our apriori desires. The ECT, which is named as the speed of adjustment, is 52.55% as portrayed by the Table above. The ECT is statistically significant at 1% and it is also negative, demonstrating that the short run estimation of FDI, DI and GDP will converge to their long-run equilibrium by 52.55% per annum by the contributions of FDI and DI as explanatory variables. The coefficient of determination means 58% of the variation in GDP is explained by foreign direct investment, domestic investment and interest rate. This recommends the remaining 42% is dictated by other elements excluded in the model. likewise the F-statistics is more than the critical value this permits us to reject H_0. Accordingly the F-statistics value portrays the collective significant accuret specification of the model.

Table 4: Granger Causality Test

Sample: 1980 2015 Lags: 5			
Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause GDP GDP does not Granger Cause FDI	30	3.12014 0.41560	0.0319 0.8320
DI does not Granger Cause GDP GDP does not Granger Cause DI	30	1.79956 0.30526	0.1611 0.9037
DI does not Granger Cause FDI	30	0.83147	0.5432

For the purpose of policy implication dynamic causality test was employed with the Granger Causality test. From the table above the result reveals a uni-directional causality relationship running from foreign direct investment to GDP, which means FDI has a predictive ability for GDP.

Chapter 6

CONCLUSIONS AND RECOMMENDATIONS

This research aims at investigating empirically the linkages between foreign FDI, DI and Nigerian economic growth, the research additionally inquiries if there exists a long-run link among the variables included in this research. The research uses yearly time series data set for a sample of 35 years, 1980 to 2015 on the premise of the data availability.

ADF, PP and KPSS unit root test techniques were employed to test the stationarity of the series included in the model. The result of the Johansen Cointegration test demonstrate the presence of one cointegration vector in the model, which implies there is a existence of a long-run link among the variables of enthusiasm for this research. The ECT illuminates the adjustment speed of our series to their long-run values. Adjust speed of our variables of interest is 52.55%. From the outcomes of the error correction model, it is clear there is a significant long run relationship between economic growth, foreign direct investment and domestic investment in Nigeria.

6.1 Implications

The circumstance enveloping the relationship of foreign direct investment, domestic investment and economic growth in Nigeria can be elucidating more practically than in theory. Our outcome shows that FDI is statistically significant; this outcome is not a surprise because the oil sector where the largest share of FDI is focusing in Nigeria is the major source of the government revenue. Furthermore, the domestic

investment is statistically insignificant adverse to earlier assumptions, this demonstrates the shortage of domestic investment in Nigeria. The discoveries of this research therefore have implications as follows:

1. If the current trend continues, given that Nigeria is a monoculture economy solemnly relaying on oil, this means the extractive FDI (oil sector) is going to crowd out other sectors. This will reduce investors' confidence in other sector. Therefore FDI can increase growth more if it is diverted to different sectors other than oil sectors like manufacturing and communication.
2. The government should create an enabling environment for investment in manufacturing and communication sectors, this will attract foreign investors to invest in these sectors that that enhance growth more than extractive FDI.
3. Finally, the study suggested that the monetary and fiscal authorities should enhance both monetary and fiscal policies that will reinforce the presence of domestic investment. This can be achieved by robust expansionary monetary and fiscal policies.

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