AN EMPIRICAL ANALYSIS OF THE DETERMINANTS OF NIGERIA'S INWARD FOREIGN DIRECT INVESTMENT (FDI) FLOWS: A COINTEGRATION ANALYSIS

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ABSTRACT

Despite a myriad of studies related to inward foreign direct investment (FDI) determinants, studies on how such determinants may differ in developing versus developed countries have produced mixed results from which it is difficult to discern a conventional wisdom. Moreover, only relatively few studies have specifically investigated inward FDI determinants in Nigeria (Adelegan, 2009; Ekpo, 1997; Ajakaiye, 2010; Ajayi, 2006; Anyanwu, 1998; Olatunji, 2011; Ariyo, 2009; Okpara,*et al.,* 2012), leaving a glaring gap on the key factors influencing inward FDI in Nigeria. Aiming to address this gap, the present PhD thesis intends to investigate the determinants of inward FDI in Nigeria. To address this primary aim, the specific research objectives are:

(i) To critically review past literature, both theoretical and empirical, on the key determinant factors affecting Nigeria's inward FDI;

(ii) To collect relevant data, formulate an adequate model specification and choose the most suitable econometric technique to undertake the empirical analysis using a state-of-the-art cointegration technique (the ARLD bounds testing approach to cointegration);

(iii)To interpret and discuss the results, identifying the main findings, and draw out key policy implications.

The study uses annual data from 1970 to 2014 and employs the Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration, a testing procedure for level relationshipsdeveloped by Pesaran and Shin (1999) and Pesaran *et al*. (2001). The major advantage of the ARDL approach to cointegration compared to other methods employed in previous studies is that it can be applied even if the regressors have different orders of integration, I(0) or I(1). This feature provides flexibility and also helps to avoid a potential "pre-test bias", i.e., the specification of a long-run model on the basis of I(1) variables only (Pesaran *et al*., 2001). In addition, and being based on a single equation, the ARDL methodology performs better in small samples compared to alternative multivariate cointegration procedures, for example the Johansen ML method (Romilly *et al*., 2001).

A comprehensive theory-based model is developed accounting for many variables, such as the interest rate, external debt, oil rents, the Gross Domestic Product (GDP) growth rate, trade and exchange rate volatility.

The analysis of FDI determinants in the Nigerian economy yielded reliable, robust and economically meaningful results thereby offering an insight into the driving factors of inward FDI.The empirical results indicate that the interest rate, external debt, oil rents, and the GDP growth rate have a statistically significant long-run effect on FDI, while trade and exchange rate volatility are found to be statistically insignificant. With the exception of the GDP growth rate, which presents a negative estimated coefficient, the signs of the statistically significant variables are consistent with theory. From a policy point of view, regarding the GDP growth rate, there should be concerted efforts to boost the performance of the non-oil sector in Nigeria through more investments in the agricultural and industrial sectors which will make the growth of the economy spread across other sectors and, in turn, encourage inward FDI in such areas. The findings also indicate that trade is statistically insignificant. This can be attributed to the fact that FDI flowing to Nigeria is mostly resource-oriented due to the Nigerian government being more focused on policies that attract FDI to the oil sector and neglected others such as agriculture and manufacturing. Finally, the findings suggest that exchange rate volatility has a negative, yet statistically insignificant impact on FDI. This result may be explained by the fact that Nigeria's inward FDI is so oil-dependent that exchange rate volatility, albeit likely to deter investment, appears to have an insignificant effect statistically.

The study makes both theoretical and methodological contributions to knowledge by providing vital information on FDI determinants in Nigeria thus guiding Nigerian leaders in government in decision making as well as other researchers interested in the study of FDI in Nigeria. Several policy implications flow from the findings. Countries such as Nigeria, endowed with natural resources, should pursue policies targeted at full deregulation (privatisation) of their natural resource sector to better utilise the abundance of their natural resources and to attract additional FDI. Nigeria should also pursue better debt management practices. When debts are acquired, they should be targeted towards future consumption and longer term investments. Most importantly, as an import-dependent economy, the Nigerian government should also formulate export-driven and appropriate fiscal policies that will stabilise and balance Nigeria's trade relationship with other world economies. The Nigerian government should create the necessary environment that will regulate macroeconomic and specifically monetary policy (interest rate) which is essential for the attraction of FDI inflows into the economy. Finally, Nigeria should

ensure that the quality of exportable commodities is improved to enhance international competitiveness.

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I give glory to God Almighty for His amazing grace upon me during my PhD studies. I couldn't have done this without Him.

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CHAPTER 1: INTRODUCTION

1.1 Chapter summary

This chapter discusses the academic context and background of this PhD thesis and highlights the research gap this study attempts to fill. The chapter also specifies the main research question (primary aim) and associated research objectives, and identifies the contributions that are expected to stem from the findings. The chapter concludes by outlining the structure of the thesis.

1.2 Academic context and background

There are very obvious reasons why it is necessary to investigate and gain a better understanding of, what determines foreign direct investment (FDI) to developing countries, with a particular interest toward Nigeria.

Over the past three decades, FDI has been subjected to considerable scrutiny in terms of its potential benefits (e.g. on employment, knowledge and technological spillovers) and impact on the economic growth of host countries. Empirically, many studies (see, Asiedu, 2006; Charkrabarti, 2001; De Vita and Abbott, 2007; Alvinasab, 2013; Ayanwale, 2007; Ekpo, 2007; etc)have also been carried out to identify the key determinants of inward FDI. Many theories have also been proposed (e.g., Dunning's OLI theory, 1977, 2001; Aliber's theory, 1970; Vernon's theory, 1966; etc.) and tested. Each theory, is expected to be applicable universally, to explain why FDI occurs across all industries and all countries. However, no single theory has been able to explain FDI for all types of industries and countries. This deficiency has been attributed to several factors, such as changes in the economic fundamentals of many developing countries, financial market development, improvements in financial control policies and banking supervision, and widespread liberalisation programmes (see, Bekaert *et al*., 2002; Blitzer, 2005; Okpara *et al*., 2012; De Vita and Kyaw, 2008; Elijah *et al*., 2010). Attempts have also been made to draw from hypotheses embedded in these theories over past decades, in an attempt to develop an all-encompassing framework capable of guiding empirical work on the determinants of inward FDI. However, as will be concluded from the comprehensive literature to be conducted in

later chapters, this attempt has been to no avail, leaving much of the task of the identification of the variables that exert a significant influence on inward FDI to the empirical research.

Africa's natural resources account for the uneven spread of FDI inflows across the continent. Specifically, the 24 countries in Africa classified by the World Bank as oil and mineral-dependent have, on average, accounted for nearly three quarters of annual FDI inflows over the past two decades (UNCTAD, 2005). In spite of the abundance of natural resources in Africa, the investment response has been poor, despite the application of some economic reforms that aimed at creating an investor-friendly environment. Obadan (2004) argues that investment is low in Africa because of the closed trade policy, inadequate transport and telecommunication infrastructure, low productivity and corruption. Pigato (2010) has suggested that most African countries lack the skills and technological infrastructure to effectively absorb large flows of FDI even in the primary sector while Fuat *et al*. (2004) see the lack of 'technological effort' in Africa as cutting off the continent from the most dynamic components of global FDI in manufacturing.

Nigeria is one of the economies with great demand for goods and services and has attracted significant FDI over the years. The amount of FDI inflows into Nigeria reached US$2.23 billion in 2003 and it rose to US$5.31 billion in 2004 (a 138 percent increase). This figure rose again to US$19.92 billion in 2008 (an 87 percent increase). The figure, however, declined slightly to US$19.44 billion in 2009 (Pigato, 2010). Such declines notwithstanding, the question that comes to mind is, do these FDI flows actually contribute to economic growth in Nigeria? If FDI actually contributes to growth, then government effort to ensure the sustainability of FDI is a worthwhile activity. Achieving FDI sustainability requires, first and foremost, a thorough understanding of the factors contributing to the growth in inward FDI, with a view to ensuring its enhancement. Again, most studies on FDI and growth are cross-country studies. However, FDI and growth are country specific. Earlier studies (e.g. Odi, 2013; Obadan, 2004; Akinlo; 2009) examine only the importance of FDI on growth and the channels through which it may be benefiting the economy, leaving a glaring gap on the specific determinants of inward FDI in Nigeria. The present PhD study fills this gap by empirically investigating the determinants of FDI flows in Nigeria.

Overall, the empirical evidence that has emerged in the last few decades indicates that FDI flows have been growing at a pace far exceeding the volume of international trade. Between 1995 and 2015, the aggregate stock of FDI rose from 9.7 percent to 36 percent of world GDP,

with sales of foreign affiliates of multinational enterprises (MNEs) substantially exceeding the value of world exports (Adu, 2016). The United Nations Conference on Trade and Development, UNCTAD (2016) reports that FDI flows to Africa have increased from $9.68 billion in 2000 to $54 billion in 2015. The UNCTAD World Investment Report (2016) shows that inward FDI to West Africa is mainly dominated by inflows to Nigeria, who received 70 percent of the sub-regional's total and 11 percent of Africa's total. Out of this, Nigeria's oil sector alone receives 90 percent of the FDI inflows.

Some of these benefits are in the form of externalities and the adoption of foreign technology. Externalities, in this context, can be in the form of licensing agreements, imitation, employee training and the introduction of new processes by the foreign firms (Akinboade, 2014). According to Akinboade (2014), MNEs diffuse technology and management know-how to domestic firms. When FDI is undertaken in high risk areas or new industries, economic rents are created overshadowing old technologies and traditional management styles. These are highly beneficial to the recipient economy. In addition, FDI helps in bridging the capital shortage gap and complement domestic investment especially when it flows to high-risk areas of new firms where domestic resources are limited (Edoumiekumo, 2013).

The favorable economic environment has made some countries in Africa increasingly attractive as destinations for private capital flows. The bulk of FDI is still focused on a few countries and targeted mainly at extractive industries, particularly the petroleum sector (mostly cross-border mergers-and-acquisition related inflows, which make up a large proportion of gross FDI inflows)(UNCTAD, 2016). But, deposit outflows from some oil exporters - notably Libya, Nigeria, and Russia - displayed some of the highest correlations, while for others - including Saudi Arabia and other Middle Eastern oil exporters - the correlations were only modest. Libya, Nigeria, and Russia also accounted for one-half of all deposit outflows from oil-exporting countries, and in each of these countries deposit outflows accounted for one-half or more of total gross capital outflows (UNCTAD, 2016). These huge capital outflows are linked mainly to extractive FDI and calls into question the ability of FDI to drive growth effectively in these countries.

1.3 Knowledge gap

Existing theories seem to focus on the firms' motivations for engaging in FDI rather than relying on exporting, portfolio investments or management contracts to fulfil the firms' expansion ambitions. Theoretical issues and controversies aside, despite a myriad of studies related to inward FDI determinants, studies on how such determinants may differ in developing versus developed countries (Lumenga 2006; Elijah *et al*.,2010; Khan *et al*., 2009; De Vita and Kyaw, 2008; World Bank, 2007, Lemi, 2011; Phillips, 2011; Pigato, 2010; Asiedu, 2002a; Soludo, 2007; Tsikata *et al*., 2000; Wafure and Abu, 2010; Odi, 2006; Onyeiwu and Shrestha, 2004; Sekkat, 2007; Khondoker, 2010) have produced mixed results from which it is difficult to discern a conventional wisdom. Moreover, only relatively few studies have specifically investigated inward FDI determinants in Nigeria (Adelegan, 2009; Ekpo, 1997; Ajakaiye, 2010; Ajayi, 2006; Anyanwu, 1998; Olatunji, 2011; Ariyo, 2009; Okpara,*et al.,* 2012). Some of the discrepancies that have emerged from these studies also raise a number of methodological issues that need to be highlighted and addressed in the analysis of this phenomenon.

Aiming to address this gap and issues with respect to Nigeria, this PhD study aims to identify the key determinants of Nigeria's inward FDI. For this purpose, a comprehensive model will be developed by selecting theory-based variables that previous literature has identified as those that could be expected to exert a significant influence on inward FDI. The specific idiosyncrasies of Nigeria will also be taken into account for this purpose alongside variables that have already proved in past empirical studies to have explanatory power (i.e., variables that recorded a statistically significant effect) in the determination of inward FDI. Overall, it is envisaged that knowledge, and hence a proper understanding of the main determinants of inward FDI in Nigeria will provide a significant contribution to both theory and knowledge in the field. Additionally, there will be valuable policy implications that are expected to offer a useful blueprint for policy choices to facilitate the institutional implementation of appropriate measures to attract the inflow of the desired quantum of FDI into the country.

1.4 Aim and objectives

As reflected in the title of this PhD thesis, the primary aim of this doctoral research is to ensure a gap is filled in the knowledge about the determinants of inward FDI in Nigeria, using cointegration analysis. To address this primary aim, the specific research objectives are:

(i) To critically review past literature, both theoretical and empirical, on the key determinant factors affecting Nigeria's inward FDI;

(ii) To collect relevant data and formulate an adequate model specification;

(iii) To choose the most suitable econometric technique to undertake the empirical analysis using a state-of-the-art cointegration technique (the ARDL bounds testing approach to cointegration);

(iv) To interpret and discuss the results, identifying the main findings, and draw out key policy implications.

1.5 Expected contribution

Overshadowing everything else are several problems facing Nigeria. Among these, are weaknesses in infrastructural provision, a lack of personal and property security, poor governance and corruption. Reflecting such major constraints, Nigeria ranked below average in the 'Report on African Countries of the Future 2013/2014 Winners' among African countries surveyed in terms of 'Best Infrastructure, Best Business Friendliness, Best Cost Effectiveness, Best FDI Strategy', in attracting FDI into the country. Such a poor business environment makes it difficult for Nigeria to increase the rate of FDI inflows. While these factors are, in a sense, intangible in the business climate, their impact is real in terms of its effect on FDI and, consequently, on the growth potential of the economy (Report on African Countries of the Future 2013/2014 Winners).

The importance of this study derives from the fact that, despite a considerable amount of empirical work carried out on inward FDI, also in the context of developing countries, very few studies have been conducted to investigate the variables that exert a statistically significant influence on Nigeria's FDI attraction. The common perception is that FDI is largely driven by natural resources and market size (Asiedu, 2006). Most of the previous studies did not focus particularly on Nigeria (see Elijah 2010; Asiedu, 2002a; Asiedu 2006). Factors that attract FDI to other African countries may not necessarily be applicable to Nigeria. There appears, therefore, to be a gap in the literature in determining the key factors that influence inward FDI in Nigeria. This study is also important in revealing the barriers to FDI inflows in Nigeria.

The achievement of the research objectives is expected to make an original contribution to knowledge in several respects. First, at the theoretical level, the study will specify a

comprehensive model of theory based variables expected to exert a significant influence on the level of inward FDI in Nigeria. Testing such a model will therefore test a range of hypotheses underlying the role of specific variables considered. Second, econometric estimation of the proposed model using both a unique dataset and an adequate econometric technique will constitute the most comprehensive and up-to-date empirical study conducted to date of the determinants of inward FDI in Nigeria. Finally, in line with the tradition of research in economics, the above contributions will also inform the development of an original set of policy implications on FDI attraction and promotion in Nigeria which should prove useful to Nigerian policy makers.

1.6 Structure of the thesis

The remainder of this thesis contains seven chapters. Chapter 2 provides an overview of Nigeria, revealing the characteristics of the country by way of offering a contextual background. It also provides a detailed analysis of the socio-cultural environment of the country. Additionally, the economic features of Nigeria are examined as well as the political situation.

Chapter 3 reviews the history of the FDI phenomenon. Activities and trends of FDI over time involving global FDI flows (both outward and inward FDI of both developed and developing countries), are thoroughly reviewed. Africa's position regarding FDI flows is also analysed. Furthermore, a detailed analysis of Nigeria's inward and outward FDI flows is undertaken looking at FDI's main destination countries, main source countries and sectors attracting FDI within the country. Additionally, various FDI policy options are critically examined, at both the national and international level, with a focus on the evolution of FDI policy in Nigeria.

Chapter 4 reviews the definition of FDI by developing a comprehensive taxonomy. The theories of FDI and other models also aimed at explaining the FDI phenomenon are examined along with the motivation of FDI by MNEs. The chapter ends with a detailed examination of additional factors that may exert a systematic influence on inward FDI flows.

Chapter 5 presents a critical and systematic review of the large body of empirical literature that has investigated FDI determination. Here, past empirical studies and findings are discussed, starting with a brief general review of such studies worldwide, and then by honing in on studies focusing on the determinants of FDI inflows to Africa and, finally, on Nigeria's

determinants of inward FDI. Based on these reviews, the chapter ends by specifying a comprehensive, theory-based and empirically justified model to be tested, one that accounts for all the theory-based variables that may be expected to exert a systematic influence on Nigeria's inward FDI.

Chapter 6 describes the econometric methodology to be used in this study, namely, cointegration analysis, and justifies the methodological choices made. The cointegration framework to be used in this PhD study has developed rapidly over the last two decades, with many economic phenomena being investigated or re-investigated leading to considerable new findings and insights. After discussing the basic ideas of stationarity, unit roots and short-run models, the concept of cointegration is unpacked, with special emphasis given to multivariate cointegration in the form of the Autoregressive Distributed Lag (ARDL) bounds testing method.

Chapter 7 discusses the econometric results. It provides a detailed description of the data and variable measures employed to undertake the econometric study. Then, some stylised facts regarding the evolution over time of each of the time series (variables) are presented. Next, the results of the unit root tests and of the ARDL cointegration methodology are presented and discussed. A final section of further discussion of the significance of the findings ends the chapter.

Chapter 8 discusses the conclusions arrived at. Here, the research findings are summarised, following the structure dictated by the specific aims and objectives outlined in this introduction chapter. Next, the overall contribution of this thesis is highlighted. Several policy implications flowing from the findings of this PhD study are then discussed and, finally, a reflective discussion of the limitations and profitable avenues for future research brings the chapter to an end.

CHAPTER 2: NIGERIA'S COUNTRY PROFILE

2.1 Chapter overview

This chapter begins by providing a holistic view of Nigeria, bringing to the forefront the characteristics of the country by way of offering a contextual background. Furthermore, a detailed analysis will be done of the socio-cultural environment of the country. Additionally, the economic features of Nigeria will be looked at as well as the political situation, some concluding remarks end the chapter.

2.2 Country brief overview

Nigeria is a country in West Africa (see figure 2.1). Nigeria shares land borders with the Republic of Benin in the West (773km), Chad and Cameroon in the East (87km and 1690km), and Niger in the North (723km). Its coast lies on the Gulf of Guinea (853km) in the South and it borders Lake Chad to the Northeast (Ademiluyi and Asiyanbola, 2010).

Figure 2.1 Location of Nigeria
Source: http://www.bbc.co.uk/

Noted geographical features in Nigeria include the Adamawa highlands, Mambilla Plateau, Jos Plateau, Obudu Plateau, the Niger River, River Benue and Niger Delta. Originally, the capital of Nigeria was Lagos but that changed on December 12, 1991 as the Nigerian State Capital ended up being relocated to Abuja, though Lagos remains the hub of commerce in Nigeria (BBC, 2015).

Nigeria is found in the Tropics, where the climate is seasonally damp and very humid. Nigeria is affected by four climate types; these climate types are distinguishable, as one

movesfrom the Southern part of Nigeria to the Northern part of Nigeria through Nigeria's middle belt (bbc, 2015).

Nigeria is covered by three types of vegetation: forests (where there is significant tree cover), savannahs (insignificant tree cover, with grasses and flowers located between trees), and montane land. The latter is the least common, and is mainly found in the mountains near the Cameroon border. Both the forest zone and the savannah zone are divided into three parts.
Some of the forest zone's most Southerly portion, especially around the Niger River and Cross River deltas, is mangrove swamp (see Central African mangroves). North of this is fresh water swamp, containing different vegetation from the salt water mangrove swamps, and north of that is rain forest (Girod and Jacques, 2008).

As illustrated in Figure 2.2, the savannah zone's three categories are divided into Guinean forest-savannah mosaic, made up of plains of tall grass which are interrupted by trees, the most common across the country; Sudan savannah, similar but with shorter grasses and shorter trees; and Sahel savannah patches of grass and sand, found in the northeast (Girod and Jacques, 2008).

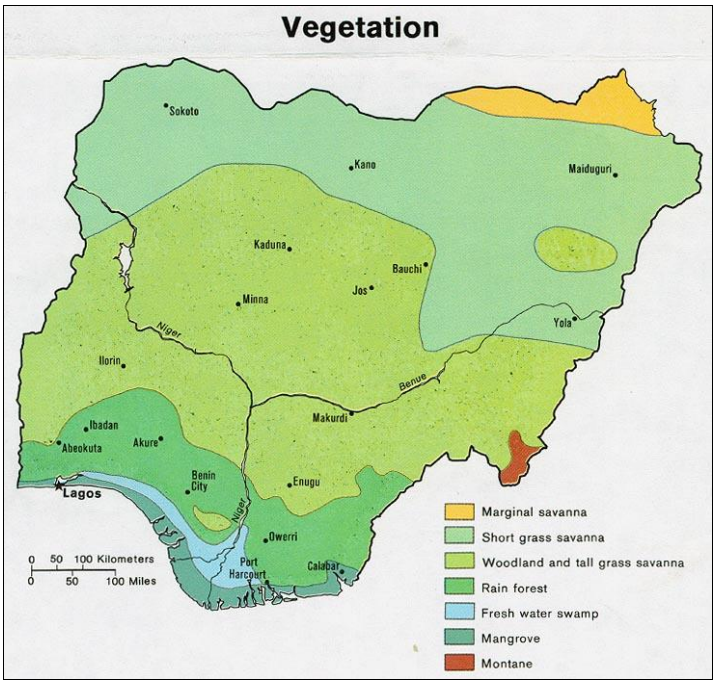

Figure 2.2 Vegetation map of Nigeria

Source: http://www.mbendi.com/

2.3 Socio-cultural characteristics of Nigeria

In this section, various aspects of the socio-cultural characteristics of Nigeria will be examined, including the population of the country, its demographics, its topography, ethnic groups and languages.

2.3.1 A growing population

According to Kalu (2017), Nigeria's current population of approximately 182 million people is the largest in Africa. It is anticipated to surpass the USA and become the third most populated country in the world by 2020. The population grew by 33 percent in the last decade alone. Nigeria is often referred to as the "Giant of Africa", owing to its large population and economy. With approximately 182 million inhabitants, Nigeria is currently the seventh most populous country in the world, and has also, one of the largest populations of youth in the world (Kalu, 2017).

Nigeria has experienced a population explosion for at least the last 50 years due to very high fertility rates, quadrupling its population during this time. Growth was fastest in the 1980s, after child mortality had dropped sharply, and has slowed slightly since then. According to the 2014 revision of the World Population Prospects, the total population was 174,708,000 in 2013, compared to only 37,860,000 in 1950. The proportion of children below the age of 15 in 2010 was 44.0 percent, 53.2 percent was between 15 and 65 years of age, while 2.7 percent was 65 years or older (Salibu, 2012). The Figure 2.3 below plots the growth in population from 1970 to 2014.

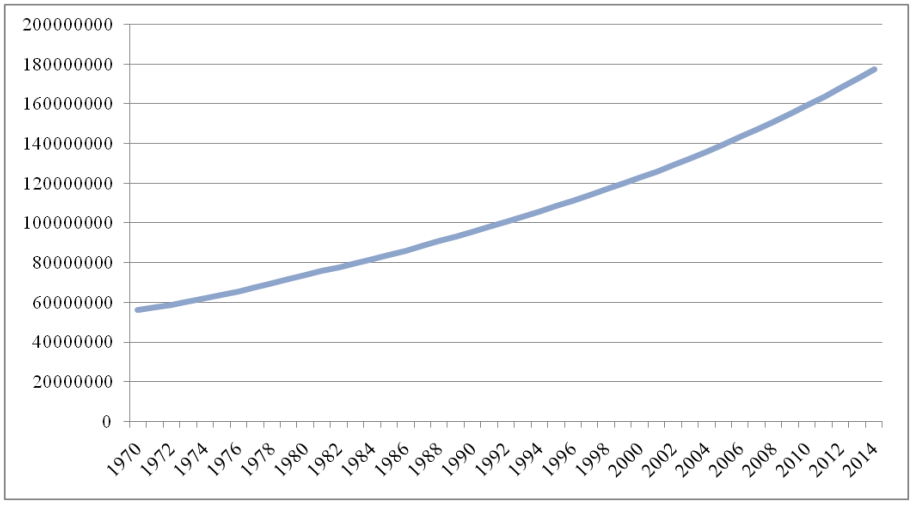

Figure 2.3 Population of Nigeria

Source: Developed by the author from data sourced from UNCTAD (2015).

According to Omoju and Adesanya (2012), the Nigerian population counts have a history of being controversial, violent, with allegations of rigging and manipulation. The census in 2006 was mainly peaceful, but there were outbreaks of violence - including a number of deaths - and heightened ethnic and political tensions. The census included questions on education, occupation, income, size of house, water supply, toilet facilities, type of fuel used and access to radio, television and telephones - but, in an effort to avoid trouble, not religion. Religious and ethnic groups were concerned that the results of a census which included religion could affect their position in society, government funding and political influence (Omoju and Adesanya, 2012). Figure 2.4 shows the Nigerian population density across the country.

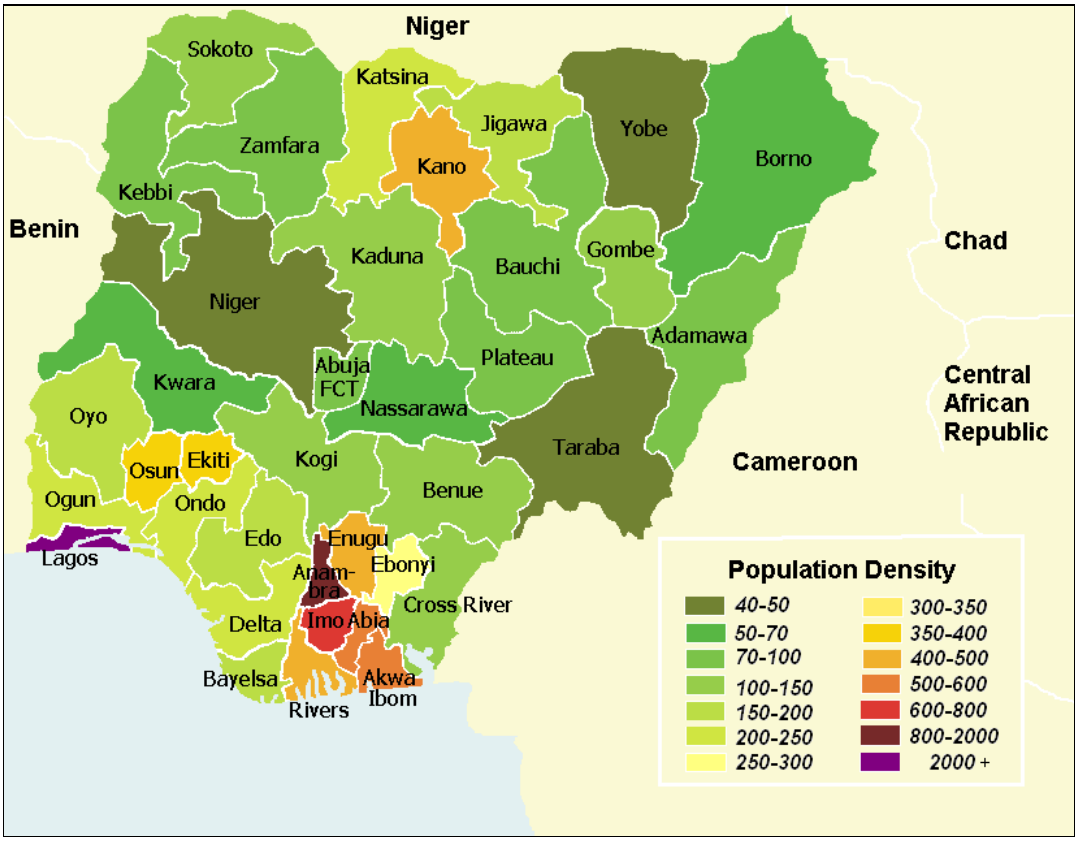

Figure 2.4 Nigeria's population density map

Source: http://news.bbc.co.uk/

2.3.2 Nigeria's ethnicity

Nigeria is viewed as a multinational state, as it is inhabited by over 500 ethnic groups, of which the three largest are the Hausa, Igbo and Yoruba. The myriad of ethnic groups speak over 500 different languages, and are identified with a wide variety of cultures. Regarding religion, Nigeria is divided roughly in half between Christians, who live mostly in the Southern and Central parts of the country, and Muslims, concentrated mostly in the Northern and South-Western regions. A minority of the population practices religions indigenous to Nigeria, such as those native to Igbo and Yoruba people (Adejuyibe, 2013).

According to Anugwom (2013), the most numerous ethnic groups in the Northern two-thirds of the country are the Hausa and the Fulbe/Fulani, the overwhelming majority of whom are Muslim. Other major ethnic groups of the North are the Nupe, Tiv, and Kanuri. The Yoruba people are the overwhelming majority in the southwest, as well as parts of the North-Central region. Over half of the Yorubas are Christian and about 40 percent are Muslim, while the remainder hold traditional Yoruba views. The predominantly Christian Igbo are to be found in the central parts of the Southeast. Roman Catholic is the largest denomination, but Pentecostal, Anglican and other Evangelical denominations are also prominent. The Efik, Ibibio, Annang, and Ijaw constitute other South Eastern populations (Anugwom, 2013).

Persons of different language backgrounds most commonly communicate in English, although knowledge of two or more Nigerian languages is widespread. Hausa, Yoruba, and Igbo are the most widely used native Nigerian languages. Figure 2.5 below shows the predominant ethnic groups in Nigeria.

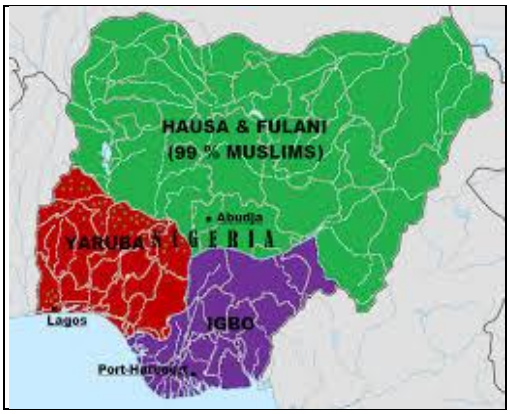

Figure 2.5 Map showing predominant ethnic groups in Nigeria

Source: www.nationsonline.org

2.3.3Nigeria’s topography

Nigeria's most expansive topographical region is that of the valleys of the Niger and Benue River valleys, which merge into each other and form a "y" shaped confluence at Lokoja (see Figure 2.6). Plains rise to the North of the valleys. To the Southwest of the Niger there is "rugged" highland, and to the Southeast of the Benue hills and mountains are found all the way to the border with Cameroon. Coastal plains are found in both the Southwest and the Southeast. The Niger Delta is located in the Southern part of Nigeria. It is one of the world's largest actuate fan-shaped river deltas (Oguntoyinbo, 2010).The riverine area of the Niger Delta is a coastal belt of swamps bordering the Atlantic Ocean. The swamps are vegetated tidal flats formed by a reticulate pattern of interconnected meandering creeks and distributaries of the River Niger.

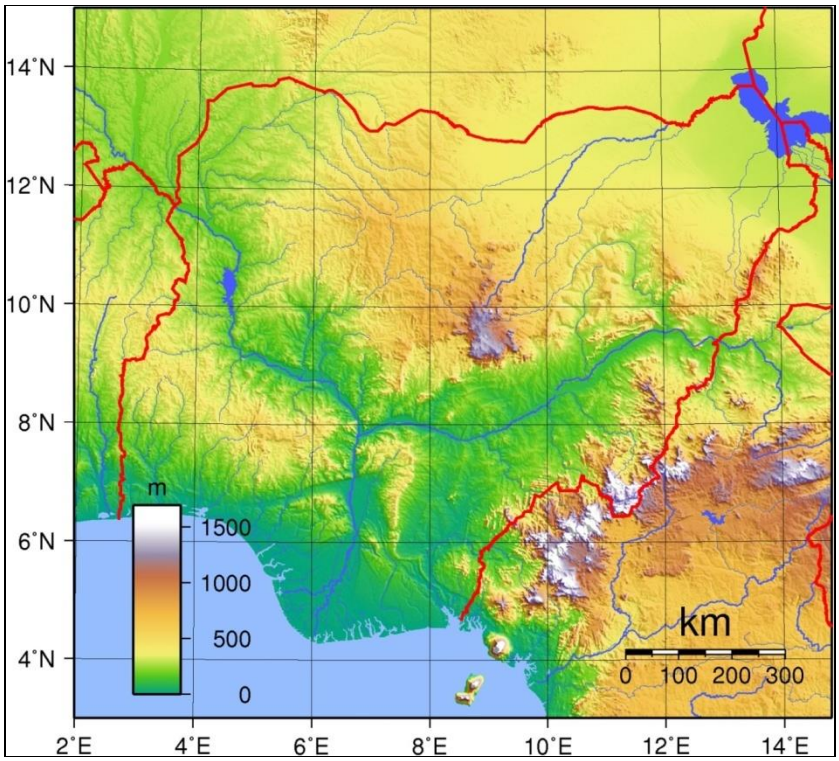

Figure 2.6 Map of the Topography of Nigeria

Source: http://www.africaneconomicoutlook.org/

2.4 Political overview of Nigeria

British influence and control over what would become Nigeria and Africa's most populous country grew through the 19th century. A series of constitutions after World War II granted Nigeria greater autonomy. Independence came in 1960 (Eregha, 2009).

Following nearly 16 years of military rule, a new constitution was adopted in 1999, and a peaceful transition to civilian government was completed. After eight years of democracy, there are now more than 50 parties across the country. The main ones are the ruling People's Democratic Party (PDP) and the opposition All Nigeria People's Party (ANPP) and Action Congress (AC). President Olusegun Obasanjo - an ethnic Yoruba and Christian from the South - is a veteran of the military and political elite. He has won some praise abroad as he is credited with tackling the foreign debt and corruption that were crippling the economy. But many Nigerians complain they have yet to see any major improvements in the basic infrastructure - power, water and utilities - or in their prospects of getting a job, while prices keep rising (Adu, 2016).

The government continues to face the daunting task of reforming a petroleum-based economy, (whose revenues have been squandered through corruption and mismanagement) and institutionalising democracy. In addition, Nigeria continues to experience longstanding ethnic and religious tensions. Although both the 2003 and 2007 presidential elections were marred by significant irregularities and violence, Nigeria is currently experiencing its longest period of civilian rule since independence. The general elections of April 2007 marked the first civilian-to-civilian transfer of power in the country's history. After lurching from one military coup to another, Nigeria now has an elected leadership. But the government faces the growing challenge of preventing Africa's most populous country from breaking apart along ethnic and religious lines (Eregha, 2009).

States in Nigeria are led by a governor who is elected in a general election. Each state also has a House of Assembly whose members are also elected from zones in the state. States are also divided into Local Government Areas which are led by elected Local Government Chairmen. States in Nigeria were formed out of regions which were in use during the pre-and post-independence periods when Nigeria was a federation of three regions: Northern, Western, and Eastern regions. The regions were made up of provinces which had been in place since colonial times.

In 1963, two provinces were split from the Western Region to form the new Mid-Western Region and in 1967 the formal state structure was established, by a military decree, and the regions were replaced by 12 states. In 1976, seven new states were created bringing the total to 19 states and in 1987 two new states were created, followed by another nine states plus the Federal Capital Territory with Abuja as its capital. This brought the total number of states to 30 and in 1996, an additional six states were created which increased the number of states in Nigeria to 36 (Adu, 2016). See Figure 2.7 below that depicts the 36 Nigerian states.

Figure 2.7 Nigerian Map with the 36 States

Source: http://www.thenigerianvoice.org/

Political liberalisation ushered in by the return to civilian rule in 1999, was followed by militants from religious and ethnic groups pursuing their demands through violence. Thousands of people have died over the past few years in communal attacks led by the al-Qaeda ally Boko Haram. Separatist aspirations have also been growing, prompting reminders of the bitter civil war over the breakaway Biafran republic in the late 1960s (Chiakwehi, 2016).

The imposition of Islamic law in several Northern states has embedded divisions and caused thousands of Christians to flee. Nigeria has been under civilian rule since 1999 after a succession of military leaders. President Muhammadu Buhari is the current President and has been President since 29 May 2015. The President is both the chief of state and head of

government. The government is democratic and organised in a Federal manner (Chiakwehi, 2016). Religious divisions that exist within the population rule the political situation in the country. There have been various incidents of violence between Muslim and Christian members of the population.

2.5 Corruption in Nigeria and Nigeria's Transparency index

Nigeria is one of the largest oil producers in the world. It is also one of the world's most corrupt countries. Most of its population of more than 182 million see little of that wealth. Many are on the verge of starvation. Corruption is Nigeria's biggest challenge. The country has developed a national and international reputation as a veritable menace of corruption (Buhari, 2016b). Nigeria suffers from what the development literature calls the 'resource curse'—the paradox that developing countries with an abundance of income from natural resources tend to have less economic growth, less democracy, and worse development outcomes than countries with fewer natural resources and therefore without such income from minerals and fuels (Buhari, 2016b). Nigeria ranks 136/176 – its current position in terms of corruption relative to other countries. Its current transparency index of 28/100 indicate the perceived level of public sector corruption on a scale of 0 (highly corrupt) to 100 (very clean) (Transparency International, 2017)

2.6 Economic characteristics of Nigeria

Nigeria has been, for many years, hampered by political instability, corruption, inadequate infrastructure, and poor macroeconomic management. However, as reported by Adu (2016), in 2008 the government began pursuing economic reforms, such as modernising the banking system, curbing inflation by blocking excessive wage demands, and resolving regional disputes over the distribution of earnings from the oil industry.

President Buhari pledged to continue the economic reforms with emphasis on corruption reduction, and in this regard on 21 December 2016, the government's Federal Ministry of Finance announced a whistle-blowing policy with a 2.5%-5% reward. The aim is to obtain relevant data or information regarding the violation of financial regulations; the mismanagement of public funds and assets; financial malpractice fraud; and theft (Chimobi, 2017). The government also plans to develop stronger public-private partnerships for infrastructure development. Therefore, in this section, we will be considering various economic characteristics

of Nigeria, namely, GDP, inflation, natural resources, infrastructure, agricultural sector, import/export etc.

2.6.1 Real GDP growth rate

Nigeria's estimated GDP in 2010 was $377.9 billion (agriculture 30 percent; industry 32 percent; services 38 percent).In 2014, Nigeria's economy (GDP) became the largest in Africa, worth more than $500 billion and $1 trillion in terms of nominal GDP and purchasing power parity respectively (Umaru, 2015). See Figure 2.8 below for the trend in GDP over the last five decades.

Nigeria overtook South Africa to become the world's 21st (nominal) and 20th (PPP) largest economy in 2015. Furthermore, the debt-to-GDP ratio is only 11 percent (8 percent below the 2012 ratio). The country's oil reserves have played a major role in its growing wealth and influence (Umaru, 2015).

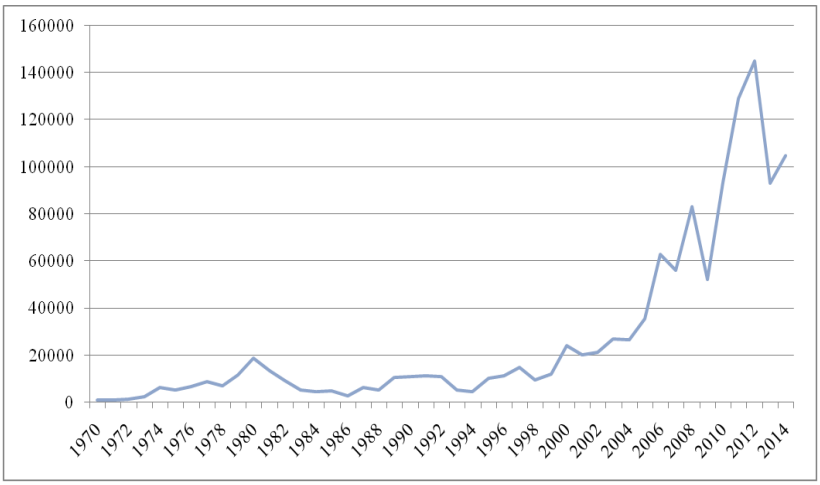

Figure 2.8 GDP of Nigeria (in millions) 1970-2014

Source: Developed by the author from data sourced from UNCTAD (2015)

According to UNCTAD (2014), Nigeria is considered to be an emerging market by the World Bank and has been identified as a regional power in the African continent. Nigeria is considered to be a middle power in the world, and has also been identified as an emerging power; it is a member of the MINT group of countries, which are widely seen as the globe's next

"BRIC-like" economies. It is also listed among the "Next Eleven" economies set to become among the biggest in the world. Nigeria is a member of the Commonwealth of Nations, the African Union, OPEC, and the United Nations among other international organisations (Girod and Jacques, 2008).

2.6.2 Natural resources

Nigeria's natural resources include oil and natural gas, tin, columbite, iron ore, coal, limestone, lead and zinc. Nigeria is a country rich in natural resources, consequently most industry activity revolves around these. Nigeria is Africa's leading crude oil producer and oil is the country's most important natural resource, generating up to 95 percent of Nigeria's revenues. The country is a member of OPEC. The continued increase in crude oil means continued growth in this sector (Jean-German, 2012).

The Federal government holds all mineral rights and is responsible for issuing exploration and development licenses. The Minerals and Mining Act, 2007, and the Petroleum Act of 1969 form the legal basis for exploration and production activity in the mineral sector (IMF, 2013). Table 2.1 below provides a list of natural resources obtainable in Nigeria.

Table 2.1 A list of natural resources in Nigeria

States/Towns	Mineral resources
Rivers, Cross River, Akwa Ibom , Delta, Edo, Imo, Abia, Bayelsa	Oil and gas
Enugu	Coal
Ondo, Oyo, Cross River	Cocoa/Bitumen
Nkalagu, Ewekoro, Calabar	Cement
Agbaje, Ajaokuta, Aladja	Iron Ore
Asaba	Ignite
Jos	Tin
Abia, Ebonyi	Salt
Cross River, Delta, Edo	Rubber
Delta, Imo Cross River, Rivers, Kogi	Palm oil
Sapele, Port Harcourt	Ply wood
Igbeti	Marble
Abakaliki, Ogoja	Lead/Zinc
Sokoto, Ewekoro, Ukpilla, Abeokuta	Limestone
Sokoto, Ilesha	Gold

Source: Generated by the author (2015)

2.6.3 Exports and imports

In 2010, Nigeria had an estimated export income of $82.54 billion, with petroleum and petroleum products accounting for 95 percent. Figure 2.9 plots the export income from 1970 to 2014.

Nigeria spent an estimated $44.1 billion (2010 est.) on imports in 2010, principally machinery, chemicals, transport equipment, manufactured goods, food and live animals. Nigeria's export partners are chiefly the US (37.4 percent), India (10.5 percent), Brazil (7.8 percent) and Spain (6.9 percent) (Emeka, 2012). Figure 2.10 plots the import income from 1970 to 2014.

Nigeria main import partners are China, Netherlands, US, France and the UK. Nigeria's main export products are petroleum and related products as well as cocoa and rubber. Nigeria is the United States' largest trading partner in sub-Saharan Africa, largely due to the high level of petroleum imports.

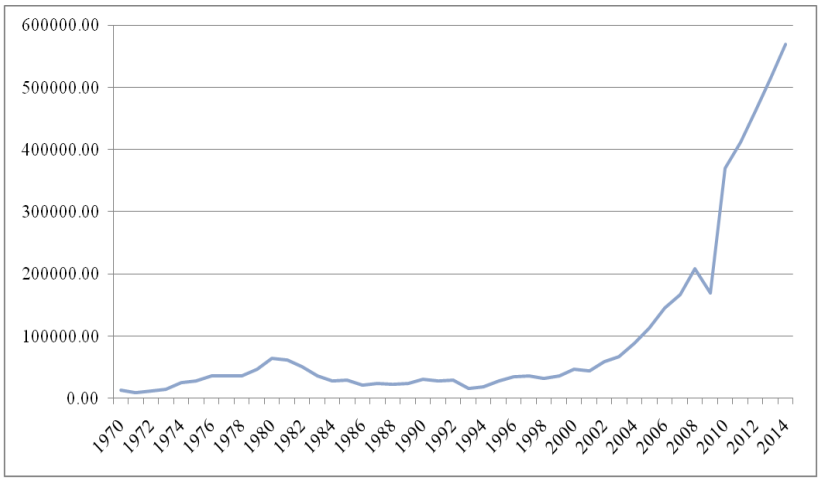

Figure 2.9 Export US dollars at current prices (in millions)

Source: Developed by the author from data sourced from UNCTAD (2015)

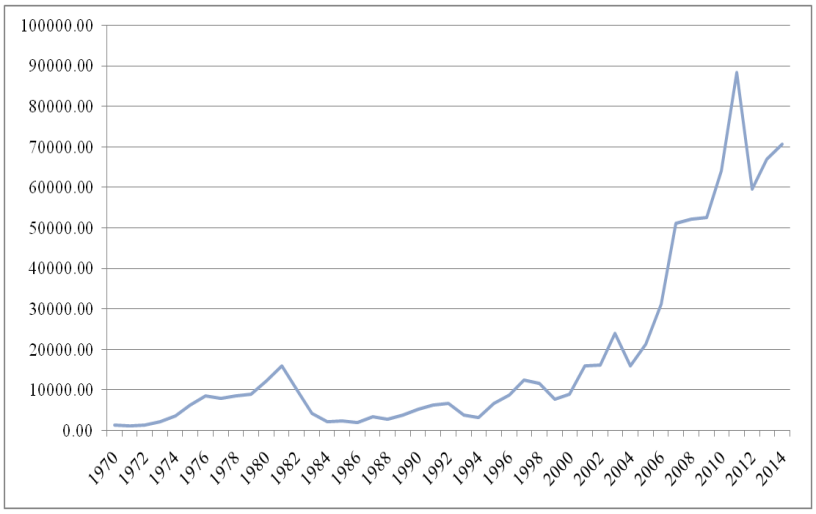

Figure 2.10 Import US dollars at current prices (in millions)

Source: Developed by the author from data sourced from UNCTAD (2015)

Nigeria's main imports include machinery, chemicals, transport equipment, manufactured goods, food and live animals (Edoumiekumo, 2013). According to Adelowokan (2013), there are currently 24 Free Trade Zones in Nigeria, but only 15 are currently operational. The first Free Trade Zone, established in Calabar in 1993, has over 70 companies currently trading through it. The partnership of China and Nigeria is forming a 16,500 hectare free trade zone near Lagos and it is expected to be a boom for potential investors as well as the Nigerian economy.

2.6.4 Agricultural sector

Agricultural resources include cocoa, palm oil, yams, cassava, sorghum, millet, corn, rice, livestock, groundnuts and cotton. Although the agricultural sector has suffered from years of mismanagement, inconsistent and poorly conceived government policies, and the lack of basic infrastructure, the sector continues to account for about 30 percent of GDP and two-thirds of employment (Femi, 2012).

2.6.5 Investment

Nigeria is Africa's most populous country and as such is seen as one of the most promising markets for international companies. The country also offers the interested investor, Africa's largest domestic market as well as the additional attractions of a low-cost labour pool and

abundant natural resources (CBN, 2011). Figure 2.11 offers an indication of the investment climate of Nigeria from the view of market capitalisation.

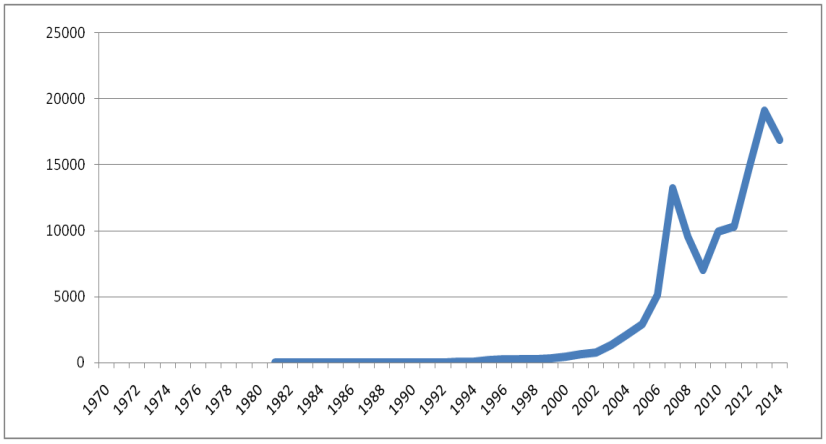

Figure 2.11 Market capitalisation of Nigeria (in billions)

Source: Developed by the author from data sourced from UNCTAD (2015)

Nigeria is not on track, at this point, to meet its Millennium Development Goals because of a lack of policy coordination between the Federal, state, and local governments, a lack of funding commitments at the state and local levels and a lack of available staff to implement and monitor projects on health, poverty and education. Although Nigeria struggles with decaying infrastructure and a poor regulatory environment, the country possesses many positive attributes for carefully targeted investment. Additionally, there is a growing Nigerian consensus that foreign investment is essential to realising Nigeria's vast potential. Foreign investors will only be attracted if the government is able to sustain democratic principles, enhance security for life and property, and rebuild and maintain infrastructure (CBN, 2010).

2.6.6 Foreign exchange

The Foreign Exchange Decree of 1995 re-established the foreign exchange market. Foreign companies can source foreign exchange at the parallel market rate. Companies are allowed to hold domiciliary accounts in private banks. Foreign investors are allowed to bring capital into the country without requiring prior government approval (CBN, 2011).

2.6.7 Trade

Nigeria has been a member of the World Trade Organisation (WTO) since 1 January 1995. Nigeria is also a member of the Economic Community of West African States (ECOWAS). Additionally, Nigeria has signed various other trade agreements, most recently signing an agreement with Kuwait. Nigeria also has an Economic Partnership Agreement (EPA) with the European Union (IMF, 2013).

2.6.8 Business travel

Nigeria has four international airports: Abuja, Kano, Lagos and Port Harcourt, as well as several domestic airports. The airports are operated by the Federal Airports Authority of Nigeria (FAAN). Air service among Nigeria's cities is generally dependable. The maintenance culture of Nigeria's domestic airlines, however, is not always up to international standards (World Bank, 2011).

Sea services to Lagos, Port Harcourt and Calabar are available from European ports, although not advisable as a preferred choice of travel. The International Maritime Bureau has reported that the territorial and offshore waters in the Niger Delta and Gulf of Guinea are high risk for piracy and armed robbery against ships. In 2010, 19 commercial vessels were attacked with most occurring in the vicinity of the port of Lagos (World Bank, 2011).

Visitors to Nigeria will require a visa. The risk of contracting any of the following diseases is high; bacterial and protozoal diarrhoea, hepatitis A and E, typhoid fever, malaria, yellow fever, meningococcal meningitis, leptospirosis, shistosomiasis and rabies. Nigeria is one of the most highly endemic areas for Lassa fever.

2.6.9 Communications and infrastructure

Nigeria's publicly owned transportation infrastructure is still a major constraint to economic development. The principal ports are at Lagos (Apapa and Tin Can Island), Port Harcourt, and Calabar. Docking fees for freighters at these ports are among the highest in the world. While Nigeria has about 80,500 kilometres of roads, only about 15,000 kilometres are paved and many remain in poor shape. Extensive road repairs and new construction activities are gradually being implemented (Agbola, 2008).

As reported by Adebayo (2005), the government has in place a policy of 100 percent destination inspection of all goods entering Nigeria, which has resulted in long delays in clearing goods for importers and created new sources of corruption. The state of the country's rail services is not good because of years of neglect. In spite of various projects over the years aimed at rectifying this situation, much still needs to be done. Recently, there have been calls for the enactment of the Railway Modernisation Act, a bill that seeks to unbundle the current Nigerian Railway Corporation into several units/services. The proposed law will also seek to establish the Nigeria Rail Transport Regulatory Commission (NRTRC), under the Ministry of Transport, to act as the regulatory body for rail transportation in Nigeria (Agbola, 2008).

Nigeria's telephone system is below international standards although there are efforts to improve it. Further expansion and modernisation of the fixed-line telephone network is needed, while network quality remains a problem.Deregulation of the mobile phone market has led to the introduction of Global System for Mobile Communication (GSM) network providers namely, MTN Nigeria, Airtel, Globacom, and Etisalat.

2.6.10 Risk

Traditionally, one of the main areas for concern in Nigeria is the country's banking sector. A large degree of fraudulent activities has occurred in this sector. In 2009, Nigeria took significant steps to strengthen the banking sector. After completing financial audits of all 24 national banks, the Central Bank found 10 of the banks to be undercapitalized or suffering from illiquidity. Many of the failing banks' management teams were replaced and the Central Bank injected nearly $6 billion into the sector (CBN, 2011).The problem remains however and it is best to avoid dealings with anyone whose credentials are not fully investigated until such time as the matter is properly resolved. There are websites that provides full information regarding these banking scams (Oyedele, 2012).

A large dependence on oil continues to pose a problem for the Nigerian economy as Nigeria has developed a mono-cultural dependence on only one sector (oil) and the country is especially vulnerable to fluctuations in the international oil price and vandalisms on the oil pipeline by the Niger Delta avengers.

2.6.11 Inflation

Nigeria as a nation is by no means immune to the menace of inflation. Hence, after an appreciable economic performance in the early 1970s, the Nigerian economy witnessed some anxious moments in the late 1970s to the 1990s. Severe pressures built up in the economy mainly because of the expansionary fiscal policy of the federal government during these years. This was accompanied by high monetary expansion (Oladipo, 2011). Figure 2.12 below depicts the inflationary status of Nigeria over the period 1970 to 2014.

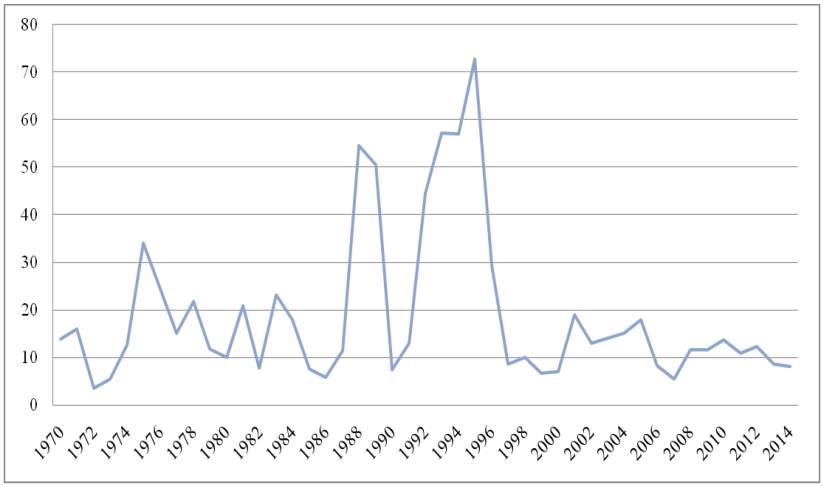

Figure 2.12 Consumer price index

Source: Developed by the author from data sourced from UNCTAD (2015)

The huge government deficit was financed largely by the Central Bank of Nigeria. This was exacerbated by the transfer of government sector deposits to the banks and the resultant increase in their free reserves with adverse consequences on the general price level. The inflationary pressure was further aggravated by high demand for imports of both intermediate inputs and consumer goods due to over valuation of the naira which made imports relatively cheaper than locally manufactured goods (Nyong, 2009). Undoubtedly one of the macroeconomic goals which the government strives to achieve is the maintenance of stable domestic price level. This goal is pursued in order to avoid cost of inflation or deflation and the uncertainty that follows where there is price instability (Oyejide, 2009).

Nigeria contributes approximately 20 percent of the African continent's GDP (Bayode, 2013). It has thriving telecoms, banking, oil and gas sectors and provides a reliable access point to sub-Saharan Africa.

2.7 Concluding remarks

This chapter has provided an overview of Nigeria, also considering its socio-cultural and economic characteristics. Nigeria's population has been looked at and furthermore, the Nigerian population density was also examined. We also looked at the three types of vegetation existing in Nigeria, namely the montane land, the savannah and the forest. Effort was made to describe Nigeria's ethnic situation, looking at the three main significant ethnic groups in Nigeria which are the Hausas, the Yorubas and the Igbos, having clearly stated that Nigeria consists of many ethnic groups and tribes with about 500 diverse languages. The topography of Nigeria was also considered.

The Nigerian political economy was also extensively considered, shedding light on the processes involved in the establishment of 36 states in the country. Also highlighted was the transition from military rule to democratic rule as a result of political liberalisation.

Finally, an overview of the main economic characteristics of the country was provided, briefly mentioning key activities and features of the Nigerian economy namely, inflation and GDP, imports/exports, investment, natural resources, etc.

CHAPTER 3: FDI ACTIVITY, TRENDS AND POLICY

3.1 Chapter overview

This chapter begins by reviewing the history of the Foreign Direct Investment(FDI) phenomenon. Activities and trends of FDI over time will be examined by reviewing global FDI flows (both outward and inward), taking into account both developed and developing countries. Africa's position regarding FDI flows will also be considered. Furthermore, a detailed analysis of Nigeria's inward and outward FDI flows will also be examined by looking at FDI's main destination countries, main source countries and sectors attracting FDI within the country. Additionally, various FDI policy options will be critically examined, at both the national and international level with a focus on the evolution of FDI policy in Nigeria.

3.2 Global FDI Flows

FDI is a key driver of global economic growth, and indeed of globalisation (Obadan, 2004). FDI is growing rapidly around the world, driving forward the growth in production and international trade.

Over the past three decades, as seen in figure 3.1 below, the flows of FDI worldwide have generally outpaced growth in global GDP and in exports. Global FDI growth slipped behind growth in merchandise exports during the 2000s, but that was due largely to a price effect—the rapid increase in commodity prices during the decade—that is unlikely to be repeated this decade (Global benchmark report, 2014). FDI outflows open access to foreign markets and promote deeper integration into global supply and value chains, making an economy's firms more efficient and competitive.

In the years after the Second World War, the United States of America (henceforth, US) emerged as the country referred to as the major global player in terms of global FDI flows, as a large part of the world recovered from the destruction which came as a result of this conflict. Around three-quarters of new FDI (including reinvested profits) were accounted for by the US and this was between 1945 and 1960 (Velde, 2004). Ever since then, FDI has grown exponentially becoming a truly global phenomenon, and today we can say that the stock of FDI accounts for over 20 percent of global GDP (UNCTAD, 2009).

FDI has grown dramatically as a major form of international capital transfer over the past few decades. From 1980 till date, world flows of FDI defined as cross-border expenditure to acquire or expand corporate control of productive assets, have approximately tripled and FDI has become a major form of net international borrowing for USA and Japan, the world's largest international lender and borrower respectively (Alavinasab, 2013).

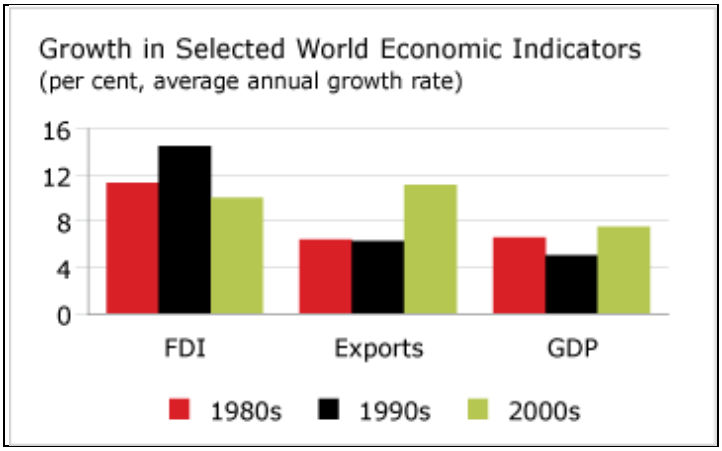

Figure 3.1 Growth of world economic indicator

Source: Global Benchmark report (2014), pp. 10-21.

According to the United Nations Centre on Transnational Corporations (UNCTC, 1991), which used International Monetary Fund data, for the five-year period 1985-1989, world FDI flows totalled over $630 billion. During the period 1983-1989, world FDI flows (expressed in US dollars at 1989 prices) grew at annual compound growth rates of 28.9 percent, world income grew at about one-fourth this rate (7.8 percent), and world trade at less than one-third (9.4 percent) (UNCTC, 1991). The increase in FDI after 1985 was majorly a surge in investment flows among nations that were industrialised. The UNCTC data obviously indicate that the G5 nations (France, West Germany, Japan, the United Kingdom, and the United States) were what we might call source of almost 70 percent of FDI flows at this point in time, while nations classified by the United Nations as developed market economies were home to most of the remaining FDI flows (UNCTC, 1991).

Why is the late-80s surge in foreign direct investment important? Most immediately, FDI came to play a key role in financing international current account imbalances: in 1989, nearly half of the U.S. current account deficit was financed by inflows of direct investment rather than

by more conventional short-term and portfolio investment, whereas Japan used more than two-thirds of its current account surplus for foreign direct investment (Froot and Stein, 2001). In effect, the U.S. raised the money to pay for its imports by selling foreigners companies instead of bonds. Japan similarly used much of the revenue from its exports to acquire overseas subsidiaries instead of passive assets (Froot and Stein, 2001).

Irrespective of the long-run factors behind the growth of FDI (and each individual country's liberalisation policies towards FDI), the author's review of the literature suggests three main reasons to explain these increases in FDI: (i) fluctuations in relative cost of capital, associated in particular with exchange rate fluctuations; (ii) changes in taxation; and (iii) actual or prospective changes in tax policy. Another possible reason for the surge in FDI flows worldwide can be attributed to the dramatic change in corporate financing techniques. In particular, during the late 1980s, the junk bond market matured and then partially collapsed. Bank lending for the purposes of acquisitions and mergers also increased significantly over this period (Buckley, 1985).

Is it possible that these innovations actually influenced the growth of FDI globally? To be able to answer this question, one may look at the characteristics of the recent FDI surge. First, the amount of direct investments which took the form of a merger or acquisition increased, particularly in countries such as the US. Second, the reduction in the relevance of greenfield FDI in part made FDI an increasingly North-North phenomenon, as North-South flows grew considerably more slowly. Third, the fraction of the acquisition price raised externally by the foreign acquirer increased substantially over this period (IMF, 2003).

According to the facts that have been stated in the literature by Harvey (1992), they are all in line with the hypothesis that there have been important innovations in the corporate capital markets which have encouraged takeovers to happen more easily and to rely more heavily on external financing. Never like before, corporate control happens to be a traded asset nowadays. Indeed, the 'capital market innovation hypothesis' is frequently used to explain the rise of US domestic takeover activity during the late 1980s (Froot and Stein 2001).

The amount or quantum of FDI flows that happened to be going to nations that were termed as developing nations thus was only about 19 percent, according to Velde (2004) and this was quite low compared to what had been experienced by earlier decades given that after World War II, many countries now classified as developed were, in economic terms, themselves part of

developing economies (e.g., Italy, over the period 1945-1950). Funke (2008) reported that of the relatively small amount of FDI going toward developing economies in the late 1980s, a vast amount of FDI was attracted by a small group of nations, namely, Mexico, Brazil, and the Asian newly industrialising countries.

World FDI increased once more, growing again after the 2012 slump. FDI inflows began rising again in 2013 by 9 percent ($1.45 trillion) (UNCTAD 2014). UNCTAD (2014) projects that FDI could rise to $1.7 trillion in 2015, and $1.8 trillion in 2016, with a surge especially in developed countries. These forecasts were based on observed fragility particularly in some emerging markets and risks related to policy uncertainty, with regional instability negatively affecting the growth expected of FDI in developing countries.

In 2013, greenfield FDI showed signs of recovery, increasing by an estimated 10.94 percent from $557.58bn in 2012 to $618.62bn. The number of FDI projects declined slightly in 2013, decreasing by 6.36 percent to 11,691. China was the highest ranked country globally, with $64.14bn-worth of FDI announced in 2013 (FDI report, 2014).

3.3 Global FDI outflows

Global outward FDI flows have rebounded sharply from the recent financial crisis and economic recession, when they fell by 9 percent in 2008 and 33 percent in 2009 (UNCTAD, 2013). From Figure 3.2 below, only Belgium and Switzerland receive “A” grades; six countries receive “D” s, and Ireland suffered an actual contraction in its 2011 outward FDI flows.

The Outward FDI Performance Index captures a country’s relative success in investing elsewhere in the global economy via FDI. If a country’s share of global outward FDI matches its relative share in global GDP, the country’s Outward FDI Performance Index is equal to one. A value greater than one indicates a larger share of FDI relative to GDP; a value less than one indicates a smaller share of FDI relative to GDP. A negative value means a country disinvested elsewhere in that period. The two “A” performers—Belgium and Switzerland—have an index score of 5.7 and 4.5, respectively, which indicates that firms based in these two countries are using outward FDI extremely aggressively to expand their global business activity by creating, acquiring, and expanding global business assets (UNCTAD, 2013).

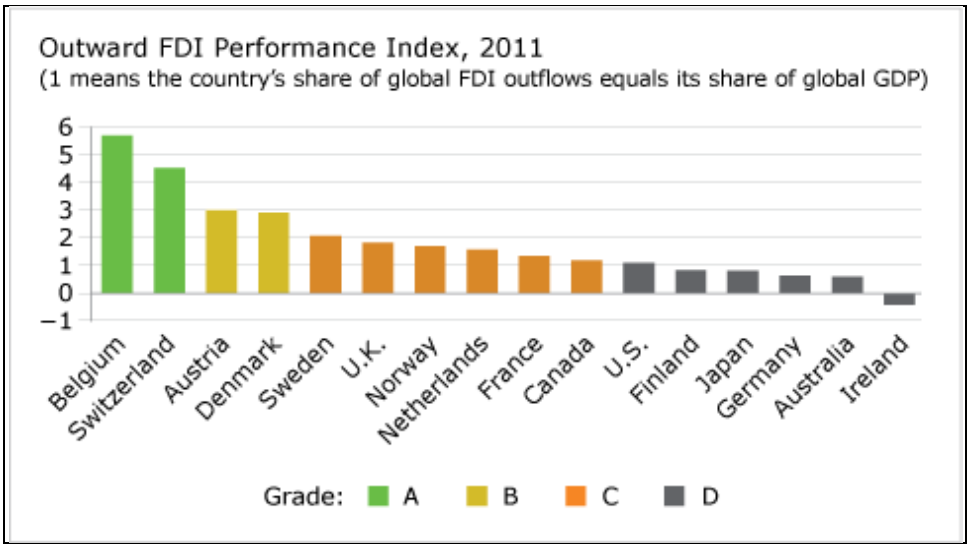

Figure 3.2 Outward FDI performance index

Source: UNCTAD (2013), p. 23

Table 3.1 Ranking of outward FDI performance (outward FDI performance index)

Countries	**1970s**	**1980s**	**1990s**	**2000-11**
Australia	D	C	D	D
Austria	D	D	D	D
Belgium	D	D	A	A
Canada	C	C	D	D
Denmark	D	D	C	D
Finland	D	D	C	D
France	D	D	C	C
Germany	n.a	n.a	D	D
Ireland	D	D	D	C
Japan	D	D	D	D
Netherlands	A	A	A	B
Norway	D	C	D	D
Sweden	D	A	B	C
Switzerland	n.a	A	A	B
UK	B	A	B	D
USA	D	D	D	D

Source: Developed by the author from data sourced from Global Benchmark report (2015)

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Taking a look at Table3.1 above, we can see how each country ranked in the outward FDI performance index from the 1970s through to the 2000s and countries are compared as to how their outward FDI performance stacks up against that of their competitors. Some countries here are doing relatively better than others. Belgium - the top performer in 2011 - (see Fig 3.2), accounted for only 0.7 percent of global GDP but 4.2 percent of global outward FDI. Also the US earned a "D" on the Outward FDI Performance Index because the US accounted for 21.6 percent of world GDP in 2011 and only 23.4 percent of global outward FDI, resulting in an outward FDI performance index of 1.1. Canada's share of global outward FDI flows fell from a high of 10.8 percent in 1981 to 2.9 percent in 2011. Yet its share of world outward FDI in 2011 was still 1.2 times its share of world GDP, which means it was still playing a larger role in outward FDI than its economic size would warrant (Global Benchmark Report, 2014).

Many affluent countries have more outward FDI than inward. In other words, they have invested more abroad than other countries have invested in them and this gap in FDI seems to be growing. In fact, the FDI gap of most EU countries has nearly tripled over the past decade and overall currently constitutes about 15 percent of GDP in these countries (Global Benchmark report, 2014). Although many countries have experienced this development, this scope varies greatly as well as the underlying reasons for the development of the investment gap. Similar to these EU countries, many of the OECD member states are experiencing a gap between inbound and outbound FDI. The reason is a general and growing tendency to invest in these countries (OECD statistical report, 2014).

At USD 1100 billion, OECD's FDI outflows represented 77 percent of global outflows for 2012; a 15 percent decrease from 2011. In the same period, the US, the largest single investing economy world-wide, recorded USD 351 billion outward FDI which accounted for 25 percent of global outflows (or 32 percent of OECD or 37 percent of G20 economies). Other significant investing countries in 2012 were Japan (USD 122 billion), Belgium (USD 85 billion), the United Kingdom (USD 72 billion), Germany (USD 67 billion), China (USD 62.4 billion) and France (USD 62.2 billion) (OECD statistical report, 2014).In summary, it is expedient to review how global FDI outflows have evolved over time. Here we consider the trends from 1970 to 2014.

From Figure 3.3 below, it can be seen that global foreign direct investment (FDI) outflows rose by 16 percent in 2011 to an estimated US$1.66 trillion. This growth was due in

large part to cross-border mergers and acquisitions and to increased amounts of cash reserves kept in foreign affiliates (Global investment trends monitor, 2013). It is noted that much-needed direct investment in new productive assets through greenfield investment projects or capital expenditures in existing foreign affiliates appeared to be limited. (UNCTAD, 2014).

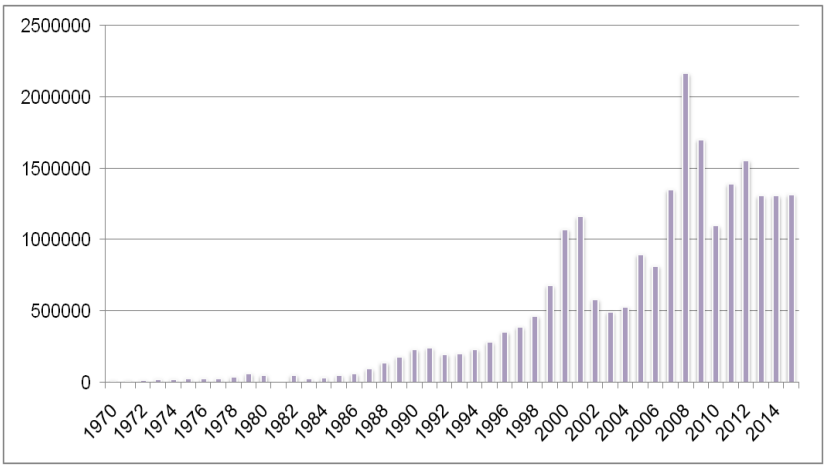

Figure 3.3 Global outflow trends 1970-2014

Note: The vertical axis measures millions of US$

Source: Developed by the author from data sourced from UNCTAD (2014)

3.4 Global FDI inflows

Table 3.2 below shows that the US remains the world's most favoured FDI destination country, yet its popularity has diminished in recent decades. In 1990, the US held 25.9 percent of global inward FDI stock (UNCTAD, 2012). This share fell to 17.2 percent in 2011. China's share of global FDI stock grew from 1 percent in 1990 to 3.5 percent in 2011, while transition economies increased their share from 0.1 percent in 1990 to 3.7 percent in 2011 (UNCTAD, 2012).

Just like the outward FDI Performance Index, the Inward FDI Performance Index also captures a country's relative success in attracting global FDI. If a country's share of global inward FDI matches its relative share in global GDP, the country's Inward FDI Performance Index is equal to one. A value greater than one indicates a larger share of FDI relative to GDP; a value less than one indicates a smaller share of FDI relative to GDP. A negative value means foreign investors disinvested in that period (UNCTAD, 2013).

Table 3.2 Distribution of theWorld's inward FDI stock (percent)

	1990	2000	2011
Developed economies	**75.1**	**75.9**	**63.9**
European Union	36.5	31.2	35.6
Canada	5.4	2.9	2.9
United States	25.9	37.4	17.2
Developing economies	**24.9**	**23.3**	**32.4**
China	1.0	2.6	3.5
Transition economies	**0.1**	**0.8**	**3.7**

Source: Developed by the author from data sourced from UNCTAD (2015)

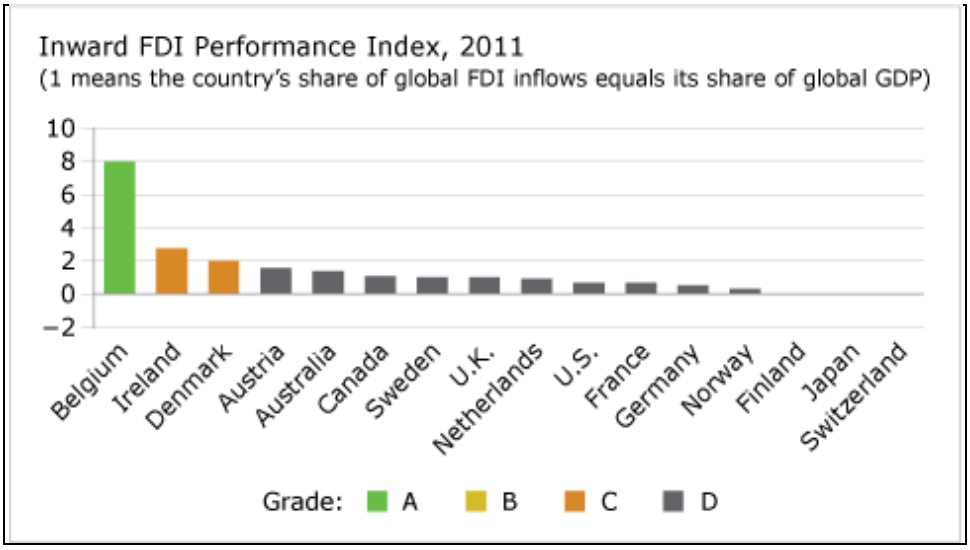

Figure 3.4 Inward FDI performance index

Source: UNCTAD (2013), p. 13

From the Figure 3.4 above, eight countries have an Inward FDI Performance Index that is greater than one, meaning that all these countries attract more inward FDI than their economic size would suggest. Belgium achieved an inward FDI index result of 8 in 2011, three times higher than the second-ranked comparator country, Ireland. Belgium's FDI index result has never dipped below 3.4 and has twice exceeded a result of 13 in the past decade (UNCTAD, 2013).

Why is Belgium such a special case? It works actively to attract inward FDI by using tax and other incentives to lower corporate income taxes and create a more tax-competitive business environment. Belgian firms then recycle this capital to corporate entities in other countries in the form of loans. Consequently, Belgium has one of the most internationalised economies in the world, with foreign affiliates accounting for about 35 percent of manufacturing jobs and 21 percent of services jobs (Global Benchmark report, 2014).

Table 3.3 Ranking of inward FDI performance (Inward FDI Performance Index)

Countries	**1790s**	**1980s**	**1990s**	**2000-11**
Australia	B	A	C	D
Austria	D	D	D	D
Belgium	B	A	A	A
Canada	A	B	D	D
Denmark	D	D	C	D
Finland	D	D	D	D
France	D	C	D	D
Germany	n.a	n.a	D	D
Ireland	B	B	B	C
Japan	D	D	D	D
Netherlands	B	B	B	C
Norway	C	D	D	D
Sweden	D	D	B	D
Switzerland	n.a	C	D	D
UK	B	A	C	D
USA	D	C	D	D

Source: Source: Developed by the author from data sourced from Global Benchmark report (2015).

In 2011, Japan and Switzerland actually saw a net negative result for their Inward FDI Performance Index, meaning their stock of inward FDI declined. This weak result reflects a variety of factors, including the short-term impact of the tsunami and earthquake in Japan, business strategies and negative asset valuation adjustments by firms, and the impact of dividend payments and transfer pricing (OECD International direct investment statistics database, 2013). In 2012, 44 percent of global FDI inflows were hosted by only five countries. China attracted the lion's share by USD 253 billion (or 18 percent of total) followed by the United States (USD 175 billion), Brazil (USD 65 billion), the United Kingdom (USD 63 billion) and France (USD 62 billion) (OECD International direct investment statistics database, 2014).

FDI in Germany, declined by 87 percent in 2012 to USD 6 billion, ranking at the 20th position. This development is due to disinvestments (in equity) by foreign investors and reimbursements of intercompany debt. On the other hand, inflows to Japan recovered modestly in 2012 increasing to USD 2.1 billion (World Investment Report, 2014).

In 2012, some EU countries recorded negative inflows such as Belgium at USD -1.6 billion (declining drastically from USD 103 billion in 2011) as a result of major disinvestments in the fourth quarter of 2012. However, the impact of some of the decreases recorded in the OECD area in 2012 were offset, in part, by significant increases. FDI inflows to France increased by 52 percent, to USD 62 billion (ranking as 3rd OECD recipient). Due to historically high levels of intercompany loans, inflows to Luxembourg reached USD 58 billion, excluding investments in special purpose entities hosted in this country (UNCTAD, 2013).

While China and Argentina received respectively 11 percent and 25 percent more FDI as compared to 2011, inflows to India, Russia and South Africa's decreased by more than 15 percent. Indonesia recorded its highest level of FDI inflows at USD 19.9 billion and Saudi Arabia received USD 13.7 billion in the first three quarters of 2012, while Brazil maintained the same level of FDI inflows at USD 65 billion (UNCTAD, 2013). In summary, a comprehensive presentation of the world's FDI inflows over time is provided in the figure below.

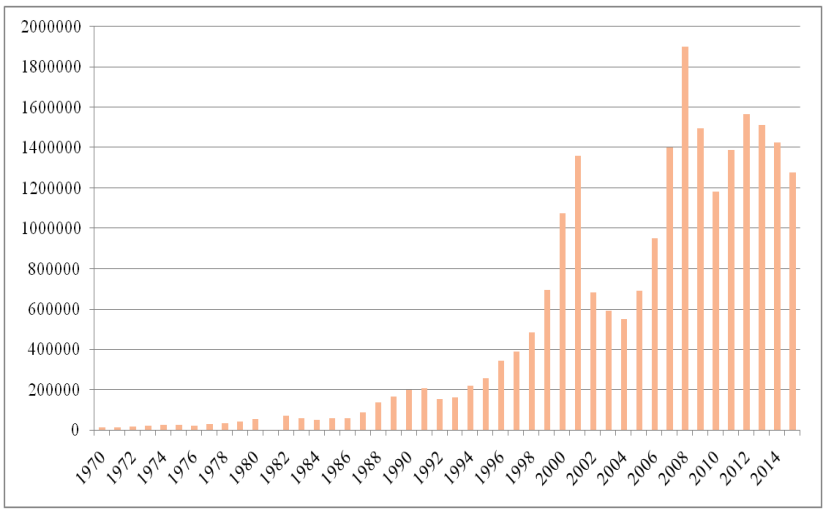

Figure 3.5 Global inflow trends 1970-2014

Source: Developed by the author from data sourced from UNCTAD (2014)

We see FDI picking up and returning to growth after the 2010 slump. After the decline in 2010, global foreign direct investment inflows rose by 9 percent in 2012, with growth expected to continue in the years to come. This demonstrates the great potential of international investment, along with other financial resources, to help reach the goals of a post-2015 agenda for sustainable development (UNCTAD, 2014).

3.5 Global FDI outflows from developed, developing and transition countries

Global FDI outflows rose by 16 per cent to an estimated US$1,664 billion, up from US$1,429 billion in 2010. Similar to FDI inflows, outflows surpassed their pre - crisis level, but still fell 25 percent short of their 2007 peak. The rise of FDI outflows in 2011 was mainly driven by growth of outward FDI from developed countries (Okpara *et al.,* 2012).

Recovery of outward FDI from developed countries gathered pace in 2011. Outflows exceeded US$1.23 trillion, a level comparable to the pre - crisis average of 2005–2007, with the EU, Japan and North America all contributing to the recovery. Outward FDI from the United States reached US$384 billion, which was well above the pre - crisis average and approaching the peak recorded in 2007. Reinvested earnings of foreign affiliates reached a record US$326 billion in 2011, accounting for 85 percent of FDI outflows (UNCTAD, 2012).

The economic crisis had dampened developing countries' outward investment in 2009, when FDI declined by 28 percent to $149 billion following a record $207 billion in 2008. Despite its severity, that decline was significantly below the 45 percent drop in FDI flows from developed countries (World Bank, 2011). Normally FDI is relatively resilient, but these sharp declines reflected parent companies reliance on international debt markets to finance their overseas expansions and the drying up of this kind of financing. FDI outflows from developed countries did not expand as rapidly as FDI from developing countries and as a result the share of developing country in global FDI outflows reached 18 percent, almost double the 10 percent average of previous three years (World Bank, 2011).

After a short-lived setback in 2009, investment flows from developing countries were back on their upward trend and reached an estimated $210 billion (1.1 percent of GDP) in 2010 (World Bank, 2011).

With the sharp decline of outward FDI flows from developed countries since the crisis, the importance of investment from other developing countries (South-South FDI) increased and

accounted for an estimated 34 percent in 2010 compared to 25 percent in 2007. With the acquisition of telecom company Zain Africa (now called Airtel) by Indian Bharti for $10.7 billion earlier this year—the largest South-South M&A deal and other large mergers in the sector, services sector contested the dominance of extractive sector in South-South flows in 2010 (Global Economic Monitor, 2014).

Outward FDI from developing economies fell by 7 percent in 2011. As a result, the share of developing and transition economies in global FDI outflows reduced from 31 percent in 2010 to 26 percent in 2011 (UNCTAD, 2012). Nevertheless, outward FDI from developing and transition economies remained important reaching its second highest level recorded. The growth of FDI outflows in 2011 did not translate into an equivalent expansion of productive capacity, as it was due in large part to cross - border acquisitions and increased amounts of cash reserves kept in foreign affiliates rather than the much - needed direct investment in new productive assets through greenfield investment projects or capital expenditures in existing foreign affiliates. Developed country TNCs largely made strategic acquisitions to seize on increased opportunities in other developed countries resulting in a higher share of the group in total FDI projects. Greenfield projects alone, however, show that developed - country TNCs are continuing to shift capital expenditures to developing and transition economies, for stronger growth potential (UNCTAD 2012).

Rising outward FDI from the EU is driven by FDI from Italy and the United Kingdom, from which outflows doubled and trebled, respectively. Corporate restructuring appears to have been the primary driver of cross - border M&A deals by European TNCs. The jump in Japanese outward FDI may have been helped by the appreciation of the Japanese yen, which increased the purchasing power of the country's TNCs in making foreign acquisitions (for example the acquisition of Nycomed (Switzerland) by the Japanese pharmaceutical company, Takeda, for US$13.7 billion) (World Bank, 2011).

The growth in FDI outflows from developing economies seen in the past several years appeared to lose some momentum in 2011 due to significant declines in outward FDI from Latin American and the Caribbean and a slowdown in the growth of investments from Asia (UNCTAD, 2014).In this case, a healthy level of equity investments abroad was undercut by a large negative swing in intra - company loans as foreign affiliates of some Latin American TNCs provided or repaid loans to their home country parent firms, possibly driven by

opportunities to profit from interest rate differentials. However, some regions such as West Asia bucked the trend by increasing their outward FDI (UNCTAD, 2014).

In terms of destination, detailed cross - border M&A and greenfield data shows that sixty percent of the outward FDI (OFDI) flows from developing countries went into other developing countries, mostly in the form of greenfield investments (World Bank, 2011).

FDI outflows from developing Asia (excluding West Asia) continued to grow in 2012, but only marginally after a significant increase in the previous year. Outward FDI from East Asia decreased, and that from South Asia remained stagnant while that from South - East Asia rose markedly. FDI from Hong Kong (China), the region's largest source of FDI, declined by 14 percent to US$82 billion, although it boomed in the last quarter of the year. FDI outflows from China reached US$68 billion, more or less the same level of 2010 (United States Agency for International Development (USAID, 2013).

Chinese firms have been active in a number of European countries, such as Germany, where they have become a leading source of greenfield investments. Outflows from India, the dominant source of FDI in South Asia, remained almost at the same level of 2010, at US$15 billion. In contrast, outflows from Singapore, the leading source of FDI in South - East Asia, registered a 19 percent growth, reaching US$25 billion. TNCs from developing Asian economies continued to go global, acquiring overseas assets. Their cross - border M&A activities demonstrated diverging trends in the developed and developing worlds in 2012 – total purchases in the former increased by 19 percent to US$51 billion, while those in the latter declined by 55 percent to US$23 billion (UNCTAD, 2014).

Greenfield FDI by Asian TNCs in 2013 remained at a similar level of the previous year in both of these regions. West Asia witnessed a rebound of outward FDI, with flows rising by 41 percent to US$18 billion in 2013, after reaching a five - year low in 2010. This is also reflected by a 19 percent increase in the region's greenfield FDI projects abroad and the return of cross - border M&A purchases to positive values, after registering negative amounts in 2010 (Odi, 2013).

The strong rise registered in oil prices since the end of 2010 increased the availability of funds for outward FDI from a number of oil rich countries – the region's main outward investors. Outflows from Bahrain, Kuwait, Qatar and the United Arab Emirates increased, while those from Saudi Arabia decreased, though they remained at a relatively high level in

2013(Yang, 2014). In addition, outflows from Turkey registered a 68 percent increase, rising to a record US$2.5 billion, a level they had reached in 2008 with a strong location shift in its investments from developed and transition economies to developing countries, particularly North Africa, West Asia and the Islamic Republic of Iran. Turkish enterprises showed renewed interest in some least developed countries (LDCs), with greenfield projects announced in Rwanda and Yemen (Yang, 2014).

Outward FDI flows from Latin America and the Caribbean have become highly volatile in the aftermath of the global financial crisis. They decreased by 29 per cent in 2013, after a strong 82 percent increase in 2010, which followed a large decline in 2009 (39 percent). This high volatility is due in part to the importance of the region's offshore financial centres (which accounted for four - fifths of the region's outflows in 2013) (UNCTAD, 2014).

FDI outflows from the transition economies of South - East Europe and the Commonwealth of Independent States (CIS) grew by 19 percent, reaching an estimated all - time record of US$73 billion. Natural resource - based TNCs in transition economies (mainly in the Russian Federation), supported by high - level commodity prices and higher stock market valuations, continued their expansion in emerging markets rich in natural resources (e.g. TNK - BP entered the Brazilian oil industry in 2011 with a US$1 billion acquisition of a 45 percent stake in 21 oil blocks located in the Solimoes Basin) (Ide, 2014).

In 2013 developing economies generated almost one third of global FDI outflows, continuing a steady upward trend while FDI outflows from developed countries dropped to a level close to the trough of four years ago. The uncertain economic outlook led transnational corporations (TNCs) in developed countries to maintain their wait and-see approach towards new investments or to divest foreign assets, rather than undertake major international expansion. As a result of this, 22 of the 38 developed countries experienced a decline in outward FDI, leading to a 23 percent overall decline (World Development Report, 2014).

According to the World Development Report (2014), FDI outflows from developing countries also reached a record level in 2013. Transnational corporations (TNCs) from developing economies increasingly acquired foreign affiliates from developed countries located in their regions. Developing and transition economies together invested $553 billion, or 39 percent of global FDI outflows, compared with only 12 percent at the beginning of the 2000s (World Development Report, 2014).

Developed countries have been the preponderant suppliers of FDI, accounting for almost nine tenths of the world's outward stock. The most striking change in the past 20 years is that the European Union has become by far the largest source (UNCTAD, 2014). In 1980, the outward stocks of the Union and the United States were almost equal, at around $215 billion. But by the 2000s, the European Union's stock (including intra-European Union stock) had reached $3.4 trillion, more than twice that of the United States ($1.5 trillion). The gap opened in the 1980s, widened since the late 1990s and it is still ongoing till date (UNCTAD, 2014).

Outward FDI stocks have changed even more than inward stocks for developing countries, increasing from 3 percent of GDP in 1980 to 20 percent in the 2000s, the result of the emergence of developing-country transnational corporations (UNCTAD, 2014).A graphical presentation of world FDI outflows as distributed among the developed, developing and transition economies is shown below (see Figure 3.6).

The prospects for global FDI outflows continue to improve since the depth of the crisis, as can be shown from the figure below. Recent events including the relative easing of the sovereign debt crisis in Europe, due to a massive injection of liquidity into the financial system and the recovery of the US economy are contributory factors of improvements in FDI outflows.

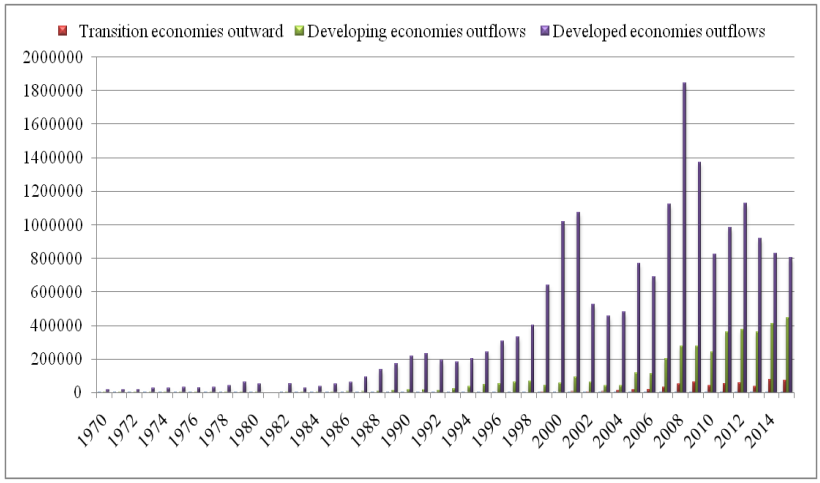

Figure 3.6 Global FDI outflows from developed versus transition/developing countries 1970-2014

Note: The vertical axis measures million of US dollar

Source: Developed by the author from data sourced from UNCTAD (2014)

3.6 Global FDI inflows into developed, developing and transition countries

In 2002, the developed world hosted two thirds of world inward FDI ($4.6 trillion), mainly distributed in the US, the United Kingdom and Germany. Central and Eastern European countries increased their inward FDI stock substantially, from $3 billion in 1990s to $188 billion in 2000s. As a percentage of GDP, the ratio rose from 1 percent to 21 percent over the same period (Andreff, 2009).

Andreff (2009) further stated that FDI inflows to developing countries ($2.3 trillion) totalled about a third of their gross domestic product (GDP) in 2002, almost twice the 19 percent for developed countries. Back in 1980, the respective ratios were 13 percent and 5 percent. The 49 least developed countries - the poorest developing countries - accounted for 2 percent of the total inward FDI stock of developing countries in 2002. This share has not changed much in recent years. The largest host least developed country is Angola, registering FDI stock on a level comparable to that in the Philippines (Andreff, 2009).

According to UNCTAD (2012), currently, global foreign direct investment (FDI) inflows have exceeded the pre-crisis average. In 2011, they reached $1.5 trillion despite turmoil in the global economy. However, they still remained some 23 percent below their peak a few years ago. But in 2011, flows to developed countries increased by 21 percent, to $748 billion. In developing countries FDI increased by 11 percent, reaching a record $684 billion. FDI in the transition economies increased by 25 percent to $92 billion. Developing and transition economies respectively accounted for 45 percent and 6 percent of global FDI (UNCTAD, 2012).

According to UNCTAD (2013), for the first time ever, developing economies absorbed more FDI than developed countries, accounting for 52 percent of global FDI flows in 2012. This was partly because the biggest fall in FDI inflows occurred in developed countries, which accounted for only 42 percent of global flows. Developing economies also generated almost one third of global FDI outflows, continuing a steady upward trend.

FDI flows to developing Asia fell 7 percent, to $407 billion, but remained at a high level. Driven by continued intraregional restructuring, lower-income countries such as Cambodia, Myanmar and Vietnam still remained bright spots for labour-intensive FDI. In Latin America and the Caribbean, FDI inflows decreased 2 percent to $244 billion due to a decline in Central America and the Caribbean. This decline was masked by an increase of 12 percent in South

America, where FDI inflows were a mix of natural-resource-seeking and market-seeking activity (UNCTAD, 2013).

In developed countries, FDI inflows fell drastically in 2012, by 32 percent, to $561 billion, a level last seen almost 10 years ago. The majority of developed countries saw significant drops of FDI inflows, in particular the European Union, which alone accounted for two thirds of the global FDI decline (WTO, 2014). Transition economies saw a relatively small decline in the same year. A slump in cross-border mergers and acquisitions (M&As) sales caused inward FDI flows to transition economies to fall by 9 percent to $87 billion; $51 billion of this went to the Russian Federation, but a large part of it was "round-tripping" (WTO, 2014).

Currently, developing Asia remains the number one global investment destination. Regional headquarter locations for TNCs, and proactive regional investment cooperation, are factors driving increasing intraregional flows. Latin America and the Caribbean saw mixed FDI growth, with an overall positive due to an increase in Central America, but with a 6 percent decline in South America (UNCTAD, 2014).

Developed countries experienced the recovery of FDI inflows to $566 billion and the unchanged outflows, at $857 billion in 2013. The United States and the European Union (EU) saw their combined share of global FDI inflows decline from well over 50 percent pre-crisis to 30 percent in 2013. FDI inflows to transition economies reached record levels and increased by 28 percent to reach $108 billion in 2013 (UNCTAD, 2014). The figure below provides us with a detailed explanation of how FDI inflows have evolved over the years with our focus on diverse economies.

The developed economies experienced a record high in 2007 (see Figure 3.7), with a drastic decline in 2012. We also see that flows to both developing and transition economies have been quite encouraging recently (UNCTAD, 2014). According to UNCTAD Survey (2013-2015), it was projected that the developing and transition economies were clearly the most optimistic when it came to their own countries' prospects for FDI inflows in 2015.

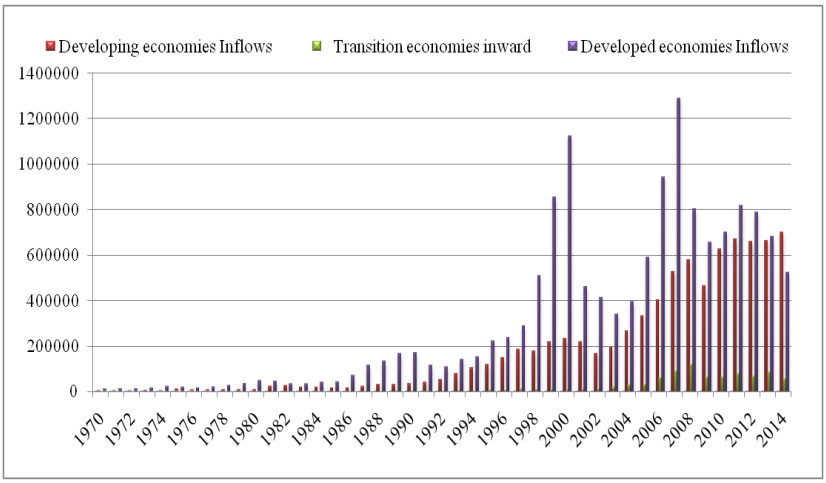

Figure 3.7 Global FDI inflows into developed versus transition/developing countries 1970-2014

Note: The vertical axis measures million of dollars

Source: Developed by the author from data sourced from UNCTAD (2014)

3.7 The position of Africa's FDI

Between 2008 and 2012, the share of consumer-related industries in the value of greenfield investment projects in Africa grew from 7 percent of the total to 23 percent (UNCTAD, 2014). Greenfield investment is investment in businesses or economic sectors that are new to any recipient country. Changes in policy and laws on inward and outward FDI within Africa have been ongoing. Many African countries have seen changes in investment policy, including bilateral and regional investment treaties, and privatisation policy, all towards a more liberal stance towards FDI thereby affecting intra-Africa FDI also.

3.8 Total African outward FDI flows

Total outflows from Africa are small, an average of $2.2 billion a year from 1992 to1999 and $1.3 billion in 2003. This is only 3.6 percent of total outward investment from developing countries ($35.6 billion), and 0.2 percent of total world outward FDI (UNCTAD, 2009). Most came from Sub-Saharan Africa, with only Libya, during the period of 2001 to 2010, becoming a significant investor from North Africa (see Figure 3.8). This is in sharp contrast to the pattern for inflows to Africa, where North Africa took about a third ($5.8 billion out of $15 billion) in 2005 (UNCTAD, 2012).

At the end of 2002, the flow of African FDI to the UK was around US$750 million, most of it from South Africa. The share of South Africa in total African FDI stock in the UK hovered around 75 percent, but declined more recently to 60 percent. In terms of outflows, South Africa was responsible for 90 percent of total African FDI in the UK in 2003 (African Development Indicators, 2007). African FDI is quite profitable in the UK, with South African firms performing very well, relative to other African investors.

During the same period, the stock of African FDI in Germany jumped to $800m in 2004, 90 percent of the total is due to South Africa. There are 41 African affiliates in Germany, half of this from South Africa. African FDI in the US reached US$2.2 bn in 2006, but only a small part of this is due to South Africa (African Development Indicators, 2007). South Africa is by far the most important African investor in Australia, and in some years in Belgium/Luxembourg (probably because of De Beers), in France and the Netherlands. In terms of FDI outflows in 2004, the top African countries include South Africa (56 percent), Liberia, Libya and Ghana followed by Nigeria, Botswana, Mauritius and Ethiopia (UNCTAD 2005). Much of African outward FDI is to the rest of the world and most of this is by South Africa. South African firms have increasingly invested in the EU, Australia and to a lesser extent in the US and Asia (OECD, 2014).

Teece (2014) stated that over the period of 1990-2009, Mauritius invested a total of US$119 million abroad. Mauritius is also a major recipient of FDI. Its average inflows are $70 million, and outflows 40 million, giving it one of the highest ratio of outflows to fixed capital formation. 16 percent of outward FDI went to Comoros, 5 percent each to Madagascar, and Mozambique, 1 percent each to the Seychelles and South Africa. In 2012-13, Singapore piped Mauritius as the largest source of FDI in India, accounting for about 25 percent of total FDI inflows in the fiscal. During the last financial year, India attracted $4.85 billion of FDI from Mauritius (Teece, 2014).Below are figures indicating the various quantum/percentages of FDI outflows from each region within the African continent (1970-2014) (See Figures 3.8 to 3.12).

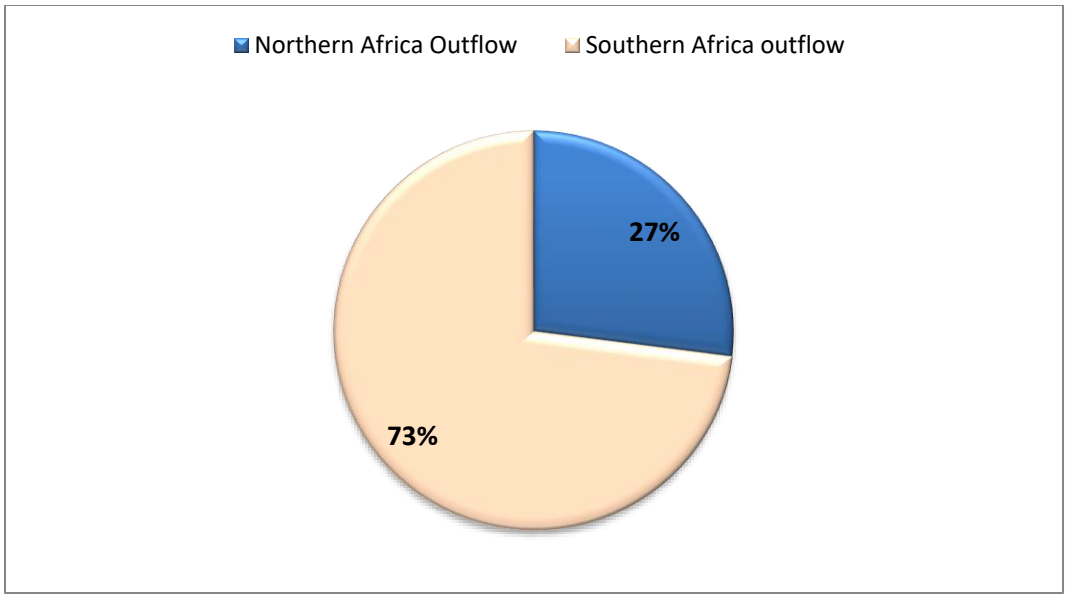

Figure: 3.8FDI outflows from Africa 1970-1980

Source: Developed by the author from data sourced from UNCTAD (2014)

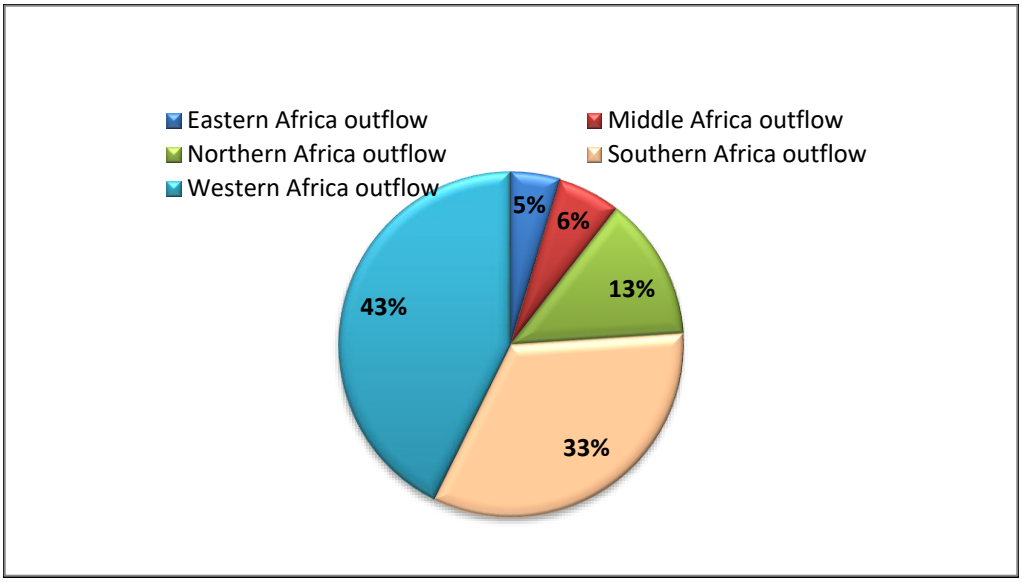

Figure: 3.9FDI outflows from Africa 1981-1990

Source: Developed by the author from data sourced from UNCTAD (2014)

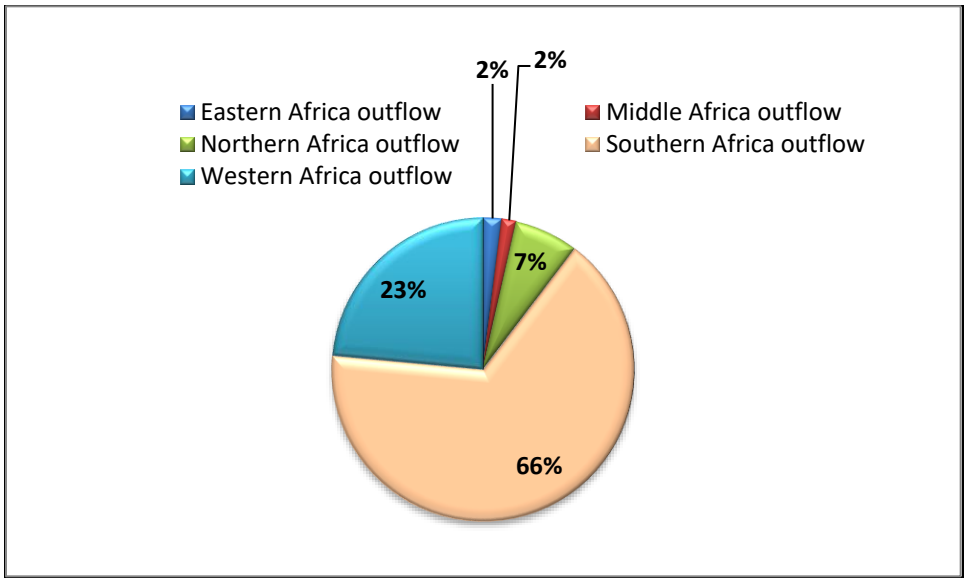

Figure: 3.10FDI outflows from Africa 1991-2000

Source: Developed by the author from data sourced from UNCTAD (2014)

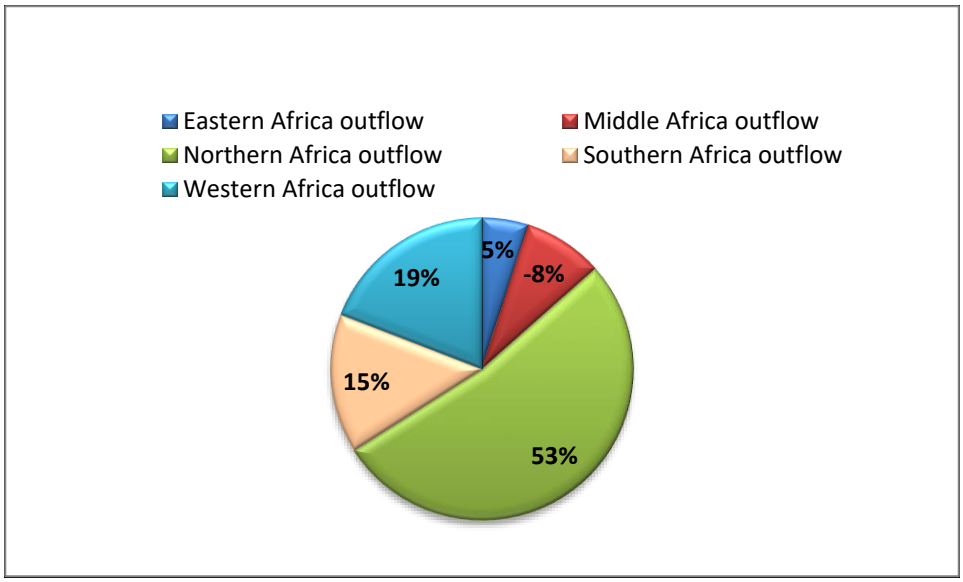

Figure: 3.11FDI outflows from Africa 2001-2010

Source: Developed by the author from data sourced from UNCTAD (2014)

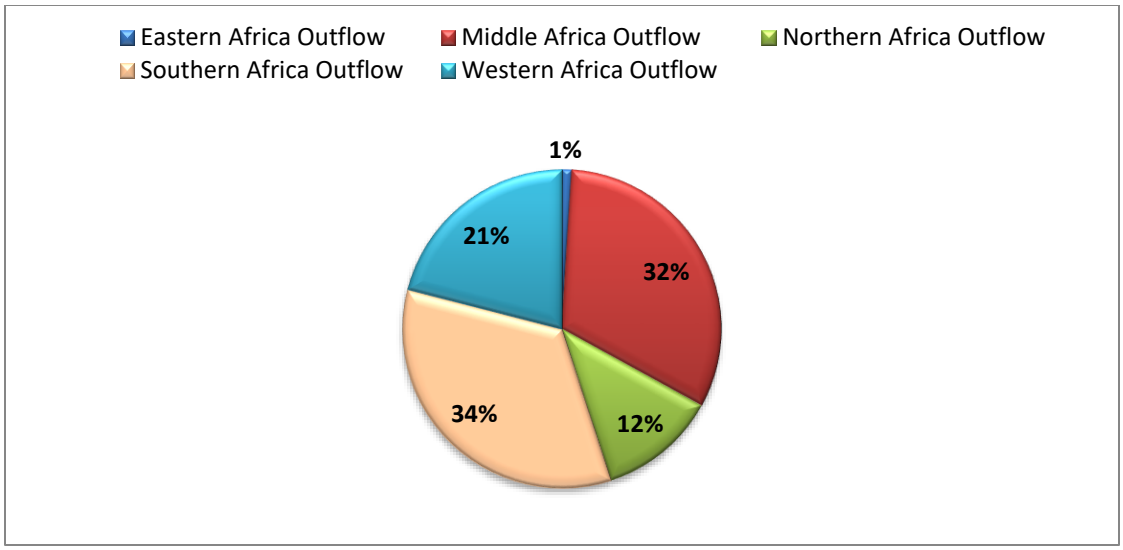

Figure: 3.12FDI outflows from Africa 2011-2014

Source: Developed by the author from data sourced from UNCTAD (2014)

Over the years, South Africa has been the continent's biggest investor up until 2001 to 2010, when its investments to the world dropped, with North Africa taking the lead (see Figure 3.11), but it quickly regained its position again between 2011 and 2014 as we see in Figure 3.12.South African companies were active in acquiring operations in industries such as mining, wholesale and healthcare during 2013, pushing FDI outflows from South Africa up to $4.4-billion and elevating the country to the position of largest source country of FDI in Africa (UNCTAD, 2014).Taking a look at the trends below, outflows were negligible until the 1990s when outflows began to rise. They were negative in 2001 and 2002, but were positive in 2003 (see Figure 3.13 below) (UNCTAD, 2014).According to UNCTAD (2014) FDI outflows from African countries almost tripled in 2013, to $14 billion.

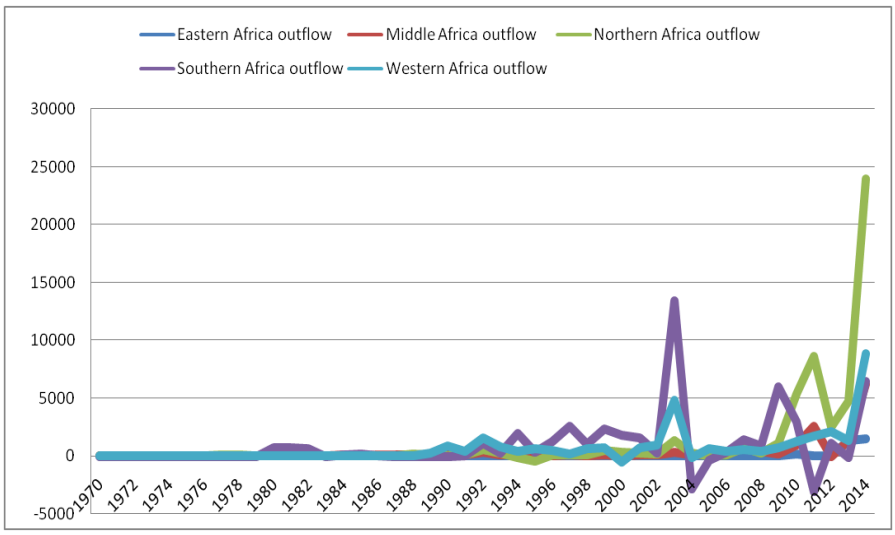

Figure 3.13 Trends of FDI outflows from Africa 1970-2014

Note: The vertical axis measures million of dollars. Also the negative values of 2001and 2008 denote retrenchment activity reflecting largely the slowdown in global economic activity as well as the poor performance of stock market.

Source: Developed by the author from data sourced from UNCTAD (2014)

3.9 Total African inward FDI flows

Expectations for sustained economic and population growth continue in Africa to attract market-seeking FDI into consumer-oriented industries. Intraregional investments are increasing. South-South FDI flows have been particularly important for Sub-Saharan Africa and low income countries. For example, the relative resilience of the FDI flows to Sub-Saharan Africa region was partly supported by the rise of South-South investment particularly from Asian countries such as China, Malaysia and India (World Investment Report, 2013).

According to the United Nations Development Programme (UNDP, 2007), many African countries have the advantage of natural resources in abundance, resulting in resource-seeking investments and a large share of the inward flow to Africa was in the extractive industries, particular in petroleum, which has benefited from increasing large shares of FDI in recent years. The majority of inflows during 2005 were in the mining, and in particular oil and gas, and the service sector. More than one half of FDI in Africa during 2005 originated from Europe, followed by France, the Netherlands, the United Kingdom, and from South African and the United States (UNDP, 2007).

About a decade ago, FDI inflows to Africa in 2005 reached a record $31 billion, a 78 percent increase compared to the previous year, while the global FDI growth rate was 29 percent in developing countries (Noorbakhsh and Youssef, 2006). This sharp increase in the FDI inflows to Africa was as a result of the boom in the global commodity market (Noorbakhsh and Youssef, 2006). As stated by Todaro and Smith (2009), this 78 percent increase only makes up 3 percent of the global FDI inflows to developing countries. This percentage of FDI inflows to Africa is lower than what it was during the 1970s and 1980s and is attributed to the slow increase in production capacity and diversification, and creating larger regional markets (UNCTAD, 2006). As reported in the World Investment Report(2006), during 2005, North Africa was the leading recipient of FDI with about 21 percent ($6.4 billion) of the region's total inflows (see Figure 3.13) (UNCTAD, 2014).

FDI inflows to Africa for the year 2010 came to $55 billion, or 10 percent of total FDI inflows to developing countries. Africa's share among developing countries declined from 12 percent in 2009. FDI to Africa's primary sector, especially the oil industry, continues to dominate FDI flows to the continent (African Economic and Financial Data, 2014).

In 2011, inflows to Southern Africa decreased by 24 percent to $15 billion, although the sub-region accounted for more than one quarter of the African total. The second largest recipient in the sub-region, South Africa, saw its inflows fall by over 70 percent to $1.6 billion, a level amounting to only one sixth of the peak recorded in the country during 2008. Inflows to the continent's largest recipient, Angola, also declined substantially. One of the problems Angola's oil industry faces is that its oil production has exceeded the quota allocated by the Organization of the Petroleum Exporting Countries (World Development Report, 2013).

As reflected in the FDI make-up of the top recipient countries (Figure 3.14), investment in extractive industry remains the most important driver of FDI to Africa. In 2013, in South Africa, inflows rose to $13 billion (Figure 3.14). Infrastructure was the main attraction in South Africa. In Mozambique, investments in the gas sector played a role (UNCTAD, 2014).

The reduction of macroeconomic imbalances in the last several years has helped South Africa capture some of the FDI flows to emerging markets. Notwithstanding recent trends, however, South Africa receives far less FDI than other countries with broadly similar credit characteristics. South Africa receives about half of the flows of similar Asian or Latin American

counties. South Africa also attracts less FDI than countries with a non-investment credit rating (Wei, 2014).

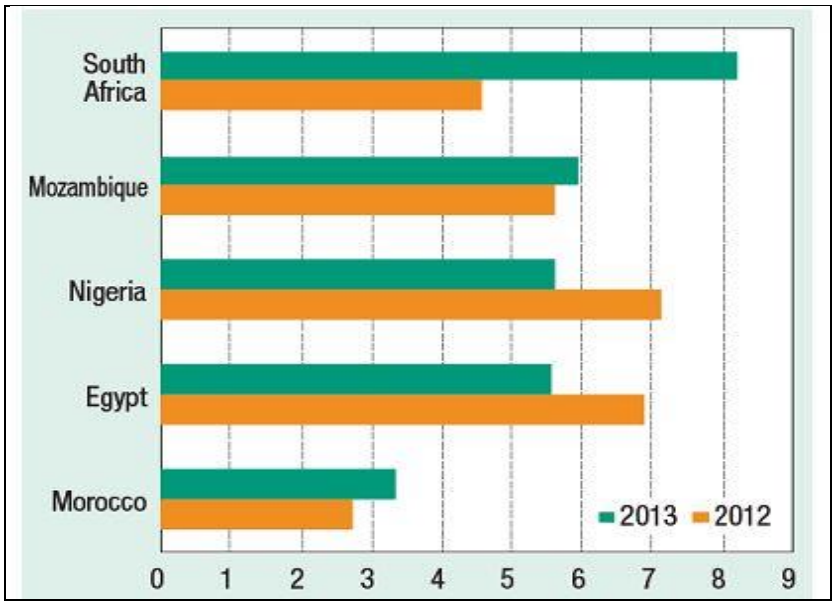

Figure 3.14 Africa: top 5 recipients of FDI inflows, 2013 and 2012 (billions of dollars)

Source: UNCTAD, World Investment Report 2014, p. 10.

Note: Countries are ranked on the basis of magnitude of 2013 FDI flows.

FDI inflows to South Africa dropped by 24 percent to $4.6-billion in 2012. This mirrored a sharp drop in investment in the Southern African region, from $8.7-billion in 2011 to $5.4-billion in 2012 - even as some countries in the region saw substantial increases. Inflows to Mozambique, for example, rose to $5.2-billion, attracted by the country's huge offshore gas deposits (Wei, 2014).

Between 2001 and 2010, FDI inflows declined in the countries of West Africa - recipients of about one fifth ($11 billion) of the continent’s total flows. Regulatory concerns in the oil industry contributed to the 29 percent fall in inflows to Nigeria, which still accounted for more than half of the inflows to the sub-region. The emerging oil industry pulled inflows to Ghana and Niger to record levels, at $2.5 billion and $947 million, respectively. FDI flows to West Africa also declined, slipping by 5 percent to $16.8-billion (UNCTAD,2014).

Between 2010 and 2012, FDI to Ghana remained stable at $3.3-billion, but inflows to Nigeria declined by 21 percent to $7-billion, accounting for much of the diminished flows to the

region. In 2013, in West Africa, FDI inflows declined by 14 percent, to $14.2 billion, much of that due to decreasing flows to Nigeria. By contrast, towards the end of 2013 Ghana, Gabon and Côte d'Ivoire started to produce oil, attracting considerable investment from foreign transnational corporations (TNCs) (Whitaker and Kolavoll, 2014).

FDI inflows to North Africa, which account for roughly one third of the total African FDI, fell between 1991 and 2000 (see Figure 3.17), to $17 billion, but the rate of decline was much reduced and the picture uneven within the sub-region. For example, inflows to the Libyan Arab Jamahiriya increased by over 40 percent in 2010 to $3.8 billion (UNCTAD, 2014), but this rebound seemed to be short-lived, given the current political situation in the country (Figure 3.18). North Africa, according to UNCTAD (2014), is beginning to see a revival in cross-border investment following the political turmoil of 2011.

Much of this increase was accounted for by a turnaround in Egypt, where inflows climbed from a net divestment of $0.5-billion in 2011 to a positive $2.8-billion in 2012 - though still much lower than the levels reached in Egypt before 2011. In 2013, FDI flows into North Africa declined by 7 percent to $15.5 billion. However, the overall level of FDI in the region remained relatively high, and investors appear to be ready to return. FDI flows to Egypt fell by 19 percent but remained the highest in North Africa at $5.6 billion. Also, most of the neighbouring countries saw increasing flows. Morocco and Sudan attracted more than $3 billion each during the same period (UNCTAD, 2014).

Central Africa's natural resources continue to attract investment from mining companies, with significant FDI, for example, targeting the expansion of the copper-cobalt Tenke Fungurume mine in the Democratic Republic of the Congo. In Central Africa, inflows of FDI increased in 2010 to reach $8.0 billion (Thomsen, 2014). The portion going to the larger recipients in Central Africa (Chad, Congo, the Democratic Republic of the Congo, Equatorial Guinea, and Gabon) was mostly due to oil-related investments. The only significant instance of FDI in non-primary sectors was investment in telecommunications in the Democratic Republic of the Congo. Central Africa attracted $8.2 billion of FDI in 2013, a fall of 18 percent from the previous year (UNCTAD, 2014).

East Africa's increase was modest (2.5 percent), as inflows to the sub-region's largest recipient, Madagascar, fell (-19 percent) between 2001 and 2010 (Figure 3.18) (Onyeiwu and Shrestha, 2004). In 2013, FDI flows into East Africa surged by 15 percent to $6.2 billion

(Figure3.19), driven by rising flows to Kenya and Ethiopia. Kenya is developing as a favoured business hub, not only for oil and gas exploration in the sub-region, but also in industrial production and transport services. Ethiopia's industrial strategy is to attract Asian capital in order to develop its manufacturing base. Energy resources such as recently discovered gas reserves in Tanzania and oil fields in Uganda saw FDI inflows to East Africa expand from $4.5-billion in 2011 to $6.3-billion in 2013 (Oyewole, 2015).Below are figures indicating the various percentages of FDI inflows to each region within the African continent (1970-2014).

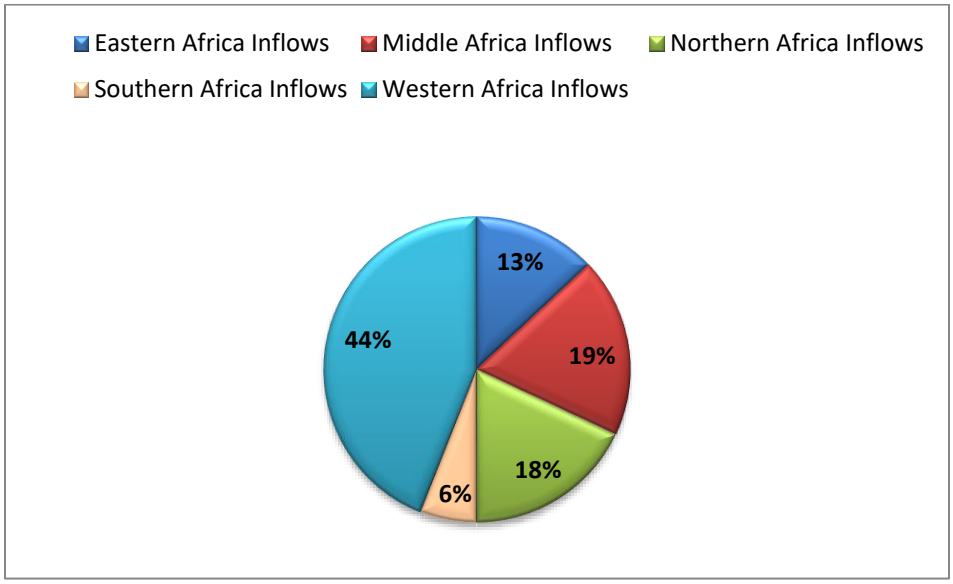

Figure: 3.15FDI inflows to Africa 1970-1980

Source: Developed by the author from data sourced from UNCTAD (2014)

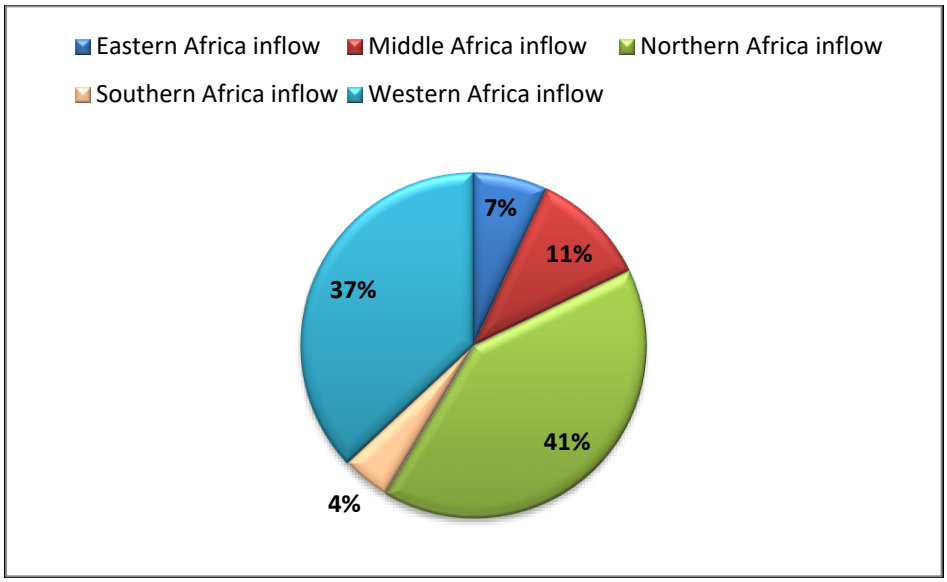

Figure: 3.16FDI inflows to Africa 1981-1990

Source: Developed by the author from data sourced from UNCTAD (2014)

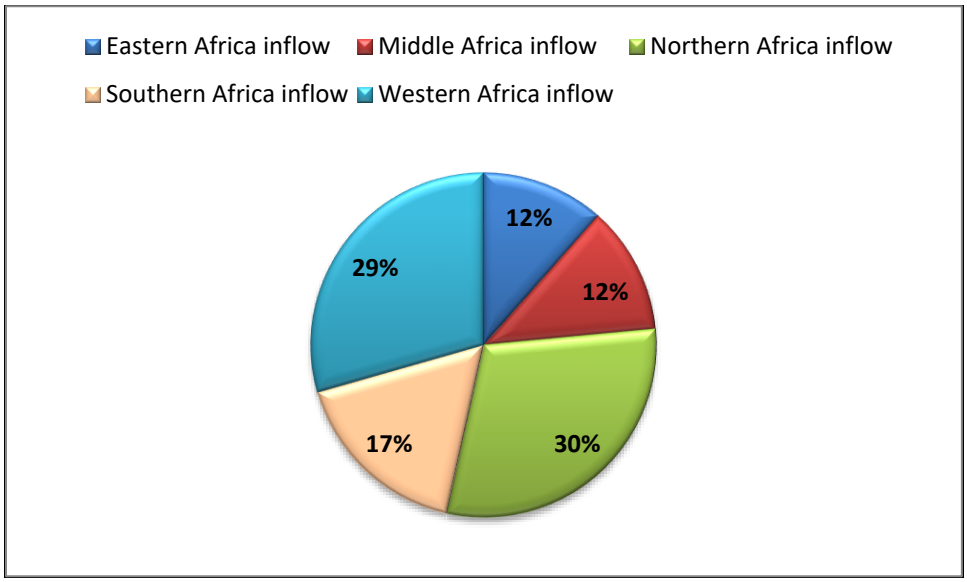

Figure: 3.17FDI inflows to Africa 1991-2000

Source: Developed by the author from data sourced from UNCTAD (2014)

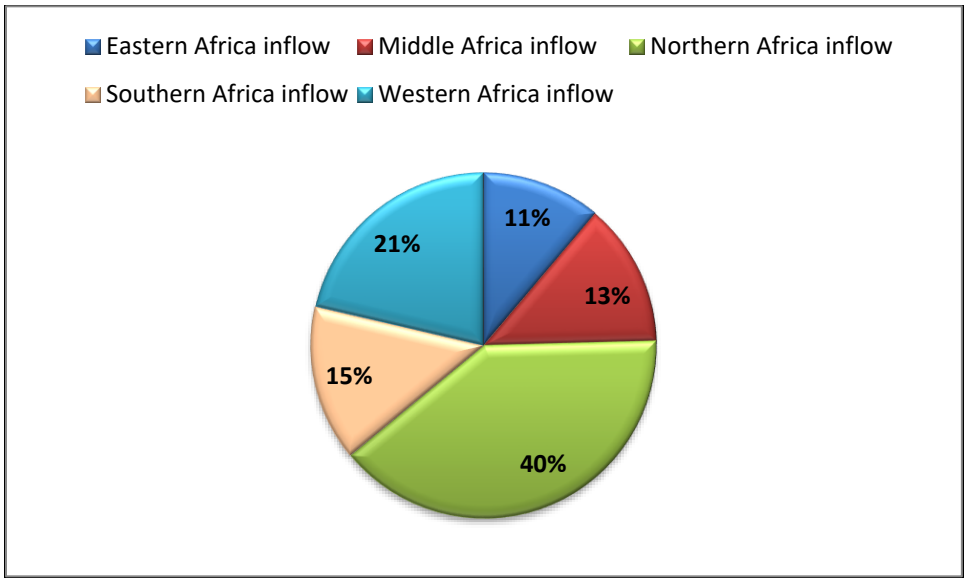

Figure: 3.18FDI inflows to Africa 2001-2010

Source: Developed by the author from data sourced from UNCTAD (2014)

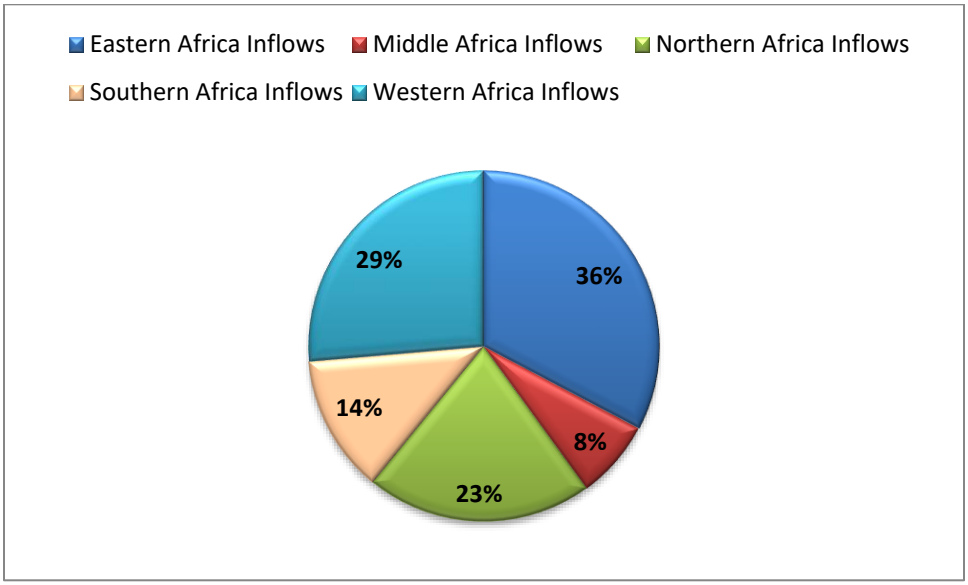

Figure: 3.19FDI inflows to Africa 2011-2014

Source: Developed by the author from data sourced from UNCTAD (2014)

There is some evidence that intraregional FDI is beginning to emerge in non-natural-resource-related industries and as a result over the long term, investment flows with greater development impacts are likely to come from neighbouring countries (Onyeiwu and Shrestha,

2014). Intraregional FDI flows in Africa are still small, only $46 billion, or 5 percent of total African FDI projects during 2003–2010. Harmonization of Africa's regional trade agreements and accelerated and closely coordinated planning with respect to FDI would help Africa reach its FDI potential, according to UNCTAD (2014) as its Foreign Direct Investment inflows to Africa rose by 4 percent to $57 billion in 2013, driven by international and regional market-seeking investments as well as infrastructure investments, according to UNCTAD's World Investment Report (2014).

The 2011 decline in inflows to the continent was due largely to divestments from North Africa. In contrast, inflows to sub-Saharan Africa recovered to $37 billion, close to their historic peak. In 2012 Africa bucked the trend with a 5 percent increase in FDI inflows to $50 billion. This growth was driven partly by FDI in extractive industries, but investment in consumer-oriented manufacturing and service industries is also expanding (UNCTAD, 2014).

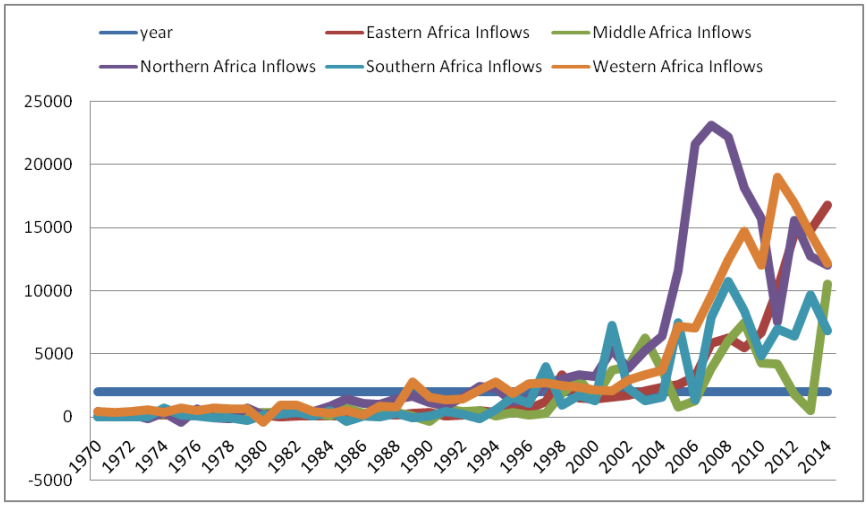

Figure 3.20 Trends of FDI inflows to Africa 1970-2014

Source: Developed by the author from data sourced from UNCTAD (2014)

Prospects in Africa are improving. In 2013, Africa saw increased inflows by 4 percent (see Figure 3.20), sustained by growing intra-African flows, approaching its 2008 record high, with the fast-growing sub-Saharan region receiving the majority of inflows (UNCTAD, 2014). Investment inflows remained narrowly focused on the major economies of South Africa, Nigeria, Democratic Republic of Congo, Egypt and Morocco, with the rest of the continent still heavily dependent on aid. Such flows are in line with efforts towards deeper regional integration,

although the effect of most regional economic cooperation initiatives in Africa on intraregional FDI has been limited (UNCTAD, 2014).

3.10 Intra-African FDI Flows

Most investments in Africa do not come from other African countries, because of the important shares of the EU and the US. According to Rogoff and Reinhart (2003), total inward stocks are $167 billion, dwarfing total African outward investment of $40 billion. Perhaps more surprisingly, most African investments do not go to other African countries because of the very high share of South African investment which goes to the EU. This was $15 billion in 2002, i.e. over 40 percent of total African outward stock. In addition, $2.3 billion of South African investment was in the US and 0.7 billion in Australia, another 10 percent. Only $1.4 billion of South African outward stocks were in other African countries, accounting for 3.6 percent of total African outward stock, and under 1 percent of total African inward stock (Rogoff and Reinhart, 2003).

Nevertheless, intra-African investments are increasing, led by South Africa (the major African investor in Africa), Kenya, Mauritius, Ethiopia, Uganda, Malawi, Tanzania, Mozambique, Botswana and Zambia and Nigeria. Between 2009 and 2013, the share of announced cross-border greenfield investment projects originating from within Africa rose to 18 percent of the total, from 10 percent (Figure 3.21) (UNCTAD, 2014). For many smaller, often landlocked or non-oil-exporting countries in Africa, intraregional FDI is a significant source of foreign capital. All major investors – South Africa (7 percent), Kenya (3 percent) and Nigeria (2 percent) – more than doubled their shares (UNCTAD, 2014). Growing consumer markets are a key force enabling these trends, given that an increasing amount of FDI into Africa – from abroad and by region – goes to consumer-facing industries, led by banking and telecommunications.

Intra-African projects are concentrated in manufacturing and services (Figure 3.22). Intraregional investment could contribute to the build-up of regional value chains. Increasing intra-African FDI is in line with efforts towards deeper regional integration. Comparing the sectoral distribution across sources shows that 97 percent of intra-African investments target non-primary sectors compared with 76 percent of investments from the rest of the world, with a particularly high difference in the share that targets the manufacturing sector (UNCTAD, 2014).

However, for most sub-regional groupings, intra-group FDI represents only a small share of intra-African flows (Figure 3.23). Only in two regional economic cooperation (REC) initiatives does intra-group FDI make up a significant part of intra-African investments – in the East African Community (EAC), with about half, and the South African Development Community (SADC) with more than 90 percent. This was largely due to investments in neighbouring countries by the dominant outward investing economies in these RECs, respectively Kenya and South Africa (UNCTAD, 2014).

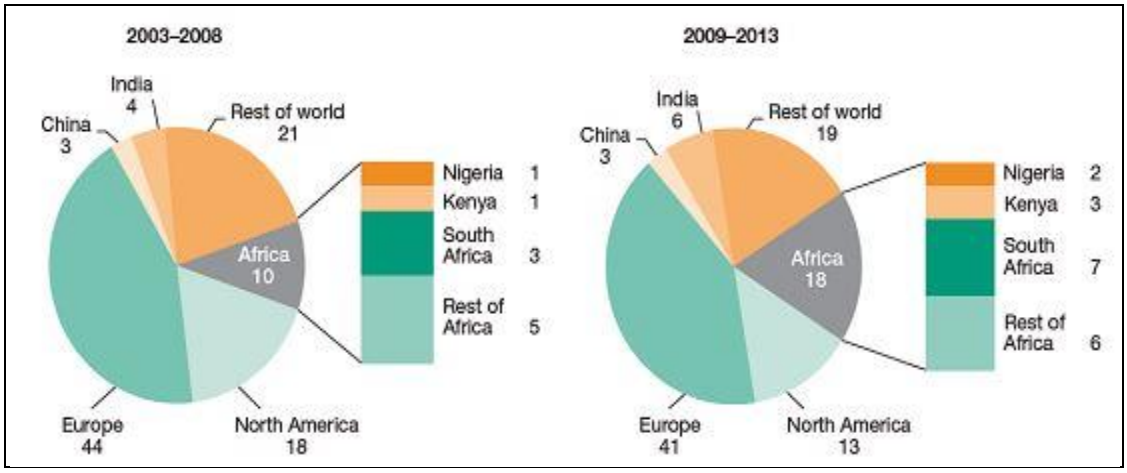

Figure 3.21 Geographical distribution of greenfield investment in Africa by number of projects, 2003-2008 and 2009-2013 (percent)

Source: UNCTAD, World Investment Report 2014, p. 49

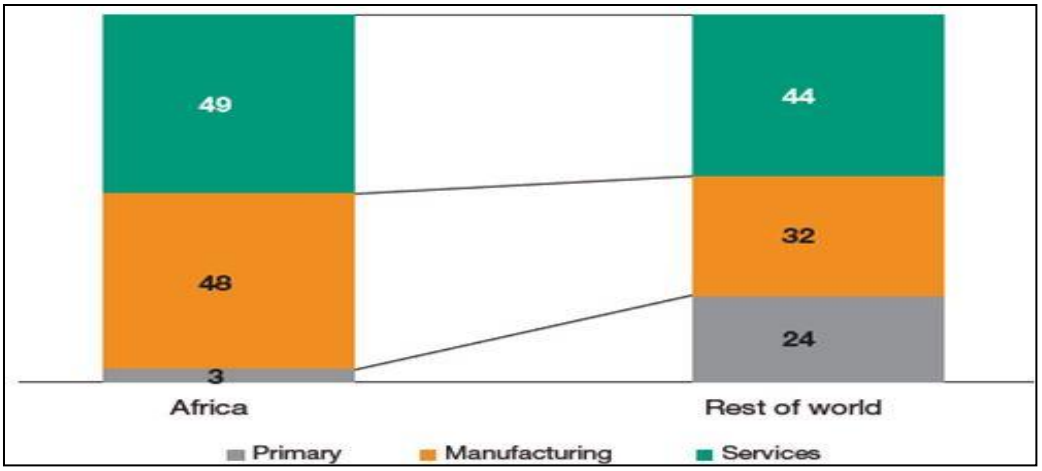

Figure 3.22 Sectoral distribution of announced value of FDI greenfield projects in Africa by source, cumulative 2009 – 2013 (percent)

Source: UNCTAD, World Investment Report 2014, p, 52.

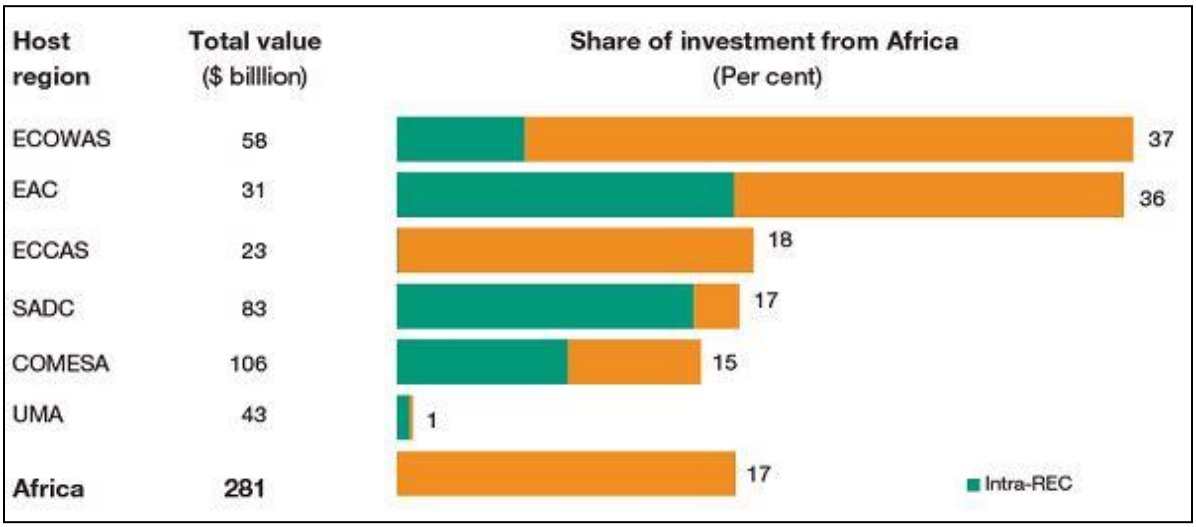

Figure 3.23 Announced value of FDI greenfield projects in manufacturing and services in RECs, cumulative 2009 – 2013 (billions of dollars and percent)

Source: UNCTAD, World Investment Report 2014, p. 61

South Africa is the third largest foreign investor in Africa following the UK (US$20 billion in 2002, 1.9 percent of total UK investment stocks) and the US (US$19.0 billion in 2003). 90 percent of South African FDI within Africa goes to Southern African countries (Quarterly Bulletin, 2004). In recent years, South Africa has also become prominent as an investor in telecommunications in the rest of Africa, including Tanzania, Cameroon, Nigeria, Rwanda, Swaziland, Mozambique, and Uganda. The rapid expansion of fast food outlets and supermarkets in Africa has been led by South African companies (African Development Report, 2003).

South African companies have also been important in mining in Tanzania, DRC, Angola, and, outside SADC, in Ghana, Guinea, and Mali (mainly gold). Outward FDI flows from Africa rose marginally to $12 billion. The main investors were South Africa, Angola and Nigeria, with flows mostly directed to neighbouring countries. South African outward FDI almost doubled, to $5.6 billion, powered by investments in telecommunications, mining and retail. Nigeria outflows

were concentrated in building materials and financial services (African Development Report, 2003).

In addition to well-known South African investors (such as Bidvest, Anglo Gold Ashanti, MTN, Shoprite, Pick'n'Pay, Aspen Pharmacare and Naspers), some other countries' conglomerates are upgrading their cross-border operations first in neighbouring countries and then across the whole continent. For example, Sonatrach (Algeria) is present in many African countries in the oil and gas sector. Other examples include the Dangote and Simba Groups (Nigeria), which are active in the cement, agriculture and oil-refining industries are present in Ghana. Orascom (Egypt), active in the building materials and chemicals industries, is investing in North African countries. Sameer Group (Kenya) is involved in industries that include agriculture, manufacturing, distribution, high-tech, construction, transport and finance. The Comcraft Group (Kenya), active in the services sector, is extending its presence beyond the continent into Asian markets (African Development Report, 2003).

African leaders are seeking to accelerate regional integration, which was first agreed to in the 1991 Abuja Treaty. The rapid economic growth of the last decade underlies the rising dynamism of African firms on the continent, in terms of both trade and foreign investment. Intra-African investments are trending up, driven by a continuous rise in South African FDI into the continent, as well as by increases of flows since 2008 from Kenya, Nigeria, and Northern African countries (World Bank, 2008). In 2013, Africa saw increased inflows (+4 per cent), sustained by growing intra-African flows (UNCTAD, 2014).

3.11 Establishing a theoretical framework for Nigeria's FDI position

Given that most of the theories established on FDI were developed in advanced countries, it is pertinent to note that the factors that work in attracting FDI into the developed countries do not necessarily work in attracting FDI in developing countries and most especially in Nigeria. According to Dunning(1976; 1981a; 1988; 1993; 2000), he developed three basic elements to explain FDI: ownership advantages, location advantages and internalisation advantages (hence the OLI acronym). Dunning argues that these elements answer questions related to the why, where and how of FDI (Galan and Gonzalez-Benito, 2001).The paradigm, offers a useful framework for Nigeria in attracting FDI flows. Seeing that Nigeria is a country rich in natural resources, this framework applies to the Nigerian situation. In terms of ownership (O), because

Nigeria is rich in natural resources, foreign investors are motivated to bring in their technology and forms of skills to extract from the resource-rich country. With location (L), investors are attracted to Nigeria because of its richness in natural resources and this serves as a motive for them to invest. Internalisation (I) applies to Nigeria too as these foreign investors, who do not own oil wells come to Nigeria for investment, making use of Nigeria's oil wells. The theoretical application therefore makes a stronger case for Nigeria to attract more FDI flows.

Experts from UNCTAD (UNCTAD, 2014) have suggested the steady inflow of FDI into Nigeria will accelerate the country's quest to rank among the top 20 economies in the world by the year 2020. They point out substantial improvement in power supply, as is currently being recorded, will help Nigeria move rapidly to the next level of development. It is also expected that the various power projects which General Electric (GE) intends to execute in partnership with local firms, will further boost output. This will have multiplier effect on virtually all sectors of the economy, as it will lead to lower production costs and more profitability for companies.

Small and medium-scale enterprises (SMEs) in the country which have had to rely on alternative power will also be able to employ more hands and add value to the economy and, in turn, make it more attractive to foreign investors.

3.12 FDI inflow to Nigeria

Nigeria has been the largest recipient of FDI in Africa over the last decade, with announcements totalling almost $116 billion in 2003-11, representing about 9 percent of GDP. Eighty percent of that FDI has been in the oil and gas sector and it is believed that Nigeria's substantial oil reserves will continue to attract funds over the medium term (UNCTAD, 2014). It has also been projected (UNCTAD, 2014) that Nigerian FDI inflows will average $23 billion annually over the next five years and will in turn create 95,000 jobs. Greenfield FDI projects in Nigeria have grown at a compound rate of close to 20 percent since 2007. However, while more than 50 percent of the FDI capital invested since 2007 has been into capital intensive resource sectors (primarily oil), there had been "*particularly strong growth*" in investment into telecommunications, with the sector attracting 23.9 percent of FDI projects between 2007 and 2013 (EY Report, 2014, p.13).

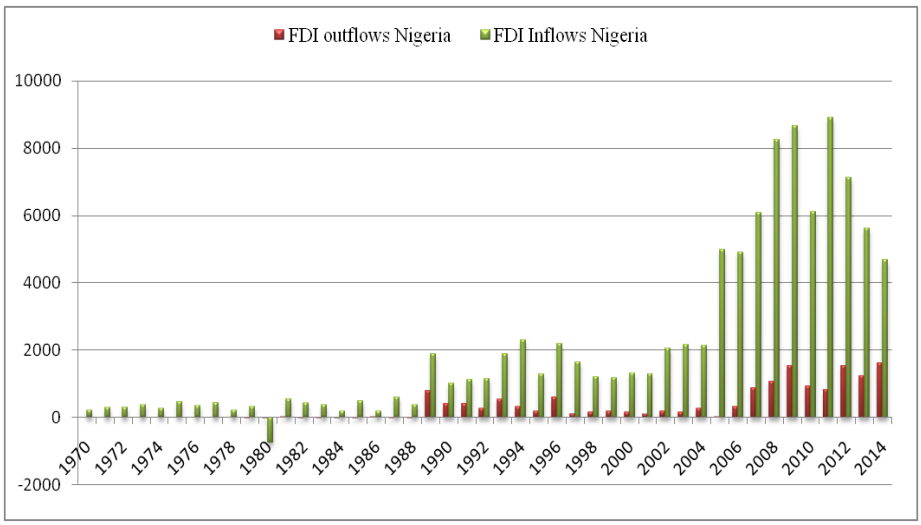

Figure 3.24FDI inflow versus outflow in Nigeria 1970 - 2014

Source: Developed by the author from data sourced from UNCTAD (2014)

In January 2011 alone, Nigerian FDI inflows were estimated at $5.2bn (N800bn), according to the World Investment Report (2012). Nigeria emerged as the Africa's biggest destination for FDI in Africa in 2011, with $8.92bn, up from $6.10bn recorded in 2010 (UNCTAD, 2012). UNCTAD (2012) ranked South Africa next with $5.81bn, while Ghana ($3.22bn); Congo, ($2.93bn); and Algeria, ($2.57bn) trailed behind in that order during the period under review. The report ranked these countries as the top five African FDI destinations, based on the volume of FDI they received.

Though total FDI inflows to Africa declined in 2011 for the third successive year since the global economic meltdown began in 2008, UNCTAD (2012) further noted that inflows to Nigeria rose from $29.5bn in 2010 to $37.9bn in 2011, a level it said was comparable to the peak of $36.3bn achieved in 2009 (see Figure 3.24). UNCTAD (2012) also attributed the drop in 2010 (a total of $42.7bn) to the protracted social instability in Egypt and Libya, two North African countries which had been major recipients of FDI.

3.13 FDI outflow from Nigeria

While FDI inflows into Nigeria appear encouraging over the past decade, FDI outflows from Nigeria seem almost non-existent (Figure 3.24). Foreign direct investment net outflow (percentage of GDP) from Nigeria was 0.33 as of 2011 and 0.46 in 2010. Its highest value over the past 6 years was 0.90 in 2009, while its lowest value was 0.01 in 2005(Figure 3.24) (IMF,

2013). In 2012, FDI outflows recorded a high of 0.87. The total stock of outward investments at the end 2012 stood at N165.94 billion. Outward FDI remained the dominant component of total outward investments during the year representing 76.45 percent of private foreign assets. When compared to its level in the previous year, FDI outflow rose by 18.80 percent (IMF, 2013).

According to the International Debt Statistics (IDS) (2014), analysis of total FDI outflow by destination showed that 56.17 percent went to Europe. Of this amount, 54.9 percent went to EU and the balance of 1.27 percent to non-EU member countries. Other notable regions that attracted Nigerian investors in 2012 included: Africa (27.24 percent), North America (7.37 percent), Middle East (5.89 percent) and Asia (1.89 percent). Of the total for the African continent, the West African sub-region received 20.36 percent, East & Central Africa received 4.29 percent, Southern Africa received 1.44 percent and North Africa received1.14 percent (IDS, 2014).

Five sectors of the economy invested more outside the country in 2012 compared with previous years. The financing, insurance, real estate and business services sector had the highest contribution (11.26 percentage points), followed by transport, storage and communication (1.21 percentage points), wholesale and retail trade, catering and accommodation (0.75 percentage points), manufacturing (0.20 percentage points) and construction (0.10 percentage points) (Central Bank of Nigeria, 2014).

3.13 Recent investors in Nigeria

Attracted by this favourable investment climate and the high returns on investment that Nigeria offers, investors from Canada and the US were among those that visited the country in 2011 to further explore investment opportunities. The Canadian Minister of International Trade, Ed Fast, who led a trade delegation to Nigeria, stressed the need for the government to protect these growing investments in order to attract more FDI. He gave this advice at a meeting with top Nigerian government officials headed by the Minister of Trade and Investment, Olusegun Aganga, under the auspices of the Nigeria-Canada Bi-National Commission.

The current volume of trade between both countries was estimated at $2.7bn in 2011. This figure is expected to rise to $6bn by 2016, following commitments made at the meeting (Akinboade, 2014). Akinboade (2014) further reported that IMW Industries, one of the Canadian firms, entered into a partnership agreement with Dangote Industries Limited in 2010 to provide

cheap and clean energy to meet the transportation needs of the company. As part of the deal, IMW Industries will manufacture the fuelling equipment for a nationwide network of Compressed Natural Gas (CNG) that is expected to reduce cost of maintaining fuel for Dangote's fleet of trucks.

A Fortune 500 Company, General Electric's (GE) global CEO, Jeffrey Immelt, also toured Nigeria earlier in 2011. The visit was a follow-up to his trip to the country last year, during which he disclosed that GE would invest massively in the Nigerian economy over the next few years (African Business, 2012).

The American company, which operates in four main industries: energy, capital finance, technology infrastructure and consumer and industrial goods, signed a memorandum of understanding with the Nigerian government to invest about $1bn (N157bn) over the next five years in a firm located in Calabar, Cross River State to develop new power plants and a cyber-shop that would enhance the vocational skills of the people. According to Immelt, an initial commitment of $250m (N40bn) will be used to expand the company's manufacturing and servicing capabilities in the country (African Business, March, 2012).

Immelt expressed the confidence that the investment would make Nigeria a regional hub for manufacturing, service and innovation with an improved ability to support a broader range of product lines in power generation as well as oil and gas exploration and production. GE also signed an agreement with the government to overhaul the railways sector, which has been lying comatose over the years, and reached a deal with the Ministry of Health to build the capacity of its personnel as well as a commitment to provide state-of-the-art medical facilities.

The American conglomerate restated its resolve to generate up to 10,000 MW of electricity to address the power needs of Nigeria. To this end, GE signed a joint development agreement with power developers that will generate a total of up to 1,500 megawatts (African Business, 2012).

Akinboade (2014) reports that greenfield FDI projects into Nigeria have grown at a compound rate of close to 20 percent since 2007, positioning it among the 10 countries with the highest growth rates in Africa. Nigeria has also attracted the most FDI capital and the second most FDI projects in Sub-Saharan Africa over that period, making it one of the star performers in a period in which FDI flows into the region have been fairly robust.

3.14 Sectors attracting inward FDI to Nigeria

Although more than 50 percent of the FDI capital invested into Nigeria since 2007 has been into the capital intensive resource sectors (primarily oil), nearly 50 percent of FDI projects are service-orientated. There has been particularly strong growth in investment into telecommunications, with the sector attracting 23.9 percent of FDI projects between 2007 and 2013 (Akinboade, 2014). Growth in investment into other service sectors like financial services, consumer products, tourism and business services, further highlights the growing opportunities emerging in these sectors.

In 2011, a breakdown of total FDI to Nigeria by recipient sector showed that the extractive sector received the largest share as at end-2011 with a sum of N4, 853.76 billion or 51.0 percent. Enterprises in the oil and gas sub-sector largely accounted for this as the oil and gas sub sector accounted for about 99.0 percent of total FDI inflows to the sector (Kale, 2014).

Kale (2014) further stated that about 64.1 percent of investments into the oil and gas subsector were in the form of equity while the balance of 35.9 percent came in the form of debt instruments. The extractive sector was followed by manufacturing (N2, 309.87 billion or 24.3 percent) and transport, storage and communication (N1, 164.69 billion or 12.2 percent). Agriculture, hunting, forestry and fishing received the least investment (N6.09 billion or 0.1 per cent) (Kale, 2014).

Four sectors of the economy attracted higher inward FDI in 2011 compared with their levels in 2010. These were financing, insurance, real estate and business services (85.0 percent), construction (28.1 percent), extractive (22.7 percent), and manufacturing (20.8 percent). However, inflows of direct investment to agriculture, hunting, forestry and fishing, transport, storage and communication and wholesale and retail trade, catering and accommodation services fell by 23.8, 7.9 and 5.1 percent, respectively (Kale, 2014).

According to the National Bureau of Statistics (NBS) (2013), in 2012, a breakdown of total FDI to Nigeria by recipient sector showed that the extractive sector received the largest share as at the end of 2012, with a sum of N6,794.72 billion or 41.24 percent. Enterprises in the oil and gas sub-sector in the none free trade zones largely accounted for about 41.22 percent of total FDI inflows to the sector. About 69.05 percent of investments into the oil and gas subsector were in the form of equity while the balance of 30.95 percent came in the form of debt instruments. NBS (2013) further reported that the extractive sector was followed by

manufacturing (N4,504.35 billion or 27.34 percent) and transport, storage and communication (N2,137.17 billion or 12.97 percent). Wholesale and retail trade, catering and accommodation received (N1,495.48 or 9.08 percent), construction (N815.94 billion or 4.95 percent, financing, insurance, real estate and business services (N722.68 or 4.39 percent) and Agriculture, hunting, forestry and fishing got the least investment (N6.39 billion or 0.04 percent) (NBS, 2013).

Six sectors of the economy attracted higher inward FDI in 2012 compared with their levels in the previous year. These were manufacturing with relative contribution to growth of 8.84 percentage points, extractive (5.03 percentage points), transport, storage and communication (4.61 percentage points), wholesale and retail trade, catering and accommodation (3.27 percentage points) and agriculture, hunting, forestry and fishing (0.002 percentage points). However, inflows of direct investment to construction sector fell by 4.14 percent (NBS, 2013).

In summary, based on all the data gathered lately on the position of Nigeria's inward FDI by NBS (2013), we conclude that the largest amount of FDI went into the oil and gas sector, which is the extractive sector, followed by the manufacturing sector. The amount of FDI that has come into the country has slightly increased over the years. In 2011, we see that four sectors of the economy attracted more inward FDI compared to their levels in 2010, and in 2012, we again see a slight increase from the previous year, as six sectors of the economy attracted higher levels of inward FDI compared to their levels in 2011.

3.15 Efforts of the Nigerian Government

Foreign investors have been coming to Nigeria in droves from all over the world over the last few years and they have taken advantage of the more favourable business environment created by the government to step up their volume of inward investments. A key driver of growing levels of investment has been Nigeria's robust and sustained economic growth. Over the past decade, the economy has consistently registered high single digit growth rates. The recent rebasing of Nigeria's GDP now makes it the largest economy in Africa, and one of the 30 largest economies in the world (Akinboade, 2014). Nigeria's economic performance is still very dependent on oil, and remains susceptible to changes in the oil price. However, as the FDI trends indicate, it is the non-oil sector that has been the main driver of growth in recent years, led by agriculture, services, and wholesale and retail trade. However, like most emerging markets, Nigeria will continue to face its fair share of challenges.

Corruption, threats to physical security and poor infrastructure are among those often cited as constraints to investment and doing business. Arguably though, power shortages have been the biggest constraint. According to Ide (2014), Nigeria has one of the lowest per capita national power supplies in the world, and most businesses rely on fuel-powered generators for reliable power. Ide (2014), reported that it also significantly hampers broader industrial development. Recent progress made in the privatisation of the power sector should significantly increase levels of investment into electricity generation and distribution, and could transform the business environment in Nigeria.

The government has taken some steps to safeguard these investments. The launch of the National Competitiveness Council of Nigeria, is a case in point. The 18-member board, chaired by the Minister of Trade and Investment, has the mandate of increasing productivity and sales for local businesses, as well as the creation of more markets for 'Made in Nigeria' products. The council is expected to further improve Nigeria's global competitiveness ranking (Ide, 2014).

3.16 FDI policy

FDI related policies exist at both national and international level. In the past, many countries rejected the idea of FDI on the basis of the risks to opening up ownership of production in one's nation territory to foreign companies. Yet, in the last 25 years, awareness of the need for FDI has increased and countries now know the importance and benefits of putting relevant policies in place to encourage inward FDI and maximise the benefits that FDI could bring (Dutse, 2010). While multilateral negotiations on investment have been rejected by both developed and developing countries on several occasions, since the 1990s there has been an evolving framework of bilateral (particularly amongst developing countries), regional (more regions now include investment provisions) and multilateral (including General Agreement on Trade in Services (GATS), Trade Related Investment Measures (TRIMs) Agreement on Subsidies and Countervailing Measures (ACM) etc) agreements affecting national policymaking in the FDI area (Dutse, 2010).

3.17 National Policies

According to UNCTAD (2000a), national FDI policies have increasingly become more liberal and provide increasingly for a welcoming investment climate. An increasing number of countries have introduced changes into their investment regimes that have become, broadly speaking, increasingly favourable towards private sector investment. A sub-set of national FDI policies concerns specific interventions, which have been used effectively only by those few countries with sufficient capabilities to implement and target them consistently and precisely, according to UNCTAD (2000a):

- Fiscal and financial incentives to multinationals aim to invest in the host country;
- Performance requirements;
- FDI promotion (establishment of Investment Promotion Agencies(IPAs));
- Building industrial parks and export processing zones;
- Promoting clustering of industries using R&D and technology centres;
- Supporting training programmes.

UNCTAD (1995, 1996, 1999, 2000a, 2000b) surveyed the use of various tax incentives in a large sample of countries. Many countries use tax holidays, import duty exemptions and other incentives – and their use increased from 1995 to 2000. Many countries are actively competing for FDI with the use of tax incentives and grants. It is now quite common for developing countries to offer tax holidays for foreign investors, often much more favourable than the treatment of investment by local firms. Incentives have worked under certain circumstances, i.e. attracting investment to Ireland in the 1960s, or to certain states in Brazil. However, the literature is unanimous in observing that there were few attempts by governments to do an a priori cost-benefit analysis. Incentives in Brazil for instance have been criticised for not making up for their costs (Rodriquez-Pose and Arbix, 2001).

Oman (2000) reported an increasing level of grant incentives over the past two decades. However, very recently, it seems that countries have begun to be less generous to foreign firms, sometimes under pressure from developed countries (e.g. through the OECD tax haven reports). In some cases, developed countries, such as the UK, have also become less generous with subsidies, as some of the firms it supported prematurely left after arrival (Babatunde, 2013). Instead, there is an increased awareness of the need to build domestic capabilities under non-

discriminatory tax systems, where systemic competitiveness is more important than temporary tax interventions. This rationale now comes on top of the rules limiting the use and extent of incentives favouring lagging regions in the EU (Babatunde, 2013).

3.18 International policies

There are also international FDI policies. By and large, they have become more liberal (rather than more protective) over the past three decades. We discuss bilateral, regional and multilateral investment policies.

3.18.1 Bilateral policies

There has been a surge in the number of bilateral investment treaties (BITs) from 500 in 1990 to close to 2,400 in 2012 (Babatude, 2013). Some countries are more active than others. Germany and the UK are more active than the US, but most developed countries now have BITs in place with all their main investment partners in developing countries. However, some developing countries, such as Brazil and Botswana, have never depended on signing BITs. Less Developed Countries generally have few BITs in place. Increasingly, BITs are also being signed amongst developing countries. The contents differ, with US BITs more far-reaching (on market access) than most European BITs.

However, empirical evidence on the impact of BITs on attracting investment has been mixed. Some studies have found that the attraction of FDI is positively linked to signing BITs, but that BITs act as a complement rather than a substitute for strong political and legal institutions (Hallward and Driemeier, 2003; Tobin and Rose-Ackerman, 2005). Others have found a strong relationship between signature of BITs by the US and FDI flows (Salacuse and Sullivan, 2005).

Double taxation treaties (DTTs) are other bilateral instruments affecting FDI. DTTs have risen similarly to BITs. Nearly 2,500 DTTs cover now more than 175 countries, with the strongest rise in the late 1980s (Aitken and Harrison, 1999). DTTs are important because they allow TNCs to avoid pay taxes in both the home and host country (tax avoidance rather than tax evasion). As developing country outward FDI is growing, so is the interest by developing countries in signing DTTs (Aitken and Harrison, 1999).

3.18.2 Regional policies

According to Ethier (1998), while most regional integration agreements notified to the World Trade Organisation (WTO) include narrow provisions to liberalise trade, the new wave of regionalism that started in the late 1980s has included investment provisions in about 20 cases. For instance, Andean community of nations restricted FDI in the 1970s but this changed over the 1980s and 1990s. Association of South East Asian Nations (ASEAN) has gradually added more investment provisions. North American Free Trade Agreement (NAFTA) included quite strong provisions from its inception in 1994 (African Development Bank, 2010). Southern African Development Community (SADC), Economic Community of West African Countries (ECOWAS) and Common Market for Eastern and Southern America (COMESA) contain weak trade and investment provisions and have not yet really implemented any NAFTA type investment provisions. Generally, regions differ with respect to trade and investment provisions in two fundamental respects:

- Over time, when regions change or add investment-related provisions;
- Across regions, when investment-related provisions differ between regions at one point in time (African Development Bank, 2010).

3.18.3 Multilateral policies

The earliest multilateral discussions on investment date back to 1948. An attempt was made to formulate international principles concerning FDI in the Havana Charter of 1948, but it was rejected. Developments afterwards are described in UNCTAD (2001, 2003, 2004a, 2004b, 2004c). The inclusion of a multilateral investment agreement was rejected at the OECD in the 1990s and more recently at the WTO, despite a proliferation of bilateral and regional investment agreements. However, some multilateral investment provisions do exist, e.g. the WTO Agreement on Trade Related Investment Measures (TRIMs), the Agreement on Subsidies and Countervailing Measures (ACM), and the General Agreement of Trade in Services (GATS), which covers conditions for FDI in services. There is little direct evidence on the impact of individual multilateral investment provisions. They should help to increase the stability of the investment climate, but it is challenging to separate the effects of multilateral measures from other effects (see Velde and Nair, 2005, on GATS and FDI in Tourism).

Home country measures (HCMs) are much less discussed in the literature than other factors affecting FDI, such as host country policies, international policies or multinational policies. Part of the reason is that policies on outward investment were traditionally seen as a screening device, restricting the outflow of capital. However, at the same time, as host countries have begun to realise that attracting FDI can be good for development, they have started liberalising the FDI regime accordingly. Home countries, which having seen potential benefits from outward FDI, have started lifting restrictions on outward FDI. Countries employ HCMs because they promote the competitiveness and sale of domestic firms hence supporting development and reducing poverty (IMF, 2010). Some countries also see HCMs as a way to promoting the economic development of the recipient (host) countries. HCMs include four categories of support:

- Support for structural economic fundamentals and governance structures in host countries, provided by development agencies;
- Support in reducing economic and political risks of an investment, provided by public risk insurers;
- Support in providing information surrounding investment, provided by trade and outward investment promotion agencies;
- Other policies that affect the viability of investment projects, such as fiscal policies and preferential trade policies in home countries (IMF, 2010).

Over the past 20 years there have been significant increases in home country support. For instance, aid agencies have increasingly sought to find synergies between aid and investment, in ways that aid can support investment, and improve its impact, including through public-private partnerships (IMF, 2010).

3.19 Evolution of FDI policies in Nigeria

Over the years, the debate on the role of inward FDI in bringing about economic growth has received the attention of policy makers, researchers and international organisations. This is in view of the increasing wave of globalisation and the consequent substantial movement of capital across economies, enabled by improved information technology. The lessons from the 2008/09 global financial crisis have shown that, as much as foreign investments have become increasingly important for developing economies, they are also sources of vulnerabilities to such economies.

Osisioma (2013) stated that the Nigeria's Economic Transformation Agenda hinges on active participation of the private sector with an annual projected injection of US$13.0 billion into the economy if the 'Vision 2020' is to be actualised. Towards this end, Government had instituted several policies/incentives aimed at creating a sustainable business environment that would enhance the global competitiveness of the economy and make it the preferred investment destination in sub-Saharan Africa (Osisioma, 2013).

Historically, the Nigerian investment climate had evolved through the protectionist era of the 1970s to the present day of liberalisation. While policies of both periods were aimed at promoting the participation of the private sector, they however differed in terms of level of equity ownership of businesses by foreign investors.

The protectionist era was anchored on the Nigerian Enterprises Promotion Decree (NEPD) of 1972. That legislation went through various amendments in the National Assembly, but the concept remained the same: the imposition of several restrictions on FDI entry, thereby earning the tag *"the indigenisation policy"* (Osisioma, 2013, p. 12).

The indigenisation policy started in 1972 with "the Nigerian Enterprises Promotion Decree"(NEPD, 1972). The decree imposed several restrictions on FDI entry. As a result, some 22 business activities were exclusively reserved for Nigerians, including advertising, gaming, electronics manufacturing, basic manufacturing, road transport, bus and taxi services, the media and retailing and personal services (Ogbuagu, 2012). Foreign investment was permitted up to 60 percent ownership and provided that the proposed enterprise had, based on 1972 data, share capital of N200,000 or turnover of N500,000 (Central Bank of Nigeria, CBN, 2009).

According to CBN (2009), the second indigenisation decree, the Nigerian Enterprises Promotion Decree (NEPD) of 1977, tightened restrictions on FDI entry in three ways: (a) by expanding the list of activities exclusively reserved to Nigerian investors (e.g. bus services, travel agencies, the wholesaling of home products, film distribution, newspapers, radio and television and hairdressing); (b) by lowering permitted foreign participation in the FDI-restricted activities from 60 to 40 percent and adding new activities restricted to 40 percent foreign ownership such as fish-trawling and processing, plastic and chemicals manufacturing, banking and insurance; and (c) by creating a second list of activities that were permitted as foreign investment was reduced from 100 to 60 percent ownership, including manufacturing of drugs, some metals, glass, hotels and oil services companies (CBN, 2009).

According to Sofowora (2009) relaxation of these restrictions began in 1989 when the NEPD was amended to leave a single group of 40 business activities in which foreign participation was completely prohibited unless the value of the enterprise exceeded N20 million ($2.7 million in 1989). Since the promulgation of these laws, the Government had vigorously pursued economic policies and regulatory frameworks that promote equitable rights and privileges for investors irrespective of nationality in the economy. This policy drive has seen the telecommunications, upstream of the oil and gas, solid minerals, manufacturing, commerce, power, tourism and hospitality industries being totally liberalised. In addition, foreign investors could hold only a share of up to 40 percent in insurance, banking, oil production and mining (Sofowora, 2009).Also the Nigerian Investment Promotion Commission (NIPC) Act No. 16 of 1995 was enacted as the successor to the Industrial Development Coordination Committee (IDCC); it repealed the IDDC Decree No 36 of 1989 as well as the Nigerian Enterprise Promotion Decree of 1989 (CBN, 2009).

According to the Nigerian Investment Promotion Commission consolidated report (NIPC,2006-2008) it was reported that in 1995, the Nigerian Investment Promotion Commission Act laid out the framework for Nigeria's investment policy and opened all sectors to foreign participation except for a short negative list (including drugs and arms) and allowed for 100 per cent foreign ownership in all sectors, with the exception of the petroleum sector (where FDI is limited to joint ventures or production sharing).Enacted along with the NIPC Act 16 of 1995 was the Foreign Exchange (Monitoring and Miscellaneous) Provisions Act 17 of 1995. Essentially, this Act guaranteed the unrestricted transferability of investment capital, profit and dividend through authorized institutions.

With these two Acts, Nigeria's government demonstrated a clear determination to promote and encourage foreign private investment participation in the economy. Under these two regimes, government had effectively guided the operations of foreign investors in the economy and freely encouraged local entrepreneurs to flourish. To complement these acts, Government has, through the NIPC, put in place a number of investment incentives to stimulate private sector investment from within and outside the country. While some of these incentives cover all sectors, others are limited to some specific sectors.

The Nigeria Export Free Zone Scheme was introduced in 1992 by the Federal Government of Nigeria as a policy instrument to drive the economy on a path of industrialization

and economic development with particular emphasis on economy diversification, attraction of FDI, job creation, export development, domestic value addition, technology/skills transfer and infrastructure development. The NEPZA Act No. 63 of 1992 established the Nigeria Export Processing Zone Authority (NEPZA) as the government agency with the mandate to handle the responsibility of licensing, regulating and monitoring of economic free zones in Nigeria. Export Free Zones are designated geographic areas considered outside the customs area which offer duty and tax free incentives which include duty free importation of raw materials, machinery, spare parts, equipment and other inputs. It also offers simplified administrative procedures which reduces the hassle of doing business.

Over the years, the export free zone scheme has been transformed to satisfy the needs of investors as well as open more opportunities for businesses taking into account the country's comparative advantages. The scheme is now liberalised to allow for the active participation of the private sector through the establishment of private free zones or public/private free zones. The scheme covers not only manufacturing activities but trade, agriculture, logistics, tourism, mining, ICT, oil & gas and more. As of date there are 28 export free zones located across the country and at various stages of development (Osisioma, 2013).

Following the return to democracy in May 1999, the reform process was re-energised, mainly through Nigeria's home-grown poverty reduction strategy. The National Economic Empowerment and Development Strategy (NEEDS), adopted in 2003, was meant to guide public policies until 2007 (Sofowora, 2009). The preparation of NEEDS followed a highly participatory process. Associated poverty reduction strategies were developed at the State and local levels – State Economic Empowerment and Development Strategies (SEEDS) and Local Economic Empowerment and Development Strategies (LEEDS).NEEDS, SEEDS and LEEDS were major departures from the policies of the past. Their broad agenda of social and economic reforms was based on four key strategies to:

(i) Reform the way government works in order to improve efficiency in delivering services, eliminating waste and free up resources for investment in infrastructure and social services;

(ii) Make the private sector the main driver of economic growth, by turning the Government into a business regulator and facilitator;

(iii)Implement a social charter, including improving security, welfare and participation; and push a value re-orientation by shrinking the domain of the State (Sofowora, 2009).

In contrast with previous development plans, NEEDS made FDI attraction an explicit goal for the Government and paid particular attention to drawing investment from wealthy Nigerians abroad and from Africans living abroad. In this context, both past President Yar'Adua and his predecessor President Obasanjo consistently expressed commitment to removing barriers to FDI in non-oil sectors. Though most FDI is still destined for the oil industry, the steps being taken under the reform agenda are bearing fruit (Sofowora, 2009).

Average GDP growth, which was 4.8 percent per annum between 2000 and 2006, had reached 7 percent in 2010 (National Planning Commission of Nigeria, 2012). The Government has now set a two-digit growth target for the short to medium term. According to NEEDS, Nigeria would have to achieve 30 percent annual investment and 8 to 9 percent growth to successfully halve poverty by 2015 in line with the Millennium Development Goals (National Planning Commission of Nigeria, 2012).However, growth alone will not automatically translate into poverty reduction. To achieve this objective, Nigeria will need to implement socially-oriented policy reforms (Ogbuagu, 2012).

The return to democracy in 1999 has created the opportunity for economic renewal. To reap the benefits from FDI, the Nigerian Government undertook ambitious measures to improve the investment climate (Ogbuagu, 2012). The policy changes have started bearing fruits and, if sustained, they will certainly provide an environment more conducive to private investment and contribute to enhance the attractiveness to FDI of Nigeria's large and growing market.

3.20 Concluding remarks

The chapter examined the history of the activities of FDI and trends, and the relevant policies to either favour or restrict FDI flows among countries. This brief historical review dated as far back as 1945 to evidence the significant growth of the FDI phenomenon to date. This section culminated in an analysis of the most recent FDI trends following the slump of FDI experienced during the most recent global economic crisis.

We concluded that, for Nigeria, the largest amount of FDI went into the oil and gas sector, which is the extractive sector, followed by the manufacturing sector, while the transport sector, the communication sector and the wholesale and retail sector followed. Currently, the

amount of FDI that has come into the country has improved and slightly increased over recent years.

Various FDI policy options were also critically examined, at both national and international level. It was concluded that national policies can be used effectively only by those few countries with sufficient capabilities to implement and target them consistently and precisely. In terms of international policies regulating FDI, a distinction was made with respect to three categories namely bilateral, regional and multilateral agreements, and all these have contributed to creating a more liberalised FDI environment over the past three decades, also in Nigeria.

Finally, we were able to focus on the Nigerian environment to assess how various FDI policies had evolved over time. Policies that restricted the flows of FDI into the country were considered as well as policies that later promoted inward FDI.

CHAPTER 4: CRITICAL REVIEW OF FDI THEORY

4.1 Chapter overview

This chapter begins by reviewing the definition of foreign direct investment (FDI) and by developing a comprehensive taxonomy. The theories of FDI, alongside models aimed at explaining the FDI phenomenon by examining the motivation of foreign investment by multinational corporations, are then critically reviewed. This chapter ends with a detailed examination of additional factors that may exert a systematic influence on inward FDI flows.

4.2 Definition of FDI

The simplest classification with which it may be useful to start in order to define FDI relates to the way in which it can come about. FDI can emerge in two ways. The first relates to FDI that produces new productive assets and a whole new operation in a foreign country from scratch (greenfield investment). The second is merger and acquisition FDI (brownfield investment) that seeks to ensure the improvement of the efficiency of the foreign acquired unit (most FDI activities fall within the latter classification).

One important characteristic of FDI compared to other forms of capital flows is that, unlike the classical loan and portfolio investment, it denotes a 'long-term interest' on the part of investors. On the issue of the motivations of FDI, multinational companies' long-term interests and investment motives are most frequently explained by Dunning's eclectic paradigm of international production (Dunning, 1976), now commonly referred to in the literature as the Dunning's OLI (Ownership, Location, Internalisation) framework. According to Dunning's OLI theory, multinational corporations will engage in successful FDI if three prerequisite conditions are fulfilled (Babić and Stručka, 2001):

(i) Ownership advantages (O), pertain to possessing competitive advantages involved in the production of goods and services in a host country.

(ii) Location advantages (L) could be said to represent specifics regarding inputs that exist in a host country (natural resources, infrastructure, abundance and low price of labour and other inputs, availability of skilled labour, etc.), as well as various forms of

administrative specifics (taxes, tariffs, quotas, incentives for FDI, etc.) that make the foreign location more advantageous for production purposes than the home location;

(iii) Internalisation advantages (I) denote the improvements of efficiency, as well the reduction of costs, to be accrued by developing and/or acquiring production processes (via the FDI subsidiary) at different stages of the value chain in which the primary activities of the investor (the parent multinational corporation) are positioned, rather than pursuing such activities through national or international markets (e.g., through outsourcing and/or offshoring)(Babić and Stručka, 2001).

According to De Vita and Lawler (2004), a closer look at the concept of FDI, however, reveals that partly due to the complex nature of this phenomenon, its definition has changed considerably over time.

4.3 A matrix of FDI definitions to capture variables

Table 4.1A matrix of core features in FDI definitions and sources

Lasting interest *IMF's Balance of Payments Manual (5th Edition, 1993), p.34*	**Threshold of ownership** *OECD's Benchmark Definition of Foreign Direct Investment (3rd Edition, 1996), pp. 7-8*
Control *Fu (2000, pp. 95-96)*	**Motive** *Jones (1998, p.21)*

Source: Developed by the author (2017), drawing from the original sources cited in the Appendix.

The matrix above captures the different variables that generally define the context of FDI and how the definition of FDI has evolved over time, to include key features of lasting interest, ownership, control and motive. In this table, the sources backing up the variables mentioned are highlighted.

Although the matrix developed in Table 4.1 is by no means exhaustive (see comprehensive information on the taxonomy of FDI definitions in the appendix), it should suffice in highlighting both the key features of the multi - faceted construct of FDI and how over

time, the definition of FDI has gradually moved away from a technical measurement of 'control', towards a more strategic consideration of 'lasting interest'.

One of the earliest definitions of FDI can be traced back to the 1953 inward investment survey conducted by the US Department of Commerce, which aimed at measuring *"all foreign equity interests in those American corporations or enterprises as these happened to be under the control of a person or group of persons, resident in a foreign country"* (US Department of Commerce, 1953, p.10). It is noticeable though that no specific definition of 'control' was provided in this report, even though it can be said that control was the main criterion for the foreign inward investment classification (De Vita and Lawler, 2004). Looking at the subsequent survey of outward investment*, "the United States equity in controlled foreign business enterprises"* (US Department of Commerce, 1953, p.4), control was specifically defined on the basis of various investment categories, though more specific definitions of FDI followed.

As originally noted by Lipsey (1999), the current definition of FDI is still that which was endorsed by the IMF (1993) and the OECD (1996). This new definition has shifted emphasis away from the idea of ''*control"*, toward a "*much vaguer concept*" (Lipsey, 1999, p. 310) of "*lasting interest*". Hence, based on this new definition, which happens to be the benchmark (conceptual) definition adopted for the purpose of the study in this PhD thesis, FDI can be said to reflect the objective of obtaining a lasting interest by a resident entity in one country ('direct investor') in an entity resident in an economy other than that of the investor ('direct investment enterprise'). Here the word 'lasting interest' essentially serves to denote that there exists a relationship that is long lasting between the direct investor and the enterprise and "*a degree of influence that is significant on the management of the enterprise*" (OECD, 1996, pp.7-8). This definition is particularly useful in distinguishing between FDI and foreign portfolio investments (in foreign stock and shares), which are usually made for short- or medium term profit and do not entail any interest in controlling the management of the enterprise over the medium to long term.

The actual extent of ownership in a foreign company that would allow a foreign investor to exercise 'a lasting interest' of course, varies from case to case, depending on how widely dispersed the remaining ownership is. Nevertheless, world-wide databases tend to compute this automatically to classify and categorise FDI data (with the standard threshold, now usually set at 20%) (see OECD, 1996, pp.7-8).

4.4 Difference between stocks and flows of FDI

Having clearly defined FDI in the above section, it is instructive at this point to clarify the distinction between FDI stocks and flows of FDI, since both constructs will be referred to throughout this thesis.

According to OECD International Direct Investment Statistics (2014), FDI flows record the value of cross-border transactions related to direct investment during a given period of time, usually a quarter or a year. Outward flows represent transactions that increase the investment that investors in the reporting economy have in enterprises in a foreign economy, such as through purchases of equity or reinvestment of earnings, less any transactions that decrease the investment that investors in the reporting economy have in enterprises in a foreign economy, such as sales of equity or borrowing by the resident investor from the foreign enterprise. Inward flows represent transactions that increase the investment that foreign investors have in enterprises resident in the reporting economy less transactions that decrease the investment of foreign investors in resident enterprises. FDI flows are generally measured in USD and as a share of GDP (OECD, 2014).

On the other hand, according to UNCTAD (2013), for associate and subsidiary enterprises, the stock of FDI is the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise (this is equal to total assets minus total liabilities), plus the net indebtedness of the associate or subsidiary to the parent firm. For branches, it is the value of fixed assets and the value of current assets and investments, excluding amounts due from the parent, less liabilities to third parties.

Inward stock is the value of the capital and reserves in the economy attributable to a parent enterprise resident in a different economy. Outward stock is the value of capital and reserves in another economy attributable to a parent enterprise resident in the economy (UNCTAD, 2013).

4.5 Motivation of FDI

FDI scholars have realised that the FDI decisions of firms depend on different motives, and they have therefore identified several motives for FDI. For example, Eiteman *et al*.(2001) identified five motives of FDI, as follow: market seeking, raw materials seeking, production efficiency seeking, knowledge seeking and political safety seeking. Nachum and Zaheer (2002) classified motivations for FDI into market seeking, resource seeking, export seeking, efficiency seeking, knowledge seeking, and competitive strategic motivation. Drawing on Dunning's classification of FDI motivations, Franco *et al*. (2008) distinguished between three motives of FDI; market seeking FDI, resource seeking FDI and non-marketable asset seeking FDI. However, Dunning (1993) categorised four motives of FDI: resource seeking, market seeking, efficiency seeking and strategic asset seeking.

4.5.1 Resource seeking FDI

The first motive for FDI is resource or asset seeking. The reason for this type of FDI is the unavailability of resources (e. g. raw materials or low cost labour), or high costs in the home country. The underlying motives for this type of FDI are to increase the firm's profit and to elevate its competitive level in the market served or in the market it wants to serve (Dunning,1993). This kind of FDI is attracted to countries with rich natural resources (Campos and Kinoshita, 2003). Sometimes the purpose of this type of FDI is to take advantage of resources in a specific area, and, FDI in this case is location-based. For example, in the oil and tourism industries, the motive may also be-to serve a third country market, and the home country, but not the host country (Tekin-Koru, 2007). The main determinants of this resource seeking FDI are: physical infrastructure, openness, unskilled labour, coastal location and the level of agricultural activity.

4.5.2 Market seeking FDI

Market-seeking motives lead companies to expand a firm's production facilities in a foreign market. There are many reasons for market seeking motives to affect investor behaviour. The market-seeking motive is influenced by factors such as structure, size and the growth of domestic and foreign markets. For example, if a domestic market is stagnated or has a limited absorption

capacity, firms may look for opportunities to invest and reach consumers in foreign high growth markets (Nachum and Zaheer, 2002). Equally, companies may seek market access to new markets and use them as a platform for expansion into neighbouring markets, perhaps to circumvent tariffs (tariff-jumping FDI). In addition to factors like transport cost, tariffs, economies of scale, and host government policy towards imports, the potential investor will consider the political and economic stability in the host country in comparison with its neighbouring countries (Streak and Dinkelman, 2000).

For market seeking FDI, the size and growth of a market are the most important factors that influence a company's choice of a market. New markets give opportunity for the firm to compete, grow and gain economies of scope and scale (UNCTAD, 1998). Conventionally, to protect the local market for manufacturing products from international rivalry, high tariffs or quotas are imposed.

However, Franco *et al*. (2008) explained that when a firm sees opportunities in a foreign market and decides to exploit them, it generally means that the firm has identified either market segments that have been previously left intact by other players in the market, or that the growth rate is so high that it can absorb more new entrants due to greater or in some cases fragmented demand. Their study argues that the factors that determine choice of location depend on the purpose of this investment. If the firm is motivated by exploiting the host country's market, then factors such as market size, and the availability and intensity of comparative and absolute advantages, are the most important factors determining the choice of location. On the other hand, if the firm is motivated by using the host country market as an export platform, then the MNE will compare the features of the targeted market and neighbouring countries in order to make an FDI decision (Franco *et al*, 2008).

4.5.3 Efficiency seeking FDI

The reason for efficiency seeking is the desire to rationalise the structure of production units that already exist in the home country. It is profitable to the firm to have different geographical locations in terms of the scale and scope of its economic activities; i. e., a firm may try to benefits from dissimilarity in expenses of factor endowments and their accessibility in different countries (Nachum and Zaheer, 2002). MNEs try to reduce the cost of their labour through investing in developing countries, for example China, Mexico and Morocco. Several countries

encourage FDI by setting up fiscal and physical incentives like tax holidays, import quotas and simple repatriation of profits. In this case, the costs of production and transport are more important than the size of the market (Akhtar, 1998; Campos and Kinoshita, 2003).

An efficiency-seeking firm is motivated by benefits from advantages such as institutional arrangements, cultures, policy, market structure, and economic system. Firms focus their activities in a small number of locations and then supply their production to several markets. Good developed and open alien markets will encourage this type of investment to be undertaken. Thus, locations distinguished by regionally integrated markets attract this type of FDI (Nachum and Zaheer, 2002).

According to Dunning (1993) there are two kinds of efficiency-seeking FDI. Firstly, that which is undertaken in countries that have similarity in levels of income and economic structure. This type aims to obtain a benefit from dissimilarity in customer tastes, scale and scope of economic activities, and capabilities of suppliers. The important determinants of this type are factors such as the nature of customer demand, the features of the local competition, and the macro and micro economic policies of governments (Dunning, 1993).

The second type of efficiency seeking FDI is aimed to benefit from different availability and price of factor endowments, and their costs in different locations. That is why firms resort to dividing the process of production. If it needs, for example, capital or technology, it will focus its production in a developed country. However, if a firm is motivated by low cost of labour, it will choose a developing country as a location for its production (Dunning, 1993). The cost of labour is a significant determinant of this type of FDI if the goods are labour intensive. However, in the case of capital intensive production, the productivity of labour is a less significant determinant of FDI.

4.5.4 Strategic asset-seeking FDI

In this kind of investment, a firm is motivated by gaining assets in order to help its long term objective in terms of rivalry in the international market. The firm is motivated to obtain new assets in the foreign market that will be added to existing ones, and to develop new advantages rather than only exploit their specific advantages. In this situation FDI is motivated by the need to acquire strategic assets in a host country (Makino *et al*., 2002). Dunning (1993) claims that firm specific advantages derive from both the firm's own proprietary assets and the ability of the

firm to own or coordinate complementary assets in the host country. Hence the firm invests in a specific location, which can supply their required strategic assets (Makino *et al*., 2002). The clarifying issues such as marketing advantages or special cost are not very important in relation to this motive. The new assets, which a firm tries to get, may make their rivals' advantages weaker or make the firm's advantages stronger than rivals in terms of competitive position. There are different causes for this strategy, such as two companies merging to become stronger than others in a market, the aim of the new firm widening its variety of services or goods to its clients. Engaging in this kind of FDI is not necessarily to exploit competitive advantages or ownership advantages in a host country, but rather the reason is often to gain advantages, which help the firm to develop and promote its position in the global market (Cross and Voss, 2008). Or to prevent other firms to gain advantages, as a defensive strategy.

To sum up, if a firm is from a developed country, it will aim to engage in FDI to exploit ownership advantages. However, if the firm is from a developing country, then the aim is to obtain these advantages (Cross and Voss, 2008). When the market for a product is imperfect, the strategic assets which firms attempt to gain are from common ownership of different economic activities or from similar activities in a different economic climate. Sometimes the main focus of strategic asset seeking motives is related to managerial of financial assets that are measured in different currencies (Dunning, 1993).

4.5.5 Non marketable asset seeking

According to Franco *et al*. (2008), the last motive for a firm to engage in FDI is the acquisition of assets which are not directly transferable through market transactions. Such assets are characterised by the possibility of being exploited only inside the country or in the 'local' context where they are created. Indeed, when this characteristic is taken to the extreme, if the firm is willing to access the asset, it is forced to invest in the host country through FDI. We call it non-marketable asset seeking FDI (henceforth NMAS) (Franco *et al*., 2008).

To start with, these non transferable assets can be externalities from agglomeration economies. In this case, the fact of being close to other firms may play its role in the FDI localisation. In particular, besides the possibility of better linkages with suppliers and customers and the presence of a valuable market of specialised labour, technological spillover effects spur firms to locate close to local firms' clusters (Franco *et al*., 2008).

Second, non transferable assets can be related to learning aspects and, in particular, to the access to the organisational capabilities of the firm. These can be considered a 'sticky' resource embedded in particular expertise and organising principles. They are generated inside the firm and, because of their high degree of tackiness, they can be hardly communicated and transferred via market transactions (e.g. Zander and Kogut, 1995). Likewise, the presence of valuable technological knowledge built upon some local specific competencies, that are not reproducible in a different setting, can actually represent something that would be lost if transferred across borders. For these reasons, the complexity of the technology embedded in the local context needs close contact with the owners of the technological base in order to start a process of accumulation (Franco *et al*., 2008).

Finally, as for the localisation determinants, firms will choose the location according to variables mainly related to the local infrastructure. We are not referring only to basic infrastructure (such as a reliable transport system), but also to scientific and high technological infrastructure (like high-quality telecommunication). In particular, the linkages between the scientific infrastructure and the markets are of crucial importance. Other crucial factors are the closeness to the technological frontier of the host country and the technological gap between the home and the host country (Franco *et al*., 2008).

Indeed, firms engaging in NMAS FDI will choose the country in order to access technological assets not available elsewhere. Moreover, as stressed in the literature on absorptive capacity (Cohen and Levinthal, 1989), a great technological gap between countries can impinge on firms' possibility to absorb this technological knowledge (for a recent empirical application, see Girma, 2005). Therefore, in this perspective firms are likely to invest in countries/sectors whose technological knowledge is not too far from their own knowledge (Franco *et al*., 2008).

4.6 Theories of FDI

There are many theoretical studies that examine FDI, and a large body of work on the motivations underlying FDI by multinational corporations. Economists believe that FDI is an important element of economic development in all countries, especially in the developing countries. This explains the continued interest in developing an all-encompassing theory of FDI.

At the most general level, the conclusion reached in previous literature on the relationship between FDI and economic development is that the effects of FDI are complex. From a macro

perspective, FDI is often regarded as a generator of employment, high productivity, competiveness, and technology know-how spillovers. Especially for the least developed countries, FDI means higher exports, access to international markets and international currencies, being an important source of financing, substituting bank loans. Despite the fact that many researchers have tried to explain the phenomena related to the impacts of FDI, we cannot say there is a general theory accepted. Nevertheless, according to Kindleberger (1969), everyone agrees on one point, in a world characterised by perfect competition, FDI would no longer exist. Given the scope of this thesis, here interest centres upon theories that aim to explain the existence and direction of FDI rather than its impact.

The first attempt to explain FDI could be traced back to Ricardo's theory of comparative advantage. However, FDI cannot be explained by this theory, which is based on two countries, two products and a perfect mobility of factors at local level. Such model could not even allow for FDI, as it is essentially a theory of trade advantages. Thus, to explain the rising share of FDI, other models were used, such as portfolio theory. This attempt too failed, because the theory explains the achievement of foreign investments in a portfolio, but could not explain 'direct' investments, entailing a 'lasting interest'. According to this theory, as long as there is no risk or barriers to capital movement, capital will go from countries with low interest rates to countries with high interest rates. But this assertion has no basis in reality, and the introduction of risk and barriers to capital movement erodes the validity of the theory at the outset, as nowadays capital can move freely in any direction (Hosseini, 2005).

Although more realistic, the 'new theories of international trade' still cannot capture the entire complexity of FDI and other forms of international production. For example, they cannot explain foreign direct and other forms of international investments (Hosseini, 2005). In the late 1950s, Robert Mundell had already tried to explain FDI through a model of international trade, involving two countries, two goods, two production factors and two identical production functions in both countries, where production of a good required a higher proportion of a factor than the other (see Mundell, 1957). In the early 1980s, Japanese researchers Kojima and Ozawa (1984), tried to create a model to explain both international trade and FDI. They started from the model developed by Mundell and tried to develop it further. Thus, in the model developed by the two Japanese researchers, FDI takes place if a country has comparative disadvantage in producing a product, while international trade is based on comparative advantage (Kojima and

Ozawa, 1984). Y*et al*so Mundell's model, alongside the extensions developed from it, cannot explain international production through FDI, especially when it is recognised that the foreign investments accounted for by the model were either portfolio investments, or investments limited to the short term.

As can be gauged from the above, it is necessary to look in more depth into the many theories and hypotheses postulated in the last 50 years in order to establish the extent to which theory can provide a cogent and all-encompassing explanation of FDI, and the extent to which such a knowledge can guide the development of a model to be subjected to empirical testing for the purposes of establishing the main determinants of Nigerian inward FDI, which is the aim of this PhD study.

4.6.1 The hypothesis of differential rates of return

According to Cushman (1985), this hypothesis considers FDI as a function of differential rates of return. It assumes that other factors are constant such as risk for example. This hypothesis assumes that capital flows from countries that have a low rate of return, to countries which have a high rate of return. This continues until the differential in the rates disappears. According to this hypothesis both local investment and FDI can be substitutes for each other.

At the conceptual level, this hypothesis evidences weaknesses. One is that some countries are both receivers and providers of FDI at the same time, and the hypothesis does not contemplate this scenario, it only concentrates on one direction of the flow of capital. The second weakness is that there are differences between expected profit, actual profit and reported profit. The testing of this hypothesis depends on reported profit, which does not reflect reality and does not allow for the calculation of the extent to which there is a difference between reported profit and actual profit (Bhagwati, 1967). There are many factors, such as inflation accounting, and inventory accounting which impact on the accounting profit as a measure of the rate of return. The third and perhaps most important weakness is that this hypothesis does not really explain why some firms prefer FDI rather than portfolio investment.

4.6.2 Portfolio diversification theory

It can be further assumed that risk is not neutral, therefore, the differential rate of return hypothesis cannot suffice in explaining FDI. Portfolio diversification theory attempts to deal

with this weakness to explain FDI. According to this theory, FDI depends on the expected rate of return as well as risk. Specifically, the theory assumes portfolio diversification as a means to decrease risk. The testing of this theory is usually undertaken by testing the relationship between the share of inward FDI to some countries and both the return rate and risk. The results show weak support for this theory (Agarwal, 1980). The following are some of the problems which this theory faces. First, return and risk are calculated from reported profit, which does not reflect actual profit. Second, if historical data is taken as a variance risk, this does not measure the risk accurately. Thirdly, the theory is concerned with a balance between estimated return and risk, and actual return and risk. In this case, the researcher can at best rely on a scenario relying on logical assumptions about the expected values of return and risk, including a margin for error (Moosa, 2002).

On the other hand, this theory has some advantages over the previous attempts. The most significant advantage is that it attempts to be a universal theory (as a theory should be). A second advantage is that it introduces an acceptable explanation for investment between industries and countries (Agarwal, 1980). A third advantage is that it takes into account risk, which is widely considered to be an important factor in determining FDI decisions. However, neither the differential rates of return hypothesis nor portfolio diversification theory can be said to provide a satisfactory explanation of the role of multinational corporations (MNCs, also labelled as TNCs or MNEs in this thesis) as contributors to FDI and why firms choose FDI instead of portfolio investment (Moosa, 2002).

4.6.3 Industrial organisation theory

Hymer (1960, published in 1976) is the first economist who showed that both capital theory and portfolio investment were not capable of explaining FDI. He was the first who highlighted the link between FDI and market imperfections. In addition, his theory was the first dealing with international production focusing on MNEs themselves. Moreover, he was the first to explain FDI from an industrial organisation perspective. In this context, Hymer referred to the difference between portfolio investment and FDI. If the investor can control his investment then it means that he should choose FDI, if not, then portfolio investment should be preferred. Portfolio theory assumed that overseas activities are undertaken due to higher interest rates, implying risk is neutral. However, Hymer denotes that interest rate differentials are not the reason for FDI to be

undertaken, but rather the reason is to protect the investment as the firm wants to utilise the advantage it has in exploiting an alien market (Rayom and Baker, 1995).

A firm faces many disadvantages when setting up a subsidiary in a foreign country, in view of competition from domestic firms, for example, a lack of knowledge of local market conditions, the cost of communications, the institutional framework, business and social customs, differences in language, culture and so on. However, it should possess sufficient advantages to overcome these disadvantages. For instance, brand name, production differentiation, cheaper sources of finance, managerial skills, production technology, patents, and economies of scale and so on. In other words, a firm must possess advantages that allow them to earn additional revenues in other countries than just at home, and effectively gain a 'competitive advantage' over (foreign) domestic companies in the host country. Thus, these advantages have to be firm specific and transferable to subsidiaries.

Hymer said that, through the market, firms connect among themselves, although they are in different countries. According to Hymer's opinion, it is profitable if there is one firm taking the control and other firms working under this firm. For this to happen there must be barriers to new entrance and there must be competition between firms in the market. Underlying such context, Hymer emphasises the advantages of individual firms. Several scholars, such as Kindleberger (1969), Buckley and Casson (1976), Dunning (1976) and Caves (1982), have used Hymer's theory as a theoretical basis for further development.

Kindleberger (1969) assessed three key areas regarding the transfer of advantages internationally. Firstly, there is an advantage in external and internal economies of scale, including those occurring from vertical integration. Secondly, assuming perfect competition in the market, there is an advantage that comprises special access to capital and management, in the company and patented knowledge. Lastly, there is an advantage to government intervention, especially regarding output or entry restrictions. These advantages allow the multinational company to solve problems such as lack of knowledge about local firms and the host country. Moreover, Kindleberger (1969) suggested that the expenses of FDI are due to three factors. Firstly, the government of the host country. Secondly, the cost of communication and the acquisition of information regarding, for example, political and economic conditions, and the cultural integration process in the host country where the firm intends to operate. Finally, exchange rate risks between countries adopting different currencies.

Dunning and Rugman (1985) argued that Hymer's theory ignored transaction costs, which are important in assessing the effect of government policies on FDI. Rugman (1986) claimed that Hymer did not explain information costs or asymmetries (themselves part of transaction costs) or account for the governance costs of contracting. The focus of Hymer was on the ability of MNCs to utilise monopolistic power such as entry barriers to prevent new entrants to a market. Hymer and Kindleberger illustrated that for a firm, FDI is favoured over licensing and exporting as a tool to exploit their advantages. This preference derives from the fact that exporting means incurring costs such as transport or tariff barriers (Buckley, 1985). Licensing, on the other hand, means bearing the costs of imperfections in the market in terms of knowledge and the dangers of these advantages being copied or replicated by local competitors. However, Hymer and Kindleberger did not address the issue of globalisation, which was addressed later by Kindleberger (1973) and Dunning (1976).

4.6.4 Knickerbocker's theory of horizontal FDI

Vernon (1966) and Caves (1971) pay attention to the reaction of the firm against the behaviour of its oligopolistic rivals. However, Knickerbocker (1973) explored this phenomenon in greater detail to provide an explanation for horizontal FDI. According to Knickerbocker (1973), if one firm invests overseas, then ‘follow the leader’ is the preferred strategy by other firms. Knickerbocker (1973) argued that there are two types of investment, aggressive investment and defensive investment. Aggressive investment consists of setting up the first subsidiary in a particular industry and in a particular country. Defensive investment is about setting up subsequent subsidiaries to complete with the first entrant. In an oligopolistic structure the behaviour of a firm leads to a pattern of action and reaction, and the conduct and subsequent performance of a firm is the result of aggressive policies by its competitors and how the firm in question responds to them.

The determinants of aggressive investment are opportunities to acquire new technology, sources of raw materials and to dominate a market. The advantages that the aggressor might achieve in the long-term present disadvantages to its competitors, who will take defensive policies (for example mimicking FDI behaviours) as a reaction to minimise competitive risks in that or other markets. Agarwal (1980) argues that the problem with this theory is that it does not explain why a firm engages in overseas activities in the first place or why it takes the form of

FDI instead of exporting or licensing. Buckley and Casson (1976) criticised Knickerbocker's theory on the basis of the following aspects. First, the aims of the companies are not known, whether they are managerial risk aversion, profit or growth maximisation or maintenance of market share. Second, why the 'follow the leader' strategy is the best strategy under an oligopoly is not clear, as many game theoretic outcomes are plausible under such market structure (including collusive behaviour). Finally, this theory does not explain the motives of the first-mover.

4.6.5 Caves' theory

Caves' (1971) contribution to FDI theory was to claim that FDI takes place in only some institutional forms and in not many industries; only in industries in which market structures are oligopolistic in developed countries. Caves concurs with Hymer and Kindleberger with respect to the industry features of investment and the structure of markets. Caves' argument is that, when a company is contemplating FDI the targeted foreign market is tested through exporting, and after this the firm starts to produce locally through its local subsidiary in order to reduce costs or to encourage the domestic market to adopt a particular product, thereby increasing its sales. Caves (1971) argues that due to the fact that there are many types of FDI, further study is required. For this reason he developed an approach explaining that in new geographical areas a company could expand horizontally or vertically, or opt for a conglomerate type of investment. However, according to Caves, the latter type of investment does not often happen. In this respect this theory is inevitably somewhat anachronistic since albeit developed 1971, it did not foresee the boom of conglomerate and diversified foreign investment that the global corporate landscape witnessed in the 1980s.

According to Caves (1971), horizontal investment means that a firm will produce in the host country, the same stage of production as in its home market. The motive for horizontal FDI is that a firm possesses assets not available to its rivals. Caves referred to these assets as product differentiation assets, which comprise privileged access to production inputs and/or innovative and financial skills. However, vertical integration is undertaken by MNEs to produce inputs, which are used in the production process in their home country. Thus the motivations of vertical FDI are to avoid oligopolistic uncertainty in price and supply, and to prevent new competitors from entering a market. Caves (1971) further suggested that for horizontal FDI, product

differentiation is a crucial element of market structure, due to the ability of a firm to transfer and control knowledge about serving a market at little or no expense. Moreover, according to the extent of success in differentiation, product differentiation leads to a dissimilar rate of return. This happens irrespective of the form of differentiation, for example, it could be through brand names, patents or advertising. The success of a marketing campaign in one market may result in the same success for other markets due to spill over of the information between markets, in addition to the acquisition of knowledge of a specific market. Hence, according to Caves, because of these assets horizontal FDI occurs mostly in research intensive industries.

Caves (1971) claims that vertical backward integration FDI occurs when there is a small number of sellers and buyers of raw materials which causes uncertainty in the long run in terms of prices and supplies. However, if the supply of raw materials is controlled by a producer, a new rival entrant in the industry is a danger. Vertical integration can eliminate uncertainty through building barriers to entry. The general result of Caves' assumption is that FDI does not occur in all industries but in specific ones, and in general the rate of return on equity capital is equal between industries in all countries, but not between industries within the same country (see also Eren, 1994; Rayome and Baker, 1995; Barclay, 2000; Hoenen and Hansen, 2009).

Caves (1971) empirically tested the main inter-industry discrepancy in MNCs. The population of his study was manufacturing industries in the UK and Canada. He proposed three hypotheses regarding intangible assets, and suggested that if the MNC was a kind of multi-plant firm then FDI would take place, and completely employ the entrepreneurial resources of the firm through FDI. Caves' (1971) findings showed that the first hypothesis was supported, while the second was partly supported, namely the multiplant firm was not found to be significant for UK firms but it was for Canadian firms. To Caves, that is why FDI did not take place in many industries with restrictions on entry.

Caves (1982) modified his approach on the subject of the determinants of FDI. For him to clarify vertical FDI, the key characteristics (such as barriers to entry, concentration of sellers and oligopolistic structures in terms of transactional clarification) became less important. This means that vertical FDI does not depend on natural resources. Another modification that Caves carried out to his original framework, was that a firm could combine two types in production and sell finished goods to the domestic market. Furthermore, MNCs might operate in different sectors than that in their home market, for the purpose of diversification, in order to minimise risk.

Despite its attractiveness, Caves' models have drawbacks. For example, Agarwal (1980) argues that Caves undervalues the significance of FDI in product diversification that is carried out by investors to satisfy the requirements of risk diversification and extension. Another drawback is stated by Rugman and Verbeke (1998) who whilst recognising that in analysing the conflict in aims between government and MNCs in source and host countries Caves' theory is helpful, noted that more analysis is needed to explain the hypothesised relationship between governments and MNCs.

4.6.6 Vernon's theory

This theory is different from other theories because it deals specifically with direct investment and trade as variants to serve a foreign market. Moreover, it clarifies this connection in a dynamic context (Argawal, 1980). Vernon (1966) tries to explain the existence of trade and international production by applying the product life cycle idea. He explains that because of the changes in a product over the product life cycle, the features of the goods change and, as a result of this, the best location of production also changes with time. The vital contribution of Vernon lies in the fact that he applied the product life-cycle idea to location determinants of FDI (Dicken, 1992). Vernon's theory introduced a helpful framework for explaining the early post-World War II increases in US manufacturing investment in other developed countries (Eren, 1994). The essential notion of Vernon's theory is the need for innovation derived from the high level of income and demand in the US (Argawal, 1980). Vernon (1971) remarks that this theory is valuable because it gives another explanation of FDI, especially for manufactured goods that feature sophisticated technology and are sold in areas of high income elasticity of demand. The cycle of production consists of three stages. In the first stage, firms set up the initial production in their home market, near their local customers, because of the requirement for well-organised co-ordination between R&D and production components. In this stage, the firm can control the price due to the demand of the new good being inelastic in terms of price. As time goes by, the product develops, based on customers' views (Mossa, 2002). The focus of this stage is on the determinants of the initial location of production (Eren, 1994). Vernon stated that there is no FDI in the first stage, when the product is new and created and served the home market due to, for example, product differentiation, or the monopoly of a firm's innovation (Akhtar, 1998).

In the second stage, the emphasis is put on the way in which foreign markets are served, and the balance between domestic production and export (Eren, 1994). This stage is noticeable by the maturity and greater standardisation of the product. Steadily in this stage the demand increases and becomes more elastic, and production becomes less expensive as a consequence of economies of scale. At this stage, a decision to export is taken in order to serve a foreign market, and as time passes there is greater awareness of production and a rise in international trade. All this leads a company to set up production in the foreign market instead of exporting to it. During this stage foreign countries (including developing countries) are importers of the goods and the home (developed) country of the firm which introduced the product innovation is an exporter (Akhtar, 1998; Barclay, 2000; Moosa, 2002).

The third stage features the complete standardisation of the product, and it is no longer the special possession of the innovating company from the developed country. Cost advantages become an important concern, so, developing countries are the best location to invest in production facilities. Now the home country becomes the importer and the host countries are exporters of the production (Moosa, 2002). Hence, FDI is a defensive shift to keep the company competitive against its foreign rivals, and also to reduce product costs by expanding production in foreign developing countries where factors of production are cheaper. Moreover, in this stage unskilled labour is an alternative to skilled labour. In this stage, companies seek a comparative advantage at home and in host countries (Eren, 1994). According to the product life cycle, the ownership of specific advantages is the most important determinant of FDI. Through FDI, technology moves from developed to developing countries (Akhtar, 1998).

Vernon's himself explained his theory noting that for many products production started at first in the US, a developed country, and finally moved to developing countries, and during these stages there was a change in supply and demand for the technology in question, and also in terms of costs of production. This leads MNCs to choose the location of FDI carefully (Barclay, 2000). Vernon (1966, 1971) modified his theory by concentrating on the oligopolistic behaviour of firms. He linked the stages of his theory to innovation-based oligopoly, mature oligopoly and senescent oligopoly. Moreover, he took into consideration other cost factors such as land and materials, and concluded that FDI is not restricted to US companies but to other companies from other developed countries as well.

Although Vernon broadens his view to take into account other factor costs like land and material, his theory focuses on high-level income countries and this assumption is an over simplification of the process of a firm's decision making (Buckley and Casson, 1976). Another limitation of this theory is that it only explains FDI in innovative products (Argawal, 1980).

4.6.7 Transaction cost theory

Coase (1937) was the first economist to distinguish between external (market) and internal transactions, arguing that there is a gap in economic theory that needs to be bridged by replacing market transactions with internal transactions. According to Coase, this replacement shows that both costs are equal. In doing so, a firm will save some marketing costs. This theory was extended by Williamson (1975), who explained that market failure leads to the advantages of internalisation (hierarchy via acquisitions) as an alternative to market transactions (e.g., outsourcing and offshoring). To analyse the growth of companies, and the assessment of the internal structure of modern firms, ownership and control, Williamson utilises the logic of economising on transaction costs. With regard to economising on transaction costs, Williamson (1975) explained the whole of business history combined by internal and external effects. He also differentiated between the three most important transaction costs; information costs, bargaining costs and enforcement costs. These costs were not included in the classical view of international trade or international production under the assumptions of bounded rationality and opportunism.

Moreover, he believes that transaction costs are affected by three factors. The first is uncertainty. The second is the frequency of transactions. The last factor is asset specificity, which reflects the fixed costs of an asset with high sunk costs. The lower the degree of asset specificity, the more likely for firms to go through the market rather than conduct operations via a hierarchy, given the lower transaction and monitoring costs that asset specific investments entail. According to Williamson (1983) all these factors must hold in order to meet the required conditions for hierarchical organisations to change market contracting. If all three factors do not hold at the same time, then hierarchies (via internalisation) will not take place. Williamson (1983) reveals that a company needs to protect its technology against expropriation by others. In doing so it resorts to internalising the market to have power over the supply and distribution of

its knowledge advantage. In such circumstances, therefore, a hierarchy is favoured over external market transactions.

However, governments may, in general, for reason such as competition, favour an external market. Rugman (1986) argued that the three transaction costs of Williamson could be circumvented within the construction of a multinational enterprise. For example, the transaction cost of opportunism proposes that managers of companies and individuals will act in their self-interest. This is a problem of unfinished contracting wherein parties concerned are utilising self seeking strategic conduct. In business this behaviour is widespread and MNCs utilise it, in addition to the use of relevant entry and exit barriers to international competitive markets. Bounded rationality supposes that there are expenses in the absorption and acquisition of information. This problem can be solved by agents through safe, relevant information and by systems of information processing that determine the significance of the information obtained. Asset specificity is considered as an entry and exit barrier for MNCs, which often have a propensity to be capital intensive, with great commitment of capital in their stock of human resources and managerial expertise, and also in their plant and equipment.

However internalisation offers the chance of re-contracting in the long term. Calvet (1981) explained that Williamson's approach was accepted by followers of the international business literature, in particular Buckley and Casson, and by his student Teece, who in 1985 applied transaction cost theory to US domestic institutions. He explained that the governance costs of licensing are raised by several kinds of contracting costs comprising asymmetries in information and other contingencies, asset specificity, and opportunism. In these circumstances, a MNC will replace internal market transaction for licensing agreements or for exporting. Rugman (1986) criticised Teece's article by arguing that he overstated the differences between Coase and Willamson's transaction cost theory and Buckley and Casson's internalisation theory.

4.6.8 Buckley and Casson's internalisation hypothesis

The theory of transaction cost economics which, as discussed above, hinges on the internalisation hypothesis was initiated by Coase (1937). This theory was developed by Williamson (1975,1981). After this, internalisation theory was developed further by scholars like Buckley and Casson (1976), and Rugman (1980, 1981). Internalisation theory provides an explanation for why a firm utilises FDI instead of other forms of foreign market entry, such as

exporting and licensing. Moreover, it removes uncertainty. Also, it explains FDI through the firm's attempt to substitute market transactions with internal transactions. Internalisation occurs when market failure is present, especially in terms of intermediate products that require, for instance knowledge, and management expertise. The benefits of internalisation stem from the avoidance of imperfections in external markets, and of course, as a way of minimising transaction costs, which is what ultimately determines the boundary of the firm according to transaction cost theory.

This theory deals with markets and firms as a substitute method of systematised production, and that is the key characteristic of internalisation theory. According to the theory, it is the best for the firm to replace a market transaction with an internal one if the following circumstances happen: if the contractual obligations expand in time; if there is opportunistic behaviour in the market; if there is no clear idea about the services or goods traded; if internalised transactions are preferred by the firm. In all of these cases, FDI takes place because of market internalisation across national borders. This process will stop when the benefits from and costs of internalisation are equal.

Many FDI hypotheses can be viewed as subsets of internalisation theory, or at least can be said to connect to it. Buckley (1988) tried to examine this theory empirically, but he found that it was difficult to test it directly. Petrochilos (1989) suggests that there is no evidence that the motivation of the firm to undertake FDI is to avoid the inefficiency of the external market, although firms do often manage to avoid market imperfections by FDI. Instead of this, according to Duninng (1976), the motivation is to protect the innovation which they have created. Buckley and Casson (1976) were the first researchers to combine Coase's transaction cost economics explanation and a theory of the multinational corporation. The basic idea for their approach was that the markets for main intermediate goods such as knowledge, management expertise, and human capital are imperfect. Hence connecting different activities through these markets entail considerable time lags and transaction costs. Thus, firms have an incentive to replace these external markets by their ownership and control for these products. Buckley and Casson's idea is in line with the ideas of Hymer, Vernon, and Kindleberger.

There are at least five circumstances of market imperfection from which the advantages of internalisation can stem. Firstly, when the efficient utilisation of a market for intermediate goods requires discriminatory pricing that is not easy or impossible to apply internally. Second,

when time lags between rivalry and initiation of the production process are long, and at the same time future markets are unsatisfactory or do not exist. Third, when there is asymmetric information between buyers and sellers about value, quality and the nature of the product. Fourth, when government intervention causes imperfections in international markets, such as tariffs, and restrictions on capital movements (these kinds of imperfections are clearly present in the Nigerian case). Fifth, when bilateral concentrations of market power appear as a result of imperfections, and hence there is instability of external markets. However, the extent of the benefits of internalisation will depend on its costs.

Internalisation is likely to be particularly advantageous in sectors such as agriculture and manufacturing. The incentive to internalise depends on the interaction between four groups of factors. These are, first, firm-specific factors such as the quality of managers (skills, education, and experience). Second, industry-specific factors such as the nature of goods, the relation between the best scales of the activities connected by the market, and the structure of external markets. Third, nation-specific factors that relate to fiscal and political relationships between the nations concerned. Last, region-specific factors, such as the social, cultural and geographic distance between countries. According to this framework, common ownership of standardised production phases comes from the internalisation of transactions in knowledge, which is horizontal integration, while the internalisation of transactions in intermediate products between closest production stages represents vertical integration (Clegg, 1987). Both horizontal and vertical integration across countries will be generated by MNCs (Buckley and Casson, 1976).

Internalisation theory explains that it is not due to ownership advantages that firms engage in FDI, but the advantages can be beneficially exploited through internalisation. If there is no benefit, a company might engage in exporting or licensing (Chen, 1983). Safarian (2009) stated that Buckley and Casson's study was the first extensive work on internalisation that focused its application specifically to MNCs and their FDI decisions. Yeung (2003) stated that Buckley and Casson's approach highlighted the issue regarding the process of internalisation and building or acquisition of capabilities. They focus on issues such as the expenses of utilising a company as an internal market for knowledge-based capabilities, leading to an examination of company issues, for example, collaboration and coordination of affiliated units.

In spite of its importance, this theory has many weaknesses. For example, Agarwal (1980) argued that this theory could not be relevant in the short term, in particular to small

companies who undertake FDI in one or two foreign markets. Petrochilos (1989) claims that although it is obvious that a firm engages in FDI to bypass the market for intermediate goods through FDI, it is not sure that the firm internalises its market motivated by insufficiency of external markets in terms of longer time lags and transaction costs. Lim (2001) suggests that as a theory, FDI is too general and thus is not easy to directly test. Parry (1985) claims that internalisation is not a comprehensive theory of MNCs. In some cases licensing is favoured over FDI because of joint venture activities and MNCs need not have effective control of organisational structures, which internalisation does not take into consideration. Rugman (1986) remarks that Parry was not correct in his explanations, due to the fact that the choice between FDI, exporting and licensing is determined by the expenses and benefits derived from these activities. Rugman claims that joint ventures are entirely in line with internalisation theory, and that MNCs, to build an effective internalisation operation, erect internal governance structures.

Rugman (1986) further points out that internalisation theory could be synthesised with an eclectic theory through a combination of Dunning first two components of his 'eclectic paradigm of international production', ownership advantages and location advantages. Buckley and Casson (1976) neglect the analysis of labour, the impact of extending a firm on labour, and the relationship between capital and labour (Lim, 2001). Finally, it appears to the author that internalisation theory too hinges on a number of rather strict assumptions, such as rationality and profit maximisation.

4.6.9Aliber's theory

Aliber (1970,1971) suggests that a strong currency is a determinant for a firm's decision-to invest abroad. As a result, countries that have strong currencies will become sources of FDI, whereas countries that have weak currencies will become hosts of FDI. Aliber based his view on foreign exchange risk, the preference of a market for holding assets denominated in strong currencies, and capital market relationships. He also claimed that a local firm cannot compete with foreign firms in borrowing at lower rates in the host country, whereas foreign firms can, due to their reputation and strong currency. This bias in capital markets is the main hypothesis, which comes from the fact that income streams (for example, large flows of the so called 'hot money') tend to flow towards weak currencies. Thus, a firm from a country with a strong currency might avoid foreign exchange risk more efficiently.

To explain FDI, Aliber (1971) argues that it provides the possibility for a source country to possess some advantage in the capital market, so it can pay a higher price for the assets compared with companies in the host country. In 1983, Aliber modified his theory of FDI. He clarified that the main distinguishing feature of a multinational enterprise was not that it indulged in FDI, but rather that it used its currency advantages to finance part of its operations. Thus the MNC is viewed as a tool to finance foreign capital (Rayome and Baker, 1995). This theory too has some weaknesses. The main one is that it does not take in consideration FDI between countries which have the same currency.

Moreover, Aliber's currency hypothesis cannot be seen as a substitute for industrial organisation theory to explain FDI. It is clear from the above theories that FDI needs to be explained from at least three perspectives. First, from a "why" question perspective, namely, why does a firm decide to invest abroad? Scholars such as Hymer, Kindleberger, and Caves attempted to clarify the motives of firms for FDI. As far as capabilities are concerned in Hymer, Knickerbocker and Cave's theories, Hood and Young (1979) argued that while the monopolistic advantages theory explained FDI in developed countries, it cannot completely explain FDI in a developing country. Hood and Young (1979) raised questions about the need of MNEs to possess any advantages before investing in developing countries. It is therefore an open question whether monopolistic advantages theory offers a relevant justification for the motivations of MNCs' involvement in Nigeria.

Also, FDI can be explained from a location perspective. Namely, where does a firm locate its foreign activities? Scholars such as Vernon (1966) have attempted to explain firms' decisions about the location of their international production. Recently, the significance and applicability of Vernon's theory of international trade and production has become redundant, as acknowledged by Vernon himself (1979). He declared that the rising similarities in income level between advanced countries, together with expanded activities of MNEs across the world, have invalidated some of the hypothesises of this theory. However, according to Vernon, this theory is still valid for new MNCs, in which context the theory may still be helpful in clarifying FDI location in less developed countries. Hence, it may have some relevance in explaining FDI flows to Nigeria.

FDI has also been considered from an entry mode perspective. Namely, how (through which form) does a firm enter international markets? Scholars such as Coase (1937),

Williamson. (1975, 1981), Buckley and Casson (1976), and Rugman (1980,1981) have attempted to explain why a firm chooses FDI instead of other forms of foreign entry mode looking at transaction cost economics as well as internalisation theory. The motive for internalisation is to replace market transactions with internal transactions, such as FDI when the acquisition entails foreign investment. As such, it is believed that internalisation theory may explain FDI in some countries but not others. However, the interesting point here is that all three perspectives 'why', 'where' and 'how' share the idea of 'motive'. One perspective tries to explore what the motives are to there to go abroad, other perspectives explore what the motives are for choosing a specific foreign location for international production rather than the home market, and what the motives are for choosing a particular entry mode. However, the three perspectives clearly differ in the focus of the motive assumed in each one. In 1976 Dunning developed his 'eclectic theory' based on his recognition of the impossibility of formulating one single testable theory of FDI. Dunning's eclectic paradigm (OLI framework) seeks to accommodate most of the partial explanations of FDI purported previously, namely, why does a firm decide to go abroad, on what basis the firm locates its foreign activities abroad, and how (through which form) does a firm enter international markets (internalisation). As such, Dunning's theory seeks to provide a set of interrelated factors relevant to the explanation of all perspectives of FDI (i.e., why, where, and how) thus offering a general paradigm.

4.6.10 Dunning's eclectic paradigm of international production

According to Dunning (1976; 1981a; 1988; 1993; 2000) an innovation stems from the combination of two types of market imperfections that are needed for FDI to take place. These are Hymer-type structural market failures and the Coase and Williamson-type transaction cost failures of markets for intermediate products to move goods and services at lower cost compared with hierarchical organisations (Nestorova, 1997). The contribution of Dunning's theory is that it gives a useful framework for identifying the elements from each individual theory previously postulated that are seen as most appropriate in clarifying a broad variety of different kinds of overseas activities and the different climate in which they take place. For example, some theories focus on the motivations of FDI, others analyse the choice of FDI as an internalisation form, and others study the location of the foreign investment.

Dunning developed three basic elements to explain FDI: ownership advantages, location advantages and internalisation advantages (hence the OLI acronym). Dunning argues that these elements answer questions related to the why, where and how of FDI (Galan and Gonzalez-Benito, 2001). Ownership advantages are based on the earlier ideas of Hymer (1960) and Caves (1971), i.e., the theory of firm-specific advantages. Dunning attempted to explain ownership advantages in terms of tangible and intangible assets, which the enterprise owns and that are not accessible to other enterprises (Dunning, 1995). These advantages include patents, technology, monopoly power, managerial skills, and marketing expertise, among others, which make engaging in FDI attractive. Due to the ability of the firm to reduce production costs, it can compete with local firms in foreign markets. Dunning broadened the concept of ownership advantages to embrace those which derive from the ability of the enterprise to co-ordinate and derive benefit from value-added activities across borders.

Moreover, the assets which stem from the capability of the firm to profit from risk diversification, are known as "*transaction cost advantages*" (Dunning, 1993, p. 80). These advantages which Dunning added, embrace, for example, increased knowledge about international markets, the capability of the firm to decrease risk, and the benefits that a firm's subsidiary can attain compared with local rivals (Dunning, 1993). Ownership advantages usually answer the 'why' question, namely, why the firm decides to go abroad (Dicken, 1992; Moosa, 2002; Cantwell and Narula, 2003; Argawal, 1980). Also, they can be transferred to other countries, and used at the same time in multiple geographical locations.

Dunning developed Vernon's theory of the product life cycle, which Vernon had tried to apply to international production through international trade. Vernon argued that foreign market demand can be served by direct investment or trading. A significant location advantage leads to a reduction in the cost of production. Dunning suggests that location advantages include the cultural, political, institutional and legal environment. This means location advantages are not restricted to the natural resources of the host country. Furthermore, he classifies government legislation, policies and the market structure as among the most important advantages to any location. Location advantages usually answer the 'where' FDI question (Dicken, 1992; Moosa, 2002; Cantwell and Narula, 2003; Argawal, 1980). Such advantages can be utilised at the same time by different firms, but they cannot move from a place to another. The important feature of

the OLI framework is that both ownership and location advantages are essential conditions but are not in themselves sufficient for successful FDI to take place.

For FDI to occur successfully, Dunning argues that internalisation is also required. This is the earlier idea proposed by Coase (1937) and Casson (1976), which Dunning developed further. Internalisation avoids the problem of market imperfections and uncertainty in the intermediate stage of production. Coase, Casson and Dunning all tried to explain why enterprises prefer FDI to exporting, importing or licensing. Internalisation advantages can be said to answer the 'how' question of FDI (Dicken, 1992; Moosa, 2002; Cantwell and Narula, 2003; Argawal, 1980). All of the three elements of Dunning's theory are, according to Dunning, needed to explain successful FDI and how it exploits fully these advantages. Dunning (1988) further claims that the three main types of FDI, namely, resource seeking, market seeking, and efficiency seeking can be explained by the OLI theory.

In resource seeking FDI, the motivation of the foreign investment lies in the intention by the investor to obtain access to natural resources or production material. In market seeking FDI, the capability of the firm to exploit its ownership advantages is to obtain access to some special market, perhaps because of its size or to circumvent regional trade restrictions. Market imperfections produce risk distribution, the oligopolistic market structure, and various types of market entry obstacles that affect location and internalisation. Efficiency seeking is concentrated on taxation, scale and scope economies and diversification of production to avoid risk. In Dunning (1994) another type of FDI was added, which was asset-seeking, strategic FDI. This type of FDI looks at sequential foreign direct investments. The objective of this strategy is to obtain the most important resources to increase the ability and advantages of an investor vis-à-vis competitors.

According to Dunning, the way in which demand in a foreign market will be served (e.g., through exporting, FDI or licensing) depends, therefore, on the advantages a firm has. If the firm only has ownership advantages, then all methods have the same weight. But if it has ownership and internalisation advantages, in this case FDI and exporting are alternative to each other. Finally, if the firm has all three advantages, FDI should be preferred.

Although Dunning's theory has been widely used by evolutionary economists, economic geographers, management scholars and others, there have been many criticisms directed to it. First, the framework is not easily operationalisable, since it includes an innumerable number of

variables, which limit its predictive power. Second, Dunning does not explain in detail the factors determining the internalisation process. The third criticism generally levelled at the eclectic paradigm is that it does not give an explanation for all types of international production, while the fourth criticism is that there are no clear demarcation lines between the OLI elements (Kojima, 1982). Another major criticism is that the eclectic paradigm's explanation of the internalisation process for a firm or country is expressed in static terms and does not take dynamics into consideration. Lim (2001) criticised the OLI framework because it missed the probable impact of ownership advantages on the macro economy and therefore on location advantages. Moreover, Buckley (1988) and Casson (1976) point out that ownership advantages are already embedded in the internalisation hypothesis, hence they do not need to be explicated as a separate element.

Despite the above critiques, Dunning's framework still provides the most extensive explanation of international production to date. It explains many determinants of FDI and how these determinants can differ between companies, industries, and countries with the passage of time, and helps to understand a broad range of other MNC-related issues. Thus the paradigm, offers a useful framework.

4.6.11 Investment Development Path (IDP) theory

Dunning (1981a; 1986; and 2000) has subsequently developed the Investment Development Path (IDP) theory. The central idea of (IDP) is that the inward and outward direct investment position of a country is associated with its economic development compared to other countries. IDP proposes that there are five stages of development which a country goes through. The order of these stages is determined by the tendency of the country to favour inbound and/or outbound direct investment. The following explains the main characteristics of these stages.

In stage one, a country does not have sufficient Location (‘L’) advantages to attract FDI. There is lower capita income which reflects inadequate demand levels, unsuitable policies of the government or economic system, insufficient infrastructure, low levels of education and training of the workforce. In this stage of the IDP there is no or very small outward FDI. Foreign companies do not undertake FDI in this kind of country. Instead, they prefer trade to take place due the fact that ownership advantages and/or technology of local firms in the foreign market are not sufficient or available. FDI in this stage is undertaken in only natural resources and/or

primary commodities. Regarding the role of government in this stage there are two possibilities. The first is that it may improve infrastructure and develop human resources thought training and education. Second, the government may create social and economic policies to improve the structure of markets such as export subsidies, and import protection. But the role of government is probably inadequate with regard to upgrading the assets of a country at this stage.

The features of stage two are an increase in inward FDI, whereas there is no outward FDI or very little. There is a possibility of increasing purchasing power or market size, and import substituting. Manufacturing investment may take place due to tariff and non-tariff obstacles that are imposed by host governments. In this stage, there is some forward vertical integration in light manufactures and labour intensive (low) technology. Stage two is like stage one in that FDI is in primary commodities and natural resources, and the main factor here is the ability of the host country to supply adequate infrastructure and both skilled and unskilled labour. So a country in this stage should possess some 'L' advantages to encourage inward FDI. Also, Ownership ('O') advantages of local firms will increase in this stage, and the role of government is important in accumulating created assets. Primary industries will be supported and moderately knowledge intensive production becomes reliant on semi-skilled labour. Outward FDI starts to appear in this stage motivated by trade-related or market seeking motives. Outward FDI is encouraged by government policies. In this stage, the rate of growth of both inward and outward FDI increases (Eren, 1994).

In stage three, the growth rate of outward FDI rises while the growth rate of inward FDI gradually decreases. Demand is directed toward high quality goods, partly due to growing competitiveness between the supplying companies. There are increases in local wages, and outward FDI will flow to countries at lower stages in their IDP. 'O' advantages of local firms become strong and compete with foreign firms in the same sectors, due to the rise in spending on training and education that leads to an increasing stock of created assets within the host country. The 'O' advantages of foreign firms start to become relatively less important. However, these advantages change because of new technology, marketing and managerial innovations to compete with local companies (Eiteman *et al*., 2001).

These 'O' advantages have the characteristics of a public good, and intangible knowledge, which leads a firm to exploit them via FDI. In this stage, economies of scale appear due to the innovatory capacity of local firms and the growth of the market that causes increasing

'L' advantages. A country in this stage will attract more technology intensive manufacturing. The motivation of inward FDI will change from import substituting production to efficiency seeking production. Also in this stage, if local companies have competitive advantages this might motivate foreign companies to acquire strategic assets. The role of government will decrease in effecting the 'O' advantages of local firms, and as a result 'O' advantages of local firms change, in part because local firms become more multinational. On the other hand, the 'O' advantages of foreign companies reveal their capability to coordinate and manage geographically distributed assets and these advantages become increasingly similar to those of companies from advanced economies (Eiteman *et al*., 2001).

Outward FDI will increase, especially to countries in stages one and two of their development, and these investments are motivated by export platforms and market seeking FDI. Moreover, outward FDI is directed to countries in stages four and five, in this case FDI is motivated by strategic assets and in part by market seeking. Government encourages inward FDI in resource-incentive industries due to their relative weakness in 'O' advantages, and 'L' advantages are strong. In the meantime, they direct outward FDI toward sectors where 'L' advantages are weak and 'O' advantages are strong. If the country shifts to a subsequent stage in its development, then structural adjustment is needed (Eren,1994).

In stage four, local companies have the ability to compete strongly with foreign companies in their own country, and also in foreign countries. In other words, they have the ability to penetrate a foreign country's market. In this stage created assets are very important determinants of 'L' advantages. Inward FDI from stage four is primarily motivated by asset seeking FDI in other stage four countries, whereas inward FDI is from countries that are not at a high stage of development. Outward FDI in this stage will continue due to the desire of companies to preserve their competitive advantage and to avoid trade barriers that are imposed by different countries at different stages of development. Here firms prefer to internalise their 'O' advantages through FDI instead of exports. Intra-industry production will grow before intra-industry trade due to 'O' advantages in general between countries are being similar. But intra-industry production and trade has a tendency to be gradually more conducted within MNEs (Fu, 2000).

In this stage the structural adjustment of technological capabilities and location bound assets of a country attract government attention. In addition to its role in reducing market

imperfections and sustaining competition, reduced transaction expenses of economic activity increase the efficiency of market operations. Government does not intervene directly, instead it makes some policies to assist the enhancement of local capabilities and resources, and to reduce the market disfiguring conduct of private economic agents (Fu, 2000).

In stage five the motive of internalising overseas activities increases. Also in this stage, the probability is that international direct investment becomes balanced due to the structure of location-bound assets between countries converging. The nature and scope of international production change from producing dissimilar services and goods to producing very similar goods among countries. Other characteristics of stage five are that created assets are not controlled by a particular country, 'O' advantages of multinational enterprise more on their ability to obtain assets and organise them efficiently to benefit from the gains of overseas common governance, and less dependent on the natural resources of the MNEs's country (Franco *et al*., 2008).

The development of countries through these stages suggests that, the economic structures of various advanced economies will tend to converge. The relative attractiveness of a specific location depends on its ability to create assets, and not very much on the quality, price and availability of natural assets. The motivations of inward FDI in stage five depend on the source of FDI. If it comes from countries at lower stages of IDP, then the motives are knowledge seeking and market seeking FDI, whereas if it comes from countries at advanced stages, then the motive is efficiency seeking FDI, and outward FDI will take place in developing countries, in particular for natural resources. Because of globalisation, strategic asset seeking FDI might increase due to a firm's desire to develop their 'O' advantages by engaging in strategic alliances or acquisitions and mergers. Through these stages the motive of FDI will shift from exploiting existing 'O' advantages to the acquisition of new ones (Fu, 2000).

4.7 Other specific determinants of FDI

The unpredictability of autonomous FDI flows, in both scale and direction, has generated a substantial research effort to identify their major determinants. An extensive literature based generally on three approaches, aggregate econometric analysis, survey appraisal of foreign investors' opinion, and industry-level analysis, has to date failed to arrive at a consensus. This can be partly attributed to the lack of reliable data, particularly at the sectoral level, and to the fact that most empirical work has analysed FDI determinants by pooling countries that may be

structurally very diverse. This section is mainly concerned with examining other specific factors influencing the destination of FDI, honing on determinants that have not been investigated in detail in the coverage provided by the many theories critically reviewed above.

The sub-sections that follow, therefore, are intended to highlight explicitly specific constructs (variables) that, at a conceptual level, can be expected to play a role in the determination of FDI flows.

4.7.1 Labour costs and productivity

Empirical research has also found relative labour costs to be statistically significant in driving inward FDI, particularly for foreign investment in labour-intensive industries and for export-oriented subsidiaries. The decision to invest in China, for example, has been heavily influenced by the prevailing low wage rate. The rapid growth in FDI to Vietnam has also been attributed primarily to the availability of low-cost labour. In India, in contrast, labour market rigidities and relatively high wages in the formal sector have been reported as deterring any significant inflows into the export sector in particular (De Mello, 2007).

However, when the cost of labour is relatively insignificant (when wage rates vary little from country to country), the skills of the labour force are expected to have an impact on decisions about FDI location. Productivity levels in Sub-Saharan Africa are generally lower than in low-income Asian countries, and attempts to address the skill shortage by importing foreign workers have usually been frustrated by restrictions and delays in obtaining work permits. The lack of engineers and technical staff in these countries was reported by Woodridge (2006) as holding back potential foreign investment, especially in manufacturing; it lessens the attractiveness of investing in productive sectors.

4.7.2 Political instability

The ranking of political instability among FDI determinants remains somewhat unclear. Where the host country possesses abundant natural resources, no further incentive may be required, as is seen in politically unstable countries such as Nigeria and Angola, where high returns in the extractive industries seem to compensate for political instability. In general, so long as the foreign company is confident of being able to operate profitably without undue risk to its capital and personnel, it will continue to invest. Large mining companies, for example, overcome some

of the political risks by investing in their own infrastructure maintenance and their own security forces. Moreover, these companies are limited neither by small local markets nor by exchange-rate risk since they tend to sell almost exclusively on the international market at hard currency prices.

Specific proxy variables (e.g. number of strikes and riots, work days lost, etc.) have proved significant in some studies; but these quantitative estimates can capture only some aspects of political risk. Surveys carried out in South Asia and Sub-Saharan Africa, (Fu, 2000) appear to indicate that political instability, expressed in terms of crime level, riots, labour disputes and corruption, is an important factor in deterring inward FDI. According to De Vita and Lawler (2004), the empirical significance of socio-political instability, and its relative importance among FDI determinants, is somewhat unclear. Indeed, while survey studies have consistently shown socio-political instability to be one of the major concerns of company executives, the evidence from econometric studies is much more ambiguous.

4.7.3 Infrastructure

Infrastructure covers many dimensions, ranging from roads, ports, railways and telecommunication systems to institutional development (e.g., accounting, legal services). Studies in China, (Fu, 2000) reveal the extent of transport facilities and the proximity to major ports has a significant positive effect on the location of FDI within the country. Poor infrastructure can be seen, however, as both an obstacle and an opportunity for foreign investment. For the majority of low-income countries, it is often cited as one of the major constraints. But foreign investors also point to the potential for attracting significant FDI if host governments permit more substantial foreign participation in the infrastructure sector (Delgado, 2013). Recent evidence seems to indicate that, although telecommunications and airlines have attracted FDI flows (e.g. to India and Pakistan), other more basic infrastructure such as road-building remains unattractive, reflecting both the low returns and high political risks of such investments (Degaldo, 2013).

Surveys in Sub-Saharan Africa indicate that poor accounting standards, inadequate disclosure and weak enforcement of legal obligations have damaged the credibility of financial institutions to the extent of deterring foreign investors (Delgado, 2013). Bad roads, delays in

shipments of goods at ports and unreliable means of communication have added to these disincentives.

4.7.4 Incentives and operating conditions

Most of the empirical evidence supports the notion that specific incentives such as lower taxes have no major impact on FDI, particularly when they are seen as compensation for continuing comparative disadvantages. On the other hand, removing restrictions and providing good business operating conditions are generally believed to have a positive effect. In China, the "open-door" policy and enhanced incentives for investing in the special economic zones contributed to the initial influx of FDI. Further incentives, such as the granting of equal treatment to foreign investors in relation to local counterparts and the opening up of new markets (e.g. air transport, retailing, banking), have been reported as important factors in encouraging FDI flows in recent years (De Mello, 2007).

The Indian Government has recently relaxed most of the regulations regarding foreign investment. This is seen as contributing to the increased FDI flows in the last couple of years. Other governments, on the other hand, have offered incentives in order to attract investment by MNEs. Since the mid-1980s, there has been a drastic shift in policy towards the latter approach, with many countries that had traditionally opted for widespread controls on FDI engaging in radical reforms of their investment regimes aimed at facilitating and promoting inward investment through incentives (De Vita, 2001).

However, the lack of transparency in investment approval procedures and an extensive bureaucratic system are still deterring foreign investors; hence the relatively low FDI/GNP ratios. In 1991, Bangladesh and Pakistan implemented reforms allowing foreign investors to operate with 100 percent foreign ownership but still failed to attract significant flows (as a proportion of GNP) because of political instability and an over-extended bureaucracy (Degaldo, 2013). Nigeria, in contrast, continues to attract FDI as an oil-exporting country despite its relatively inhospitable policies. With regard to the remaining low-income countries with small FDI inflows, according to Delgado (2013) surveys indicate that the lack of a clear-cut policy with respect to foreign investment and excessive delays in approval procedures are amongst the most important deterrents. Although a number of African countries set up `one-stop investment

shops' during the 1980s in order to simplify approval procedures, the increased workload created bottlenecks (Degaldo, 2013).

4.7.5 Privatisation

Though privatisation has attracted some foreign investment flows in recent years (e.g. Nigeria in 1993 and Ghana in 1995), progress is still slow in the majority of low- income countries, partly because the divestment of state assets is a highly political issue. In India, for example, organised labour has fiercely resisted privatisation or other moves which threaten existing jobs and workers' rights. At a regional level, 1994 figures show 15 percent of FDI flows to Latin America as derived from privatisation, but only 8.8 percent in sub-Saharan Africa and 1.1 percent in South Asia (Fu, 2000).

A number of structural problems are constraining the process of privatisation. Financial markets in most low- income countries are slow to become competitive; they are characterised by inefficiencies, lack of depth and transparency and the absence of regulatory procedures. They continue to be dominated by government activity and are often protected from competition. Existing stock markets are thin and illiquid and securitised debt is virtually non-existent. An under-developed financial sector of this type inhibits privatisation and discourages foreign investors (UNCTAD, 2013).

4.7.6 Health

Health, viewed as a form of human capital, could affect FDI through several mechanisms. The 2007 World Health Organization's Commission on Macroeconomics and Health as cited by Alsan, Bloom and Canning (2009), suggests that a healthy workforce is important when attracting foreign direct investment due to the effect of health on workers' productivity. In addition, for fear of endangering their own health and that of their expatriate staff, foreign investors may shun areas where disease is rampant and where access to health care is limited. A classic instance of disease interfering with investment was during the building of the Panama Canal. Yellow fever and other pathogens claimed the lives of 0,000 to 20,000 workers between 1882 and 1888, forcing Ferdinand de Lesseps and the French to abandon the construction project (Argawal, 1980). More recently, the outbreak of Severe Acute Respiratory Syndrome (SARS) has exemplified how disease, or even the fear of disease, can dampen investment, for example,

FDI inflows into mainland China declined by US$2.7 billion during 2003 as a result of the SARS epidemic (Business Daily Update, 2003). Similarly, FDI inflows to Hong Kong fell 62 percent in one quarter (Tam, 2003), These trends quickly reversed once the outbreak was controlled, but they suggest that lengthier epidemics, such as HIV/AIDS or malaria, could have severe, long-term effects on FDI (Alsan, Bloom and Canning, 2009).

4.7.7 Lagged FDI

Foreign investors may view the investment decisions by others in a country as a good signal of favourable conditions for investment. That is, high levels of FDI in the past may signal to potential foreign investors the soundness and potential of an economy. The literature attributes this effect to a combination of agglomeration effects, information effects and a type of herding behaviour among foreign investors. The clustering of investors through "*agglomeration economies*" (see Moran, 2003, pp. 14-34), for example, leads to positive externalities. Foreign investors may be attracted to countries with an existing concentration of other foreign investors, particularly if in the same industry, and rising lagged FDI flows are therefore expected to attract more FDI in the future.

4.7.8 Exchange rate

According to De Vita and Lawler (2004), interest on the impact of the exchange rate on investment decisions can be traced back to the work of Aliber (1970). He suggested that weak-currency countries are likely to attract FDI due to the higher purchasing power and more efficient hedging capacity of investors operating from strong-currency countries. Despite Aliber's (1970) early work, it was not until the late 1980sand early 1990s that serious consideration started to be given to the exchange rate as a potential FDI determinant. This new research impetus was prompted by Caves (1989). He examined inward investment flows into the US from over a dozen different countries, and found that the strength of a country's currency relative to the US dollar was an important explanatory variable for that country's direct investment in the US. Since then, several hypotheses have emerged in the search for an explanation of the relationship between FDI and both the level and variability of the exchange rate. If the exchange rate of a country depreciates, it attracts FDI since foreign firms may merge with or acquire domestic industries (Masayuki and Ivohasina, 2005).

However, Benassy-Quere *et al*. (2001) summarised that the effects of the level of exchange rates on FDI inflows are rather ambiguous. According to Harvey (1992), in the long-run the negative effects of exchange rate volatility are more than the positive effects in attracting FDI. Similarly, Goldberg and Kolstad (1994) found high exchange rate variability to be an impediment to FDI inflows between United States and Canada, and Japan and United Kingdom.

4.7.9 Export orientation, openness to trade and tariff-jumping

Export orientation and openness to trade are other factors that typically enter the determination of the FDI function. The widespread perception is that MNEs are attracted to export-oriented countries, first, for their intrinsic export potential, and second, because 'open' economies tend to instil greater confidence in foreign investors by virtue of their better performance record and generally more stable economic climate (De Vita and Lawler, 2004).

Export orientation and openness to trade have received considerable support in the empirical literature (see, for example, Culem, 1988; Chakrabarti,2001). It is interesting to point out that the relevance of these variables constitutes evidence inconsistent with the tariff-jumping hypothesis, which views FDI as the result of MNEs' attempt to circumvent trade barriers. It should be recognised, however, that as more and more countries liberalise their import regimes, the tariff-jumping motive for FDI is bound to become less relevant. This argument is supported by the evidence provided by Blonigen and Feenstra (1996), who found trade barriers to have no significant impact on FDI.

4.8 Concluding remarks

This chapter started by examining the definitional dimensions of the concept of FDI. Various definitions of FDI have been critically appraised thereby giving the author the opportunity to further assess the broader meaning of FDI, and to establish a clear definition for the purpose of this study. This chapter further investigated the theories of FDI and subjected them to rigorous critical scrutiny. The main theories and hypotheses by various authors were reviewed for this purpose and shortcomings highlighted. Overall, it appears to the author that the demerits of any particular theory gave birth to the development of a new one. Hence, one could say that the author of each theory aimed at improving on the explanations put forward before.

Nevertheless, and in spite of this, it can be concluded that no individual theory can yet be said to have provided a comprehensive and all-encompassing explanation of the determinants of FDI, especially when considering the different motivations of FDI, and the many different motivations of multinational corporations that inevitably appear to interact with country specific and industry-driven determinants of foreign investments. It follows that despite the usefulness of these theoretical frameworks and blueprints, the study of the factors that have explanatory power in the determination of inward FDI in any particular country remains firmly an empirical question. It is for this reason that other additional determinants that were not explicitly contemplated by the established theories of FDI, were also examined with reference to a large body of previous work that highlighted the role of these specific factors as FDI determinants.

The culminating model to be developed in the present study at the end of chapter five will take such theory-based determinants into account to arrive at a comprehensive model specification but first, it is worth reviewing what the empirical literature has indicated to be the variables with explanatory power in the determination of inward FDI.

CHAPTER 5: REVIEW OF EMPIRICAL FINDINGS ON INWARD FDI DETERMINANTS

5.1 Chapter overview

This chapter presents a critical and systematic review of the large body of empirical literature that has investigated FDI determination. Here, past empirical studies and findings on the determinants of FDI will be discussed, starting with a brief general review of such studies worldwide, and then by honing in on studies focusing on the determinants of FDI inflows to Africa and, finally, on Nigeria's determinants of inward FDI. On the basis of these reviews, the chapter will end by specifying a comprehensive, theory-based and empirically justified model to be tested, one that accounts for all the variables that may be expected to exert a systematic influence on Nigeria's inward FDI.

5.2 Review of empirical findings on inward FDI determinants

Of course, a critical review of all the applied work on FDI work needs some criteria on how best to do it. This is because it could be done by geographical coverage, by a chronological order and/or by variables. Given that the focus here centres on FDI in Nigeria, the researcher has chosen to review these findings by geographical coverage. Therefore, first we shall be looking at the determinants of FDI worldwide/globally, narrowing it down to FDI determinants in Africa and finally focusing on studies that have examined the determinants of FDI in Nigeria. In addition, a distinction will be made with respect to panel and/or cross-section studies and single-country studies employing exclusively a time series approach.

5.2.1A review of empirical findings on the determinants of FDI globally

5.2.1.1 A review of empirical findings on the determinants of FDI globally, using multi-country studies and/or cross-section

The literature on the determinants of FDI is vast and uses different methodologies to investigate the influences of various determinants of FDI. We begin with the study by Cheng and Kwan (2000) that estimated the effects of the determinants of FDI in 29 Chinese regions from 1985 to

1995, using the OLS methodology. They found that a large regional market, good infrastructure, and preferential policy had a positive effect, but wage cost had a negative effect on FDI. The effect of education was positive but not statistically significant. In addition, there was also a strong self-reinforcing effect of FDI on itself. There was no convergence in the equilibrium FDI stocks of the regions between 1985 and 1995, but there was convergence in the deviations from the equilibrium FDI stocks. However, this study is based on a short sample period, few variables, uses a basic OLS regression and does not account for the integration/co-integration properties of the data alongside possible structural breaks.

Econometric studies by Asiedu (2002a), Bevan and Estrin (2004) and Alvinasab (2013), comparing a cross section of developing countries, indicate a well-established correlation between FDI and the size of the market (proxied by the size of GDP) as well as some of its characteristics (for example, average income levels and growth rates). These studies found GDP growth rate to be a significant explanatory variable, while GDP was not, probably indicating that where the current size of national income is very small, increments may have less relevance to FDI decisions than growth performance, as an indicator of market potential.

The growth rate of an economy or the absolute annual changes of GDP may be used to measure economic growth. Greater output growth means that greater investment can be induced. It is obvious that a market (economy) that is thought to grow fast should be favourable to absorb FDI inflows. Thus, economic growth should be expected to have a positive effect on FDI inflows. As noted by Aremu (1997), economic developing level is expressed by per capita GDP. A higher economic developing level shows the strong purchasing power and good economic performance. Meantime, this variable also means that the economy with high per capita GDP has high labour productivity, good local infrastructure and investment environment. Thus, economic development level should have a positive relationship with FDI inflows. A rapidly growing economy provides relatively better opportunities for making profits than one growing slowly or not growing at all. A high rate of economic growth is an indicator of development potential.

Whilst access to specific markets, judged by their size and growth, is important, domestic market factors are predictably less relevant to export-oriented foreign firms. A range of surveys, (according to Asiedu, 2002b; Buloke, 2011; and Chakrabarti, 2001) suggests a widespread perception that “open” economies encourage more foreign investment. One indicator of openness is the relative size of the export sector. These studies indicate that exports, particularly

manufacturing exports, are a significant determinant of FDI flows and that tests show that there is strong evidence that exports precede FDI flows.

Chakrabarti (2001), using three developing countries (Indonesia, Japan and China) and data from 1990 to 2000, used Extreme Bound Analysis (EBA) to examine whether FDI responds to small changes in the conditioning information set from eight variables: market-size, tax, wage, openness, exchange rate, tariffs, growth and trade balance. The EBA upholds the robustness of the correlation between FDI and market-size, but indicates that the relation between FDI and tax, wage, openness, exchange rate, tariff, growth, and the trade balance is barely sensitive to small alterations in the conditioning information set.

Using a panel dataset of bilateral flows of FDI, Bevan and Estrin (2004) studied the determinants of FDI from Western countries, mainly in the European Union (EU), to Central and Eastern European ones, using data from 1985 to 1990. Their study identified the most important influences to be unit labour costs, gravity factors, market size, and geographical proximity. Interestingly, host country risk proves not to be a significant determinant from their estimations. Their results also indicate that announcements about EU accession proposals have an impact on FDI for the future member countries.

Also using panel data from 68 developed and developing countries, Abdul-Mottaleb and Kalirajan (2010), examined the factors that determine FDI inflows to developed and developing countries from 1980 to 2008. Based on a comparative discussion focusing on why some countries are successful in attracting FDI, their study demonstrates that countries with larger GDPs, higher GDP growth rates, higher proportion of international trade and a more business-friendly environment are more successful in attracting FDI.

Another factor that determines FDI inflows is the exchange rate. If the exchange rate of a country depreciates, it attracts FDI since foreign firms may merge with or acquire domestic industries (Masayuki and Ivohasina, 2005). However, Benassy-Quere *et al*. (2001) highlighted that the effects of the level of exchange rates on FDI inflows are rather ambiguous. According to Harvey (1992), in the long-run the negative effects of exchange rate volatility are more than the positive effects in attracting FDI. Similarly, Goldberg and Kolstad (1994) found high exchange rate variability to be an impediment to FDI inflows between United States and Canada, and Japan and United Kingdom.

Alam and Shah (2013) explore the determinants of FDI for a panel of ten OECD member countries over the period 1985-2009. Granger causality tests were used both in the short- and long-run, between FDI and the variables that emerge as significant determinants of FDI during the study period. Estimated results of fixed effects estimation indicate that market size, labour cost and quality of infrastructure have a significant effect on FDI for the panel of countries. A bi-directional short-run relationship is established between market size and labour costs in the short-run; whereas quality of infrastructure causes market size and labour costs in the short-run. In the long-run, a deviation of FDI from equilibrium was also recorded. However, market size, labour costs and quality of infrastructure all exerted a joint effect in the short-run to re-establish the equilibrium.

Abubakar and Abdullahi (2013), using data from 2000 to 2011and employing the conditional logit model (CLM), reported that there is a positive causality running from market size to FDI, positive causality also exists between inflation and FDI. There also exist a causal relationship running from macroeconomic stability to market size, and finally natural resources also have a positive causal relationship to openness. It is suggested that one of the main features of a country's attractiveness is financial sector development. External funding of the local and foreign firms is crucial in every country (Asiedu 2002b). Thus, a strong and developed financial system would contribute positively and significantly in the attractiveness of the host country. MNEs could have the opportunity of ensuring low cost financing via a developed financial system. However, if systematic taste variation is unobserved, it introduces a random element in the error term of the model. The best known limitation of conditional logit models is the property called independence of irrelevant alternatives (IIA). This restriction implies that the ratio of two alternatives does not depend on other alternatives, and this can bring about invalidity.

Al Nasser and Gomez (2009), using data from 1990 to 2005 and employing a basic OLS technique for three developing countries, supported that FDI is strongly and positively correlated with private credit offered by the host country's banking sector.

Due to the difficulty of finding an appropriate measure of macroeconomic stability, most empirical studies have used the inflation rate as a proxy since there is a strong and positive relationship between inflation and economic stability. Inflation is therefore considered as an important determinant of FDI. It reflects the consumption rates of an economy but also the potential instability of the political and economic environment of the country. In the earliest case,

high consumption rates promote economies of scale, leading to a massive decrease of the production costs and maximising profits (Asiedu, 2006).

As Loungani (2012), using a basic OLS technique and data from 1990 to 2011, studies 10 developing countries and suggests that inflation has a positive and significant effect on inward FDI in emerging economies. On the contrary, it is suggested that high inflation rates, have a negative effect on inward FDI. In this case, MNEs, which prefer to promote long term investments to more stable countries, are negatively affected by high inflation rates. Alba *et al*. (2010) suggest that countries which did not succeed in reducing inflation rates, tended to be unattractive to MNEs for long term investments.

Kareem (2012) applied data mining techniques of attribute analysis, association and classification in 78 countries for the period 1980 - 2010 and found a positive and significant relationship between various proxies of financial and banking sector development and inward FDI. By way of contrast, another evidence supports that financial sector development could have a negative effect on inward FDI inflows. MNEs originate from developed economies, where financial sector is more developed. According to this theory, positive or negative correlation between FDl and financial sector development depends on the maturity of the financial system of the host country. In addition, internal finance of the operations of MNEs in other countries is in common practice. Khan *et al*. (2010) also suggested that MNEs tend to promote inward FDIs to countries which have volatile and underdeveloped financial system. The cause of that decision is to avoid unnecessary and avoidable transaction costs with local suppliers.

According to Skouloudakis and Tampakoudis (2013), who used data from 1985 to 2010, and employed a survey technique, based on a sample of 5 Asian countries, said that financial sector development could have a negative effect on inward FDI. An integrated financial system is secured by providing liquidity insurance. This type of security covers the financial system of financial crises but decreases the liquidity of the market. In other words, an integrated financial system offers limited availability of capital which is why these could be a negative effect on inward FDI. However, with surveys, often the samples are too small to be well represented and answers tend to be limited in information which can result in low validity.

Safarian (2009) supports that market - seeking and efficiency - seeking FDI are positively affected by a greater degree of openness of the host country. Delgado (2013), using data from 1990 to 2011 and employing the OLS technique, also found a positive relationship between

openness and inward FDI in 10 countries of Latin America. But the significance of openness on the dependent variable was found to be very low. Jensen (2006), using data from 1980 to 2000 and employing the OLS technique found that trade openness has a positive and significant effect on inward FDIs in 17 countries of Latin America by using a panel data model with feasible generalized least squares estimators. Asiedu (2002) using data from 1970 to 2000 and employing OLS technique suggests that there is a positive and significant relationship between inward FDI and economic growth in 23 developing countries. Buloke (2011) using data from 1990 to 2009 and employing the OLS technique also proved that inward FDI from the US to EEC countries is positively and significantly related to GDP growth.

5.2.1.2 A review of empirical findings on the determinants of FDI globally using single-country studies employing a time-series approach

In Bangladesh, foreign investors have been attracted to the manufacturing sector by its lack of quota for textiles and clothing exports to the European Union and US markets. Garment exports, for example, rose from virtually nil in the 1970s to over one-half of its export earnings by the early 1990s. There is little doubt that the size of China's market explains, in large part, the massive FDI flows it has attracted since the early 1980s. Within China, FDI has been concentrated (over 90%) in the coastal areas. Provincial GNP, reflecting economic development and potential demand, has also been indicated as the major determinant of this concentration (Babić, 2001).

Another study on China is by Ali and Guo (2005) who used data from 1990 to 2005.Employing the OLS technique, they examined the likely determinants of FDI by analysing responses from 22 firms operating in China on what they see as the important motivations for them to undertake FDI. Results show that market size is a major factor for FDI especially for US firms. China, in particular, has attracted much foreign investment into the export sector. For local, export-orientated Asian firms, low labour costs are the main factor. However, this study is based on a short sample period, few variables, uses a basic OLS regression and does not account for the integration/co-integration properties of the data alongside possible structural breaks.

As explained by Froot and Stein (1991, p.1194) *"to the extent that foreigners hold more of their wealth in non-dollar denominated form, a depreciation of the dollar increases the relative wealth position of foreigners, and hence lowers their relative cost of capital",* so that,

ceteris paribus, more foreign investors win auctions. Empirically, Froot and Stein found that when regressing inflows of FDI into the US against the exchange rate, for the period 1973 to 1988,FDI was negatively correlated to the value of the US dollar (De Vita and Abbott, 2007).

According to Alba *et al*. (2010) there are four major modes through which firms undertake FDI: merger and acquisition, joint venture, net plant, and others. Their study examined the determinants of these different modes. Accordingly, they empirically analysed the extent to which the determinants of FDI such as firm size influence the choice of one mode of FDI over another. First, they looked at the probability of whether a Japanese firm is willing to undertake FDI in the US. Second, they analysed which of the four modes of FDI will be chosen by firms that are willing to undertake FDI. The findings showed that merger and acquisition and joint venture happen to be the most important vehicles for FDI by a Japanese firm.

An alternative explanation for the link between the exchange rate and FDI has been advanced by Blonigen (1997), using a conditional logit model (CLM). Blonigen tested his model using data of Japanese acquisitions across US industries for the 1975-1992 period. He found that real dollar depreciations lead to substantial increases in acquisition FDI in industries that more likely have firm-specific assets, namely, manufacturing industries with high R&D (De Vita and Abbott, 2007). However, if systematic taste variation is unobserved, it introduces a random element in the error term of the model. The best-known limitation of conditional logit models is the property called independence of irrelevant alternatives (IIA). This restriction implies that the ratio of two alternatives does not depend on other alternatives, and this can bring about invalidity.

As noted by De Vita and Abbott (2007), contrary to the models by Froot and Stein (1991) and Blonigen (1997) both of which, albeit through different channels, postulate a negative relationship between the exchange rate level and inward FDI, Campa (1993) predicts a positive relationship arguing that an appreciation of the host country's currency will increase investment into the host country since the expectation of future profits is higher. Campa (1993) also estimated the effect that exchange rate volatility and industry specific sunk costs have on entry by foreign firms. Using a measure of FDI based on the number of foreign entries in 61 US wholesale industries over the period 1981 to1987, he found volatility to be negatively correlated with the number of events of entry, and that this effect is stronger in industries where sunk costs are relatively high (De Vita and Abbott, 2007).

Cuvvers *et al*. (2011) analyse the determinants of FDI inflows into Cambodia using unbalanced panel data set for the period 1995–2005, for both approved and realised FDI. Their results show that the determinants of approved and realised FDI are somewhat similar. The FDI home country's GDP, its bilateral trade with the host country and the exchange rate have a positive impact on inward FDI flows into Cambodia while geographic distance has a negative effect.

Khan and Nawaz (2010) empirically investigated the determinants of FDI in Pakistan, for the period 1998- 2009, using the binomial logistic model. Their analysis identified some economic determinants of FDI in Pakistan: GDP growth rate, volume of exports, human population, tariff on imports and price index. Volume of exports emerged as the most powerful determinant of FDI. However, the failure of the estimating algorithms to properly maximise the likelihood function is seen in this model. The principal cause is a failure of the fitting algorithm to converge despite the log-likelihood function having a single finite maximum, thereby causing unreliability in the results obtained.

Alavinasab (2013) investigated the determinants of FDI in Iran for the period of 1991-2009. A simple econometric model OLS was used to determine the various economic factors that affect FDI inflows. Results of the study revealed the positive significant effects of real GDP growth, the proportion of imports to GDP, return on investment and infrastructure on FDI while the effect of government consumption on FDI inflows was found to be insignificant.

In examining the impact of exchange rate levels on sectoral investments in the US for the 1970-1989 period, Goldberg (1993), using a conditional logit model, found that the relationship between exchange rate movements and FDI had changed over time. Results suggested that the real exchange rate has a significant positive impact on FDI flows into the US.

Asiedu (2006) also suggested that MNEs depend on high quality of telecommunication which enables them to share information globally. Asiedu (2006), using OLS and data from 1980 to 2004, proved that infrastructure is the most significant determinant of inward FDI in emerging countries. However, Ali *et al*. (2007) suggested that infrastructure is less important than economic reforms in attracting inward FDI in China.

Dewenter (1995) used transaction-specific data on foreign acquisitions of US target firms completed during 1975-1989, employing the survey approach, to examine the relationship between the value of the dollar and both the flow and prices of cross-border acquisitions.

Dewenter's study concluded that, after controlling for overall investment levels and relative corporate wealth, *"the measure of foreign investment relative to domestic investment shows no significant exchange rate sensitivity"* (p.415), a finding which casts doubt on Froot and Stein's hypothesis (De Vita and Abbott, 2007).

Maniam and Chatterjee (1998) investigated the factors that determined US FDI in India, and analysed the trends of US FDI in this country, in addition to the effect of economic reforms on FDI. This study covered the period 1962 to 1994, using quarterly data. Pooled OLS (POLS) testswere employed in this study, to test the impact of US FDI on the Indian economy. The POLS model embraced the most important macroeconomic variables that impact FDI, such as market size, growth, trade balance, and the exchange rate. Also, this study showed that the trend of US FDI in India from 1962-1994 rose, especially in the period from 1991 to 1994. Moreover, this study stressed the role economic reforms had had in attracting FDI to India. However, with limited units of analyses and points in time, the problems of autocorrelation and heteroskedasticity become a nuisance.

Galan and Gonzalez-Benito (2001) tried to investigate determinant factors of FDI in Spain. This study was conducted using Dunning's framework. The survey approach was adopted in this study to gain empirical evidence about factors determining FDI decisions in Spain. The sample period of the study was from 1980 to 2000. The finding of this study showed that new branches (internal growth) were favoured over acquisitions or co-operation (external growth) by Spanish firms as a mode of entry.

Regarding the most important factor determining ownership in Spain, were specific and intangible assets, in addition to factors such as the experience in national markets, and the availability of technological and innovative capabilities. However, factors such as government incentives were found not to be important. With respect to internationalisation factors, the most important one was the ability to control intangible assets directly, transaction costs, and earlier experience through export. For services firms, the key determinant was proximity to consumers. With respect to location factors, include the size and growth of the market were most important, as was cultural factor. However, factors such as infrastructure, transportation costs and political stability came 'in second order of importance (Galan and Gonzalez-Benito, 2001).

Despite its logical appeal, the argument for the theoretical independence from the exchange rate of FDI decisions was challenged by Caves (1988) who, using data from 1975 to

1985, and employing a simple econometric model (POLS technique), examined inward investment flows into the US from several countries. He found that the strength of a country's currency relative to the US dollar was an important explanatory variable for that country's direct investment into the US. To rationalise the apparent contradiction between traditional theory and evidence, various hypotheses have emerged to shed light on the relationship between FDI and both the level and volatility of the exchange rate (De Vita and Abbott, 2007).

De Vita and Abbott (2007) aimed to establish the impact of the level and volatility of the exchange rate on UK inward FDI during the period 1975-2001. They used both fixed effects and dynamic generalised methods of moments (GMM) panel estimation techniques, and manufacturing data disaggregated by high and low R&D content of the sector of destination. In addition to exchange rate variables, they controlled for several FDI determinants identified in previous literature, including features of the country of origin and the sector of destination of the investment. They found strong evidence of a negative and significant relationship between real exchange rate volatility and FDI inflows. These results proved robust to tests for parameter stability, tests for asymmetries in the investment response coefficients across appreciation and depreciation intervals, and re-estimation by the Arellano-Bond GMM corrective procedure. Their results also showed that, after controlling for endogeneity problems, the real exchange rate level appears to have no statistically significant influence on UK inward FDI (De Vita and Abbott, 2007).

Although not exhaustive, the range of this review provides in itself a very mixed set of findings from which it is difficult to discern a conventional wisdom. The next section hones in on empirical studies of inward FDI in Africa.

5.2.2A review of empirical findings on the determinants of FDI in Africa

5.2.2.1 A review of empirical findings on the determinants of FDI in Africa, using multi-country studies and/or cross-section

Most African countries exhibit features which make them unattractive to private investors, especially foreign direct investment. First, given the high dependence of these countries on exports of a few primary commodities, they are susceptible to external shocks especially terms of trade shocks. Second, their reliance on agriculture exposes them to such natural shocks, as

droughts and floods, with severe adverse effect on the economy. Unquestionably, these features sum up to make the region a high-risk zone. Third, most of these countries have underdeveloped financial sector and low credit ratings. The absence of information and the prevalence of ignorance make the region vulnerable to sudden shifts in market perceptions and they are well exposed to contagion effects. Lastly, the persistent budget deficits emanating from a weak tax system signify severe constraints on government resources and impede government's ability to address shocks and instability(Morrisset, 2003). Thus, African countries seem trapped in a vicious cycle of instability, low private capital flows and poor economic performance.

According to Abubakar and Abdullahi (2013), for Sub-Saharan Africa as a whole, GDP growth during 1986-1995 has been identified as a major factor using the conditional logit model (CLM). Only three SSA low-income countries are amongst the nine main recipients of FDI flows in recent years, and of these only Nigeria is close to being classified as a large market (according to UNCTAD's benchmark of $36bn GNP). Angola and Ghana (with GNP of $8.9bn and $5.5bn in 1995, respectively), received larger proportional FDI flows in 1995 than Nigeria, indicating that small market size need not be a constraint in the case of resource-endowed, export-oriented economies. In fact, extractive industries in the low-income African countries continue to attract foreign investors as they have always done. Some analysts interpret this as evidence of high potential for increased FDI flows in the future; others stress that constraints are still restraining the flows of FDI to these countries (Abubakar and Abdullahi, 2013).

For the majority of African countries which fail to attract large FDI flows, their small domestic markets are often cited as the main deterrent. Given other economic and political shortcomings, most investors are doubtful about the value of installing a factory unless they can achieve a `critical mass' for their products. Regional integration is often perceived as a positive means of compensating for small national markets. There is currently no clear evidence of the degree of this influence on FDI flows. Some investors expect positive spill over effects from South Africa and are generally optimistic about an East African free trade area, but the benefits may well be concentrated in the economically stronger states (Asiedu, 2002b).

According to Asiedu (2003), GDP growth rate and trade openness fuel the interest of foreign investors. A detailed review of the policy reforms implemented in Mali and Mozambique further indicates the following strategic actions for their recent success, beyond macroeconomic and political stability: opening the economy through a trade liberalization reform; launching an

attractive privatization programme; modernizing mining and investment codes; adopting international agreements related to FDI; developing a few priority projects that have multiplier effects on other investment projects; and mounting an image building effort with the participation of high political figures, including the President.

Serious attention should be paid to the tax burden which is still relatively high. Bende - Nabende (2002) provided an empirical investigation using cointegration analysis of the macro locational determinants of FDI in Africa by testing the long - run relationships between FDI and its determinants. The study comprised 19 African countries over the 1970 - 2000 period and employed both individual country data and panel data analyses techniques. Their evidence suggests that the most dominant long - run determinants of FDI in Africa are market growth, a less restrictive export - orientation strategy and the FDI policy liberalisation. These are followed by real effective exchange rates and market size. Bottom on the list is the openness of the economy. Thus, as far as Africa is concerned, their long - run FDI positions can be improved by improving their macroeconomic management, liberalising their FDI regimes and broadening their export bases (Bende - Nabende, 2002).

Nonnemberg and Cardoso de Mendonca (2004) explored the most important determinants of FDI in 8 African countries. A panel data methodology was adopted in this study to empirically test the determinants of FDI. The population of this study consisted of 8 African countries. This study was conducted using data covering the period between 1975 and 2000. This model included, as factor determinants of FDI, the average growth rate of GDP in the previous five years(G5GDP), GDP, educational level of the labour force (ESCOL), the degree of openness(OPENNESS), the risk rating (RISK), the rate of inflation, energy consumption(ENERCON), the average rate of growth of the largest OECD exports of FDI to African countries (GGDPOECD), (the relationship between this factor and FDI is not clear) and the Dow Jones index (DOWJONES). All these factors represented independent variables, while FDI was dependent variable.

The findings of this study reveal that the average rate of growth in previous 5 years and the size of the market were strongly significant, while the level of educational attainment and openness were not important determinants of FDI. In a larger sample, inflation was negatively related to FDI, while in the smaller one and with the RISK factor, the result showed it was not significant. With respect to the RISK factor, it had a negative sign, as expected. Regarding DOW

JONES, the study illustrated that it was a very important determinant of outward FDI. GGDPOECD was found to be significant if RISK was not included in the equation, and lastly ENERCON was not significant.

Lemi and Asefa (2003) address the relationship between economic and political uncertainty and FDI flows in 29 African countries. The authors stress the following contributions of their paper: the first study in formally dealing with the role of political and economic uncertainty in affecting FDI in Africa using Generalised autoregressive conditional heteroscedastic (GARCH) model to generate economic uncertainty indicators; the study analysed FDI from all source countries. The results of the study for 29 African countries over the period 1987 - 99 showed that economic uncertainties are the major impediments only when coupled with political instability and the debt burden of host countries. Other economic factors such as labour, trade connection, size of export sector, external debt, and market size are also significant in affecting FDI flows to African economies.

Asiedu (2004) provides an explanation for the deterioration in Africa's global (relative) FDI position. The author, looking at 10 African countries and using a panel data methodology, argues that Africa's share of FDI to developing countries has declined over time, because of the less attractiveness of Africa for FDI over time, relative to other developing regions. The analysis focuses on three FDI determinants; openness to FDI, good infrastructure and institutional quality, using policy - related measures (since one of the objectives of this study is to prescribe policies that will enhance Nigeria's global FDI position) over the 1980 - 1999 period.

The main finding is that, with regard to FDI determinants, Africa's experience can be characterised as absolute progress but relative decline. Indeed, from 1980 to 1999, Africa has reformed its institutions, improved its infrastructure and liberalised its FDI regulatory framework. However, compared with other developing regions, the degree of changes in Africa has been meagre. The policy implication that follows is the need to enhance Africa's policy environment in both absolute and relative terms (Asiedu, 2004).

Asiedu (2006) utilises panel data for 22 African countries over the period 1984 - 2000 to investigate the influence of natural resources and market size vis – à - vis government policy, host country's institutions and political instability in directing FDI flows to the region. The results suggest that countries in Africa that are endowed with natural resources or have large markets will attract more FDI. However, small countries and/or countries that lack natural

resources in the region can also obtain FDI by improving their institutions and policy environment, because good infrastructure, an educated labour force, macroeconomic stability, openness to FDI, an efficient legal system, less corruption and political stability, also promote FDI.

In light of these findings, Asiedu (2006) stresses the importance of regional blocs such as the Southern African Development Community (SADC) in enhancing FDI flows to the region. In addition to expanding the size of the market, regionalism can promote political stability by restricting membership to countries with democratic political systems, as well as provide incentives for member countries to implement good policies.

According to Morisset (2000) and Asiedu (2006), the common perception among many observers is that FDI in African countries is largely driven by their natural resources and the size of their local markets. In an econometric study on 29 African countries for the period 1990 - 97, Morisset (2000) found that both market size and natural resources availability have a positive influence on FDI inflows, with an elasticity of 0.91 and 0.92 using panel data and 1.4 and 1.2 using cross - section data, respectively. Panel regressions presented in Asiedu (2006) for 22 African countries over the period 1984 - 2000 show that a standard deviation of one increase in the natural resource variable results in a 0.65 percent increase in the ratio of FDI to GDP, and a standard deviation of one increase in market size results in a 2.61 percent increase in FDI/GDP.

Even though the African countries that have been able to attract most FDI have been those with natural and mineral resources and relatively large domestic markets, these are not the sole determinants of FDI to the region (Asiedu, 2004). Morisset (2000), Asiedu (2006) and many others suggest that the list of factors influencing FDI in Africa is fairly long, although not all determinants are equally important to every investor in every location at all times (Ajayi, 2006). Studying two African countries, Agarwal (1980) used data from 1975 to 1979, and employing the survey method found, that the specific determinants of FDI include market size and growth, availability of natural resources, human capital costs and skills, and availability of good infrastructure. Others are openness of the economy, political and economic stability, institutional quality, investment regulation and international treaties and guarantees. Investment promotion, return on investment and other factors such as cost - related factors, concentration of other investors, investment incentives, privatisation and inflows of bilateral Official Development Assistance (ODA) are also FDI drivers (Agarwal, 1980).

Bende - Nabende (2002) found that market growth and market size are among the most dominant long - run determinants of FDI in Africa. Bhattacharya *et al*. (1996), Elbadawi and Mwega (1997), Morisset (2000) and Onyeiwu and Shrestha (2014) find evidence for the importance of economic growth in attracting FDI flows to Africa. After controlling for relevant country conditions, Elbadawi and Mwega (1997) also show that countries in the SADC region receive more FDI than other countries in Africa. Some investors, notably those from East Asian countries, have invested in Botswana in order to produce for the South African market (Bhinda *et al*., 1999). Multinational firms that wished to serve the large market in South Africa located their subsidiaries in Lesotho and Swaziland (Basu and Srinivasan, 2002). Asiedu (2003) and Lemi and Asefa (2003) also conclude that large markets (along with other factors) promote FDI to the region. The same goes for the South African country (Fedderke and Romm, 2006).

The availability of natural resources has been found to be positively related to FDI flows to Africa (Asiedu, 2003; Onyeiwu and Shrestha, 2014).

Lemi and Asefa (2003) and Yasin (2005) find that the availability of an abundant and cheap labour force has the expected positive effects on FDI to Africa. In addition, Lemi and Asefa (2003) and Asiedu (2006) also find evidence for the important role played by an educated labour force in attracting FDI flows to African countries. However, the lack of middle or senior level entrepreneurial experience has increased the existing skills gap in Africa, and many foreign companies have resorted to employment of expatriate managers (Bhinda *et al*., 1999). Morisset (2000) also found that the availability of relatively skilled labour does not appear to have been a major factor in the location decision of MNCs, advancing data shortcomings in most African countries as a possible cause.

Asiedu (2002b) provides evidence that good infrastructure promotes FDI to Africa. However, Pigato (2001) finds that Africa lags behind in the number of telephone mainlines and the percentage of roads that are paved. The results from using fixed effects panel estimation in Asiedu (2002a) during 1990 – 2001, with 15 African countries, also indicate that the marginal benefit from increased infrastructure was less in the 1990s than in the 2000s and thus African countries need to provide better infrastructure in order to receive investments at levels comparable to the 1990s.

Furthermore, Asiedu (2004) shows that, from 1990 - 2001, the rate of increase in the availability, reliability and development of infrastructure in the African region was less than the

rate for all developing countries. In contrast, many studies find no evidence that infrastructure as measured by the number of telephones per 1,000 population has any impact on FDI inflows to Africa (Morisset, 2000; Asiedu, 2002a; Lemi and Asefa, 2003; Onyeiwu and Shrestha, 2014). However, Asiedu (2002b) suggests the following explanation: FDI to Africa tends to be natural resource - based and the availability of telephones is not relevant for natural resource - based FDI. Indeed, as stressed by Onyeiwu and Shrestha (2014), Angola and Nigeria are reputed to be the highest recipients of FDI in Africa in recent times and yet both countries have very poor infrastructure.

A survey of three African countries by Bhinda *et al*. (1999) during 1984 – 1994 found that problems related to mobilising local banking, leasing and equity finance were on the top of the list of factors discouraging investors in Tanzania, Uganda and Zambia. Bhinda *et al*. (1999) tested the robustness of their basic model using financial deepening (traditionally measured by the ratio of M2 to GDP) as a control variable, but the estimated coefficient turned to be insignificant.

There are two opposing views linking openness of the economy to FDI flows. The "tariff - hopping"/"tariff - jumping" hypothesis posits that high protective barriers stimulate direct investment in the host country as opposed to continuing to service it through exports, because of potential marketing cost savings and transport cost reductions (Krugell, 2005).

On the other hand, the more open the economy, the more it would attract FDI from MNCs seen as different affiliates specialising according to the locational advantages of the host country (Blomstrom and Kokko, 1997). The importance of the latter is well documented in the empirical literature on the determinants of FDI to Africa (Bhattacharya *et al*., 1997; Morisset, 2000; Asiedu, 2002a, 2002b; Bende - Nabende, 2002; Lemi and Asefa, 2003; Onyeiwu and Shrestha, 2004; Yasin, 2005; Dupasquier and Osakwe, 2006; Fedderke and Romm, 2006).

Several studies have found that FDI in African countries is affected negatively by economic and political instability (e.g., Lemi and Asefa, 2003). Political instability subsumes many kinds of events like antigovernment demonstrations, assassinations, cabinet changes, constitutional changes, coups, government crises, purges, revolutions, and riots (Moreira, 2006). It is expected to decrease FDI because it increases uncertainty about the cost and profitability of investment (Krugell, 2005). In turn, instability in macroeconomic variables as evidenced by the high incidence of currency crashes, double digit inflation, and excessive budget deficits, is

associated with macroeconomic policies that are not sustainable and thus makes investment unattractive (Krugell, 2005).

Furthermore, a closer look at the improvements in the business climate of Mali and Mozambique during the 1990s also reveals that macroeconomic and political stability was among the reasons for their recent success (Morisset, 2000). Nevertheless, Lemi and Asefa (2003) show that both political and economic uncertainties are not significant determinants. The same result was reached in Asiedu (2002b).

In relation to political uncertainty *per se*, Morisset (2000), Onyeiwu and Shrestha (2004) and Yasin (2005) find that political instability is not a significant determinant of FDI flows in Africa. As concerns economic uncertainty *per se*, Lemi and Asefa (2003) find that it is binding for FDI to Africa only when economic uncertainty is coupled with political instability and the debt burden of host countries.

Based on panel data for 29 African countries over the period 1975 to 1999, Onyeiwu and Shrestha (2004) also provide evidence that countries with high inflation tend to attract less FDI. Unfortunately, the image of the African continent as a location of FDI is unfavourable, because investors perceive the continent as a home for wars, civil unrest, poverty, disease and a generally unfriendly investment destination, and this result in the diversion of these investments to other regions (UNCTAD, 1999) In other words, African countries receive less FDI than countries in other regions, by virtue of the (perceived) riskiness of the continent.

Asiedu (2002a) and Jaspersen *et al*. (2000) argue that being an African country is indeed a significantly negative determinant of FDI, because of investors' perceptions of Africa as inherently risky. According to the findings of Haque *et al*. (2000) and Collier and Pattillo (1997, 2000), commercial risk rating agencies rate African countries as riskier than justified by their fundamental investment conditions. On the other hand, a study on private capital flows to low - income countries by Martin and Rose - Innes (2003) reveals that investors no longer fully share the continuing negative perception of much of Africa as a "basket case" region with high risk and low return, which determines the attitudes of many MNC headquarters, the international media and some agencies. In a study of regional susceptibility to war, using the co-integration technique, Rogoff and Reinhart (2003) examined Somalia and Rwanda and for the period 1992-2000, found that wars are more likely to occur in Africa than in other regions and there is a negative correlation between FDI and conflict in Africa.

There is empirical evidence that inefficient institutions as measured by corruption and weak enforcement of contracts deter FDI (e.g., Gastanaga*et al*., 1998). According to the institutional quality variable of Knack and Keefer (1995), for instance, the quality of institutions is captured based on the simple average of the ratings provided by the International Country Risk Guide (ICRG) for the following five institutional indicators: rule of law; expropriation risk; repudiation of contracts by government; corruption in government; and extent of bureaucracy.

A country where it takes excessive time and costs to accomplish all procedures necessary to establish and operate will see its potential investors lose money and decide to locate elsewhere or cancel their investment projects (Morisset and Neso, 2002). In addition to the level of bureaucracy involved in establishing a business in a country, the level of corruption or lack of good governance is also expected to be a deterrent to FDI, because, for a firm, paying bribes is not only illegal but it is also like paying a tax and, wherever it exists, it creates uncertainty (Wei, 2000). Corruption can be both the cause and consequence of high administrative barriers in many developing countries (Morisset and Neso, 2002).

Asiedu (2003, 2006) found that an efficient legal framework promotes FDI to Africa, while corruption deters FDI flows to the region.

In many non-francophone African countries, Te Velde (2001) found that freehold ownership is prohibited or requires explicit approval, which may involve long delays varying considerably across countries: up to two years in Mozambique, no freehold ownership in Namibia, up to three years in Tanzania, up to eight years in Kenya and up to six months in Uganda. Emery *et al*. (2000) concentrate on Africa, showing that administrative procedures and rules on ownership can form a significant barrier to FDI. Te Velde (2001) found that it takes one to two years to establish a business and become operational in Uganda and Ghana, 18 months to three years in Tanzania and Mozambique, six months to one year in Namibia, but only six months in Malaysia. In general, from the 1980s to the 1990s the rate of improvements on institutional quality was lower for African countries as compared with other developing countries (Asiedu, 2004).

FDI regulations that have liberalised restrictions have significantly contributed to the improvement of the investment climate (UNCTAD, 1998). They provide for non - discrimination between foreign and domestic private investors, allow profit repatriation, protect against

expropriation, grant incentives, strengthen the standards of treatment of foreign investors, and shift away from targeting specific sectors or foreign investors (UNCTAD, 1998).

Bende - Nabende (2002) found that FDI liberalisation is among the most dominant long - run determinants of FDI in Africa. The results from Asiedu (2003) also indicate that a good investment framework promotes FDI to Africa, i.e. investment restrictions deter investment flows to Africa (Asiedu, 2003). In general, from the 1980s to the 1990s, the pace of liberalisation for African countries as measured by three types of indexes (capital controls; restrictions on trade and investment; FDI policy), was slow compared with other developing countries (Asiedu, 2004).

In spite of the liberalisation of FDI policies, many argue that national FDI policies may not be enforceable and do not address what foreign investors seek in guaranteeing security and benefits (Lemi and Asefa, 2003). Thus, countries are signatories to bilateral and multilateral investment and trade treaties to show their commitment and to ensure the protection of investment, which will make them more attractive for foreign investors (UNCTAD, 1998).

Lemi and Asefa (2003) found that government policy commitment as measured by the number of Bilateral Investment Treaties (BIT) signed by a host country and membership in Multilateral Investment Guarantee Agency (MIGA) play an important role in attracting US manufacturing firms to Africa. According to Morisset (2000), the adoption of international agreements related to FDI explains the recent improvements in the business climate of Mali and Mozambique. During the 1990s both countries have become members of MIGA. Mali have also acceded to the Convention on the Recognition and Enforcement of Foreign Arbitral Awards, while Mozambique have signed the International Convention on Settlement of Investment Disputes between states and nationals of other states (ICSID) and become member of the Industrial Free Zone in 1994 and the World Intellectual Property Organization in 1996. Morisset (2000) shows that greater investment promotion is associated with higher cross-country FDI inflows.

However, the author argues that investment promotion is more effective in a country with a good investment climate and a relatively high level of development. On the same vein, Dupasquier and Osakwe (2006) state that African governments set up agencies to promote foreign investment without taking steps to lift the constraints on FDI in the region and therefore IPAs have not been successful in reversing the declining trend in FDI flows to the region.

The profitability of investment, the productivity of capital is another major determinant of FDI flows. FDI will go to countries that pay a higher return on capital, i.e. the international movement of FDI occurs when rates of return on FDI exceed the rates of return on home investment (Root, 1984).

Jaspersen *et al*. (2000) and Asiedu (2002) use the inverse of real GDP per capita as a proxy for the rate of return on investment (as capital - scarce countries generally have a higher rate of return, implying low per capita income) and found a negative relationship between the two variables for the African region and for non - African countries, respectively.

Alongside the host country's real wage rates, foreign exchange rates, land and property rents/rates, fuel costs, local input costs (where applicable), level of taxation, transportation costs, and cost of capital are other key cost - related locational factors that may considerably influence the choice of an investment location (Bende - Nabende, 2002). Schoeman *et al*. (2000) and Fedderke and Room (2006) find that corporate tax rates impact negatively on FDI to South Africa. Bende - Nabende (2002) and Yasin (2005) show that low currency values are expected to encourage FDI flows in Africa. Lemi and Asefa (2003) use the cost of capital (i.e. lending interest rate) as a control variable for examining the relationship between uncertainty and FDI flows in African economies, but the estimated coefficient rendered non - significant.

Foreign investors can be lured to countries with an existing concentration of other foreign investors, since it is a good signal of favourable conditions and there are evident economies of scale in the development of backward and forward linkages (UNCTAD, 1998; Kinoshota and Nauro, 2003). However, the agglomeration of economies or the clustering of investors as partially captured by the share of urban population does not appear to have been a major determinant in the business climate for FDI in Africa (Morisset, 2000).

Launching an attractive privatisation programme is among the strategic actions recommended by Morisset (2000) for the improvement of the investment climate for FDI, based on a detailed review of the policy reforms implemented by African countries during the 1990s.However, a survey of investors by Martin and Rose - Innes (2003) did not prove privatisation as one of the factors for the large capital inflows to Africa, except for a few investors who had bought privatised companies.

5.2.2.2 A review of empirical findings on the determinants of FDI in Africa using single-country studies employing a time-series approach

According to Morisset (2000), who used data from 1995 to 2000 and the survey technique, found that there is room for the South African government to transform its economy into an investor - friendly environment, by adjusting fiscal policy. The main finding is that fiscal policy variables have a negative effect on FDI flows to South Africa.

Odenthal (2001), using data for 1990 - 2000 for Mauritius, found that inward FDI is partly explained by the relatively cheap, adaptable and well trained workforce. In the same vein, Fedderke and Romm (2006) show that wage costs impact negatively on FDI to Africa. However, this study is based on a short sample period, few variables, uses a basic OLS regression and does not account for the integration/co integration properties of the data alongside possible structural breaks.

Kolstad and Tondel (2002) using data from 1985 to 2001 and employing the OLS technique, argue that countries rich in oil and other natural resources, such as Angola, are able to attract heavy FDI inflows. Indeed, it is in the mining of high - value minerals and petroleum where Africa is particularly prominent as a host to FDI and where great potential for future FDI exists (Basu and Srinivasan, 2002).

Basu and Srinivasan (2002), using data from 1989 to 2001 and employing the survey method, reported that excessive market regulations, i.e. domestic investment policies on profit repatriation and on entry into some sectors of the economy, were not conducive to FDI attraction in Ghana. Ghana has expanded the scope for foreign investment by reducing the sectors previously closed to foreign investment (Basu and Srinivasan, 2002).

Dupasquier and Osakwe (2006) using data from 1985 to 2005 and employing the POLS method, argue that the lack of good legal and judiciary systems is a possible deterrent to FDI in South Africa. The institution of the judiciary is critical to protecting property rights and improving property rights, in turn, it was found to raise the attractiveness of South Africa as a location of FDI (Fedderke and Romm, 2006). However, with limited units of analyses and points in time, the problems of autocorrelation and heteroskedasticity become a nuisance.

Fedderke and Romm (2006) using data from 1986 to 2005 and employing the OLS and LM methods, also find that political stability has a positive impact on FDI to South Africa. The

results for FDI to Africa also indicate that political instability is a concern to foreign investors (Lemi and Asefa, 2003).

Alfarsi and Almanasory (2006) using data for the period 1983 – 2005 and employing the survey method explored the factors that attract and discourage FDI in Libya. In order to achieve the aims of the study, the questionnaire approach was used to analyse the views of foreign companies that conducted FDI in Libya.

Alfarsi and Almanasory found that the most important factors that motivated foreign investors were attractive geographical location; proximity to world markets; political stability and security. On the other hand, the most important factors that discouraged FDI from investors' point of view were (according to investors' ranking) weak structure of communication and transport, lack of data and information required by investors, absence of a stock market, and lastly lack of labour in terms of both quality and quantity.

Considering FDI to Kenya, Agodo (1978), using data from 1970 to 1975 and employing the survey method, found GDP and GDP per capital to be a positive influence, whilst GDP growth was insignificant. The hypothesis that higher growth rates foster FDI is also not significant in Asiedu (2002) and Yasin (2005). The authors add that the attractiveness of the host country's market is particularly important for market - seeking FDI, which is not likely to be the case as the countries included in their analysis are mostly poor and small countries.

Schoeman *et al*. (2000) using OLS for the period 1989 – 1999, focused on fiscal stability as it is generally considered to be one of the indicators of macroeconomic stability. The results suggest that the higher the budget deficit relative to South African GDP, the greater the negative impact on FDI relative to South African GDP. Schoeman *et al*. (2000) use the yield - interest differential in order to capture the return on investment in South Africa (for investment to be profitable, the yield on investment should exceed its opportunity cost, the real interest rate) and found that an increase in the difference between the yield (return) on investment and the interest rate increases FDI flows in South Africa.

In a survey of foreign owned firms in Egypt, Sachs and Sievers (1998) over the period 1985 – 1995, find that the greatest concern of firm owners is stability, both political and macroeconomic. In an empirical analysis of the social and political development of foreign investment in Angola, Kolstad and Tondel (2002) find that countries that are less risky attract

more FDI per capita. Asiedu (2003, 2006) also shows that both macroeconomic and political instability deter FDI flows to Africa.

In addition, Rogoff and Reinhart (2003) obtain a statistically significant negative correlation between FDI and the following indicators of political and economic instability in Somalia and Rwanda: conflicts; inflation; probability that the parallel market premia is above 50 percent.

Dupasquier and Osakwe (2006) summarise the reasons for Africa's poor FDI record, based on an overview of the empirical determinants of FDI to Africa. Their main aim is to identify concrete actions or strategies that need to be adopted at the national, regional and international level to enhance FDI flows to Africa. Below, are the following reasons: a) image building through an increase in political and macroeconomic stability, as well as in the protection of property rights and the rule of law; b) supporting existing investors through infrastructure development, provision of services and changes in the regulatory framework (e.g., relaxing laws on profit repatriation); c) marketing investment opportunities through the use of existing investors and information communication technologies instead of over - reliance on Investment Promotion Agencies (IPAs); d) diversification of the economy; e) trade liberalization; f) privatization; g) enhancing regional integration; h) providing an external agency of restraint on domestic policies through the formation of regional groups; i) promoting good governance through regional surveillance mechanisms; j) initiating and encouraging infrastructure development projects at the regional level; k) improving market access at the international level through the elimination of trade barriers and subsidies on agricultural goods exported by African countries; l) investment promotion assistance by governments of developed countries through the provision of accurate information to investors in their countries; m) technical assistance by governments of developed countries in areas such as capacity building, health and education (Dupasquier and Osakwe, 2006).

Yasin (2005) explores four determinants of FDI namely, openness, GDP, political instability and government policies, by using the survey method in Angola for the period 1990 - 2003. Yasin (2005) examines how ODA (Official Development Assistance) influences FDI in Africa, based on the assumption that ODA programs may remove some of the obstacles to FDI flows and thus improve the economic conditions that attract FDI. The results for Africa indicate that a positive

relationship exists between bilateral ODA and FDI, while multilateral ODA is not a critical requirement for FDI activities by the multinationals located in these countries.

5.2.3A review of empirical findings on the determinants of FDI in Nigeria

Nigeria, in its quest to attract foreign investments has engaged in several reforms and policies, the most prominent of which are the industrial policy of 1989, the enactment of Nigerian Investment and Promotion Council (NIPC) in the early 1990s, deregulation of the economy, and the signing of bilateral investment treaties (BITs) which took place in the late 1990s. With the coming of the present democratic dispensation Nigeria witnessed yet another economic reform aimed at complementing the existing reforms earlier mentioned. These reforms and policies led to the establishment of the economic and financial crimes commission (EFCC), the independent corrupt practice and related commission (ICPC) Bureau of Public Enterprises (BPE), and a host of other latent reforms geared to woo investors locally and internationally (Ayanwale, 2007).

Despite all these efforts by successive administrations, Nigeria's indices of inward FDI remain abysmal. Though studies abound on the subject under discussion, many variables by different authors in different studies such as size of the market of the host country, infrastructure, openness, economic instability, exchange rate instability all appear to a have negative effect on FDI as according to Anyanwu (1998).

Ayanwale (2007), using co-integration technique for the period 1985-2005, found domestic investment, openness and indigenisation policy are all very important determinants of FDI in Nigeria. Ekpo (1997), using pooled OLS and lanragian multiplier tests (LM), tested some variables collected from 1986 – 1989, argued that a high bank lending rate that was witnessed during the deregulation era of the late 1980s contributed significantly to inducing FDI inflows. From this evidence, Ekpo (1997) concludes that the provision of credit to investor in the form of subsidised loans, loans guarantees, and export credit will definitely stimulate immediate cash flow and liquidity.

There are a number of articles that are explicitly devoted to the analysis of FDI in Nigeria (see Edozien, 1968; Oladipo, 1987; Louis, 1998; Anyanwu, 1998 and Akinlo, 2004 among others). Investigating the determinants of FDI in Nigeria, Louis (1998) using an error correction specification to analyse data collected during 1980 – 1995, found that both political and economic factors constitute the major determinants of FDI in Nigeria.

Anyanwu's (1998) findings that political factors are not a significant determinant of FDI, are weighty and needs further empirical corroboration. Anyanwu (1998) using the co integration technique, found political factors to be insignificant in the determination of FDI in Nigeria and that economic factors are the key determinants. Anyanwu's (1998) study of the economic determinants of FDI in Nigeria also confirmed the positive role of domestic market size in determining FDI flows to the country. This study noted that the abrogation of the indigenisation policy in 1995 significantly encouraged FDI flows into the country and that more effort is required in raising the nation's economic growth so as to attract more FDI. However, the reliability of these results could be questioned, since a larger number of years is needed when employing the co-integration technique as a method of analysis.

Obwona and Egesa (2007) examined some variables for the period 1983 – 2005, using a survey method. They argued that foreign investors also look at factors such as the ease with which foreign firms operating within a country can employ expatriate staff, privatisation and development of banking and financial institutions. They opined that all these factors play an important role in FDI inflows. However, for surveys, often the samples are too small to be representative.Other factors that could attract FDI into the country include inflation, deregulation and openness (Wafure and Abu, 2010).

In Nigeria, Ekpo (1997), using the co-integration technique, examined the relationship between FDI and some macroeconomic variables for the period 1970-1994. The results suggested that the interest rate, credit rating, and debt service explained the variance of FDI inflows into Nigeria.

Obadan (1982), using data collected from 1970 to 1980, and using OLS and LM tests, concluded that market size, trade policies and raw materials are very important determinants of FDI in Nigeria. Anyanwu (1998) maintained that domestic investment, openness and indigenisation policy are important determinants in attracting FDI to Nigeria. Wafure and Abu (2010), went further to analyse data collected from 1985 to 2005. They investigated the determinants of FDI with a strong focus on deregulation. The authors employed the error correction technique, and confirmed that market size, deregulation, political instability, and exchange rate depreciation were the main determinants of FDI in Nigeria. In fact, recent works such as Akinboade *et al*. (2007), Asante (2007), Obwona and Egesa (2007), as well as Ogunkola

and Jerome (2007), who employed data from 1992 to 2005 using OLS and LM methods, emphasised the role of privatisation in attracting FDI into Nigeria.

According to Aremu (1997), who used data from 1987-1990, and employed a survey method, the high bank lending rate that existed during the early days of deregulation has affected internal rate of return (IRR) on investment negatively, thereby boosting investment inflows. However Aremu (1997) opined that the host country's FDI make credit available to investors in a form of subsidised loans, loan guarantees as well as guaranteed export credits. He noted that these credits are provided directly to foreign investors for their operations particularly to defray some inevitable costs which invariably have an immediate impact on cash flow and liquidity.

Olatunji (2010) used data for 1990 – 2000 and employing pooled ordinary least square (POLS) and random effects (RE) methods, found that despite government efforts to provide incentives to many investors, many investors are still resistant and cautious to come to Nigeria. His results show that poor infrastructure, general insecurity, sectarian violence, the arm revolt in the Delta region and the pervasive indiscipline that is becoming the order of the day in the Nigerian economy, all deter FDI inflows.

Wafure and Abu(2010) maintained that it is not profitability of investment today that attracts investors, but how long the profit will remain fairly stable overtime. Whenever the socio-political and economic environment is highly volatile, an investor is better off exercising his option to wait. On the other hand, he might decide to invest on those projects whose cycles are very short and can be easily undone.

Iyoha (2001) examined the effects of market size and inflation on foreign private investment inflows. He used data from 1985 to 1999, analysing them with basic OLS regression analysis. He shows that market size attracts FDI to Nigeria whereas inflation discourages it. However, this study is based on a short sample period, few variables, uses a basic OLS regression and does not account for the integration/co-integration properties of the data alongside possible structural breaks.

Louis (1998) using an error correction specification to analyse data from 1980 to 1996, found that both political and economic factors constitute the major determinants of FDI in Nigeria. Osuagwu (1982), using OLS, found that the determinants of investment demand in Nigeria from 1960– 1975 were the expected rate of returns, the supply of funds, absorptive capacity and government policies. In a study conducted by Essien and Onwioduokit (1999),

using OLS for 1975 – 1990, it was found that a long-run equilibrium relationship exists between FDI flow and such variables as debt service, interest rate differential, and nominal effective exchange rate. Salako and Adebusuyi (2001), using co-integration and error correction techniques, find that rate of inflation and real per capita income were the major factors that influence FDI in Nigeria for the period 1970 – 1998.

Obadan (1994) partially confirmed that market size, trade policies and raw materials are critical determinants of FDI in Nigeria, using data from 1983 to 1993, having analysed them using conditional logit model (CLM). Obadan (1994) also traced the importance of exchange rate on inflows of foreign private investment and noted that its importance as the centrepiece of the investment derives from the argument that a sustained exchange rate misalignment in terms of over-valuation or under-valuation is a major source of macroeconomic disequilibrium. Consequently, an over-value negatively affects the foreign private investment environment.

Anyanwu (1998) highlighted the significance of domestic investment, openness of the economy and indigenisation policy as playing a major role in determining the degree of FDI in Nigeria. Ajakaiye (1997) in a survey, posited that the rising bank lending rate profile in Nigeria during the 1987-1990 periods was noted to have discouraged productive FDI in Nigeria, consequent upon the fact that lower lending rate in the host economy is expected to have an overall effect of higher internal rate of return (IRR) on investment and boost investment inflow.

Aremu's (1997) observation has also shown that the host country of FDI provides credit to investors in the form of subsidised loans, loan guarantees as well as guaranteed, export credits. These credits are provided directly to foreign investors for their operations to defray certain costs that may consistently have an immediate impact on liquidity and cash flow.

Despite the growing consensus on the importance of attracting FDI within Nigeria, the Nigerian government still enacts policies that have direct and indirect negative effects on the profitability of multinational firms. These risks have led to the development of an industry dedicated to providing insurance covering political risks for multinational operations. Political risk insurers charge premiums for political risk coverage against the confiscation of firms' assets (expropriation risk) restricting the repatriation of profits or other capital transactions (transfer risk) or risks associated with war or civil disturbance (political violence risk) (Kareem *et al*., 2012).

Table 5.1A Matrix identifying common and different variables determining FDI globally, in Africa and Nigeria.

	Global	African	Nigeria
Common variables	• Exchange rate • Inflation • Tax • Government incentives • Government policies • Interest rate	• Exchange rate • Inflation • Tax • Government incentives • Government policies • Interest rate	• Exchange rate • Inflation • Tax • Government incentives • Government policies • Interest rate
Different variables	• Education • Good infrastructure • Financial sector development • Economic growth and development • Friendly business environment • Economic and political stability • Market size	• Debt • Natural resources • Political instability • Openness • Cheap labour costs • Market size and growth • Political regime	• Sectarian violence • Natural resources • Political instability • Debt • Cheap labour costs • Privatisation • Liberalisation • Political regime

In Table 5.1 above, a brief summary of variables that are common in determining the level of FDI globally, in Africa and Nigeria are highlighted. Due to the fact that what works as a determinant of FDI in one country or continent does not necessarily work in another country or continent, we were able to identify different variables that work differently in attracting FDI into

various countries (Please see appendix for tabular presentations of FDI determinants globally, in Africa and Nigeria).

5.3 A methodological appraisal of studies investigating FDI

Having conducted such a thorough review of the empirical literature on the determinants of FDI, it is worth at this point to ask the questions of what has been learnt, methodologically, and how limitations of previous studies can be avoided in the analysis to be conducted for this PhD. Outlined below are the specific advances this study aims to undertake over the previous empirical studies.

(1) Most studies have used basic OLS technique and we have also identified from all the previous investigations that only a few studies have actually investigated the integration and co-integration properties of the series. The latest ARDL co-integration technique has not yet been used in application to the investigation of inward FDI in the context of Nigeria. Therefore, this study is going to employ the ARDL bounds testing technique to co integration analysis, which is the most suitable state-of-the-art technique to examine the long term relationship in hand.

(2) The review of the studies conducted on the determinants of FDI reveals that these studies have only managed to use very short sample periods whereas fairly long sample periods should have been used. In an attempt to correct this error, this research will be using a longer sample period to ensure the validity of the results (data availability permitting).

(3) It is important to obtain data from very reliable sources. Here, we see that, generally, data used are not verified on the basis of credible international sources. The present study will make use of data from internationally accredited sources namely, UNCTAD, International Financial Statistics database of the IMF, and World Development Indicators database of the World Bank.

(4) Most studies seem to focus on few variables of interest. Failing to specify a comprehensive model of theory-based FDI determinants may lead to model specification bias. This study will be formulating a comprehensive model of theory-based determinants of FDI in Nigeria, thereby conducive to producing valid results.

5.4 Culminating model development and Model specification

The model adopted for this research starts from the baseline model employed by Balasubramanyam (1996) and is further developed by adding more relevant variables such as inflation, foreign debt, and the exchange rate (as informed by the review of the theoretical and empirical literature examined in chapters 4 and 5). The model finds its theoretical basis in Solow's production function framework (Solow, 1974), which has been used widely to analyse the determinants of growth in developing countries, testing hypotheses that involve the estimation of a function, which relates growth of aggregate output to growth of factor inputs, and to a variable representing growth of total factor productivity. The equation estimated is derived from the following basic neoclassical growth equation which we can also extend to any number of inputs (see also Chenery and Strout, 1966).

$$Q = A + b_1 K + b_2 L \tag{5.1}$$

$$Q = f(K, L) \tag{5.2}$$

where: Q is the growth rate of aggregate output, A is total factor productivity, K is capital, F is a function, and L is labour. b_1 and b_2 are the elasticities of output with respect to the inputs.

The empirical literature on input–output relationships in developing countries such as Nigeria suggests that the production approach is a useful reference for analysing such a relationship. The general form of the equation is written as:

$$Q_g = \alpha_0 + \alpha_1 I / Q_{t-1} + \alpha_2 L_g + \alpha_3 Z_g \tag{5.3}$$

where: Q_g is the growth rate of real aggregate output, I denotes domestic investment, Q_{t-1} is GDP in the previous period (lagged GDP), L_g is the growth rate of labour, Z_g is the growth rate of other variables influencing factor productivity, a_0 is the constant term assumed to represent the growth of productivity, and a_1, a_2 and a_3 are the parameters.

In empirical studies by Tyler (1981), Ram (1985) and Balassa (1988), the variable Z_g refers to the growth of exports, external debt, inflation, economic growth, interest rate, openness and foreign exchange reserve as determinants of productivity. Others include political risk, natural resources, real exchange rate, education, government capital investment, population,

stability in government, domestic investment, source of Fund (Capital market) and disposable income.

The production function can be written as:

$$Q = f\left(fdi,\ gdp,\ gdpgrowth,\ gdppcgrowth,\ open,\ exrvol,\ oil,\ ir,\ debt\right) \tag{5.4}$$

where: *fdi* is inward FDI, *gdpgrowth* is GDP growth rate, *gdp* is GDP, *gdppcgrowth* is GDP percapita growth rate, *open* is Trade, *exrvol* is exchange rate volatility, *oil* is oil rents, *ir* is the lending interest rate, and *debt* is public debt=debt

The augmented production function in application to FDI determination then becomes:

$$FDI = f\left(gdp,\ gdpgrowth,\ gdppcgrowth,\ open,\ exrvol,\ oil,\ ir,\ debt\right) \tag{5.5}$$

which can be written as an econometric model as follows:

$$FDI_t = \beta_0 + \beta_1 gdp_t + \beta_2 gdpgrowth_t + \beta_3 gdppcgrowth_t + \beta_4 open_t + \beta_5 exrvoli_t + \beta_6 oil_t + \beta_7 ir_t + \beta_8 debt_t + u_t \tag{5.6}$$

where: u_t is the error term (assumed to be normally and independently distributed with a zero mean and a constant variance) and β are the regression parameters.

In Table 5.2 below, the variables employed in this study are presented in a tabular form. Here the variables and their measures are highlighted in the table. The table also specifies the sources from which the variables were obtained.

Table 5.2 Table of variables employed in this study

Variables	Measures	Data source
FDI	Inward FDI	Data extracted on 13 Sep 2016 15:21 UTC (GMT) from World Development Indicators (WDI) and International Financial Statistics databases 1970-2014
GDP growth rate	GDP growth rate	Data extracted on 09 Sep 2016 22:14 UTC (GMT) from World Development Indicators (WDI)and International Financial Statistics databases 1970-2014
Openness/Trade	Import plus Export divided by GDP (IEG)	Data extracted on 13 Sep 2016 15:21 UTC (GMT) from World Development Indicators (WDI)and International Financial Statistics databases 1970-2014
Crude oil	OIL rents (% of GDP)	Data extracted on 13 Sep 2016 15:33 UTC (GMT) from WORLD Development Indicators (WDI)and International Financial Statistics databases 1970-2014
External debt	External debt stocks, total (DOD, current US$)	Data extracted on 13 Sep 2016 15:33 UTC (GMT) from World Development Indicators (WDI)and International Financial Statistics databases 1970-2014
Exchange rate volatility	Exchange rate (EXR VOL)	Data extracted on 13 Sep 2016 15:21 UTC (GMT) from World Development Indicators (WDI)and International Financial Statistics databases 1970-2014
Interest rate	Lending Interest rate (INT)	Data extracted on 13 Sep 2016 15:21 UTC (GMT) from World Development Indicators (WDI)and International Financial Statistics databases 1970-2014
GDP	GDP	Data extracted on 13 Sep 2016 15:21 UTC (GMT) from World Development Indicators (WDI)and International Financial Statistics databases 1970-2014
GDP per Capita Growth rate	GDPpcgrowth rate	Data extracted on 13 Sep 2016 15:21 UTC (GMT) from World Development Indicators (WDI)and International Financial Statistics databases 1970-2014

Source: Developed by the author (2016)

5.5 Concluding remarks

The review of the empirical literature in this chapter revealed that previous studies have employed a wide range of models, variables, methodological techniques and time periods to establish, empirically, the determining factors that exert a systematic influence on FDI inflows to any particular region or country. We started this review process of the applied work on the determinants of FDI scrutinising studies across the world, and then, given that our interest in this thesis centres on Nigeria, narrowed down to studies that focused exclusively on Africa's inward investment and, finally, solely on studies that examined the case of Nigeria. This review highlighted that there are numerous factors that can be expected to, and indeed do influence inward FDI. Yet we also learned that factors that apply to countries from the developed world do not necessarily apply to the less developed regions, especially Nigeria, due to various reasons. This observation may also explain the irregularity in the proportion of FDI flows that Nigeriahas been able to attract to date.

Finally, with the aim of preparing the ground for the empirical analysis of the determining factors affecting the inward flow of FDI into Nigeria, a baseline model was distilled from the review of the literature. The model aims to capture all the theory-based and empirically-tested variables that can reasonably be expected to exert an influence on inward FDI in Nigeria. The model adopted for this study draws primarily from the baseline model put forward by Balasubramanyam (1996), then considerably extended to account for variables such as inflation, foreign debt, and the exchange rate. Theoretically, the model is based on Solow's production function framework, which has been used majorly to analyse the determinants of growth in developing countries also with reference to variables included in the model to be tested in the present study.

The next chapter provides a detailed coverage of the specific econometric methodology to be employed to conduct the analysis.

CHAPTER 6: ECONOMETRIC MODEL

6.1 Chapter overview

This chapter begins by providing an overview of key concepts of the econometric[1] methodology used for the analysis of FDI determinants to be undertaken in this PhD study, namely, cointegration. Cointegration is a concept for modelling equilibrium or long-run relations of economic variables. The cointegration framework has developed rapidly over the last two decades, with many economic phenomena being investigated or re-investigated leading to considerable new findings and insights. After discussing the basic ideas of stationarity, unit roots and short-run models, the concept of cointegration is unpacked, with special emphasis given to multivariate cointegration. The chapter then provides a detailed discussion of the software to be employed in this study (EVIEWS 9.0) and specific unit root test (Ng and Perron, 2001) and the Autoregressive Distributed Lag (ARDL) bounds testing method of cointegration that will be applied in the present study, whilst offering a justification for the use of these econometric techniques, including a summary of the steps to be undertaken when doing the estimations.

6.2 Basic econometric concepts and early cointegration developments

As noted by Harris (1995), in time series modelling, we only have limited knowledge of the processes that determine the observed data. Whilst generally models involving data are guided by economic theory, in modelling and estimation, reliability also relies on properly characterising the statistical processes underlying the data generation process (DGP), first and foremost, whether the series are stationary or contain unit roots.

As clearly explained by Harris (1995, p.15) a *stationary* series "*tends to return to its mean value and fluctuate around it within a more-or-less constant range (i.e., it has a finite variance), while a nonstationary series has a different mean at different points in time (and thus the concept of mean is not really applicable) and its variance increases with the sample size*". More specifically, *stationarity* indicates that the mean (see Equation 6.1) and variance (see

[1] As eloquently explained by Tintner (1953) cited in Kennedy (1998, p.1), "*Econometrics is the study of the application of statistical methods to the analysis of economic phenomena*".

Equation 6.2) of a series, are constant over time. Furthermore, in a stationary process, the value of the covariance between two time periods, i.e., $\gamma_k = E\left[\left(Y_t - \mu\right)\left(Y_{t+k} - \mu\right)\right]$, depends only on the lag between the two time periods (k). If these conditions do not hold to be true, the series is said to be nonstationary. If the series has constant mean but a non-constant variance, the time series is said to be 'weakly stationary' (Gujarati, 2007).

$$E\left(Y_t\right) = \mu \tag{6.1}$$

$$var\left(Y_t\right) = E\left(Y_t - \mu\right)^2 = \sigma^2 \tag{6.2}$$

where $E\left(Y_t\right)$ $E(Y_t)$ and $var\left(Y_t\right)$ are the mean and variance of Y, respectively.

In a seminal paper, Nelson and Plosser (1982) showed that most time series have stochastic trends, these are also called unit root processes. Many subsequent applied econometric studies have shown that most macroeconomic time series are, in fact, nonstationary. Reasons advanced to account for this include changes in technology that can cause a stochastic trend in economic data, sudden environmental catastrophes, health and safety threats and policy changes that drive different behaviours by economic agents.

Interestingly, and worryingly, conventional econometric modelling was, up until the early 1980s, based on the assumption of stationarity, with econometricians paying little attention to the specification of the dynamic structure of the time series (Kennedy, 1998). Nevertheless, if a dependent variable (Y) and an explanatory variable (X) are both strongly trended, then regressing Y on X by the ordinary least squares (OLS) method may suggest a stronger explanatory power than it is actually the case. Indeed, there may in fact be no *causal* relationship between the two variables. This problem is the now well documented *spuriousregression problem* (see Granger and Newbold, 1974), "*whereby the results obtained suggest that there are statistically significant relationships between the variables in the regression model when in fact all that is obtained is evidence of contemporaneous correlations rather than meaningful causal relations*" (Harris, 1995, p.14). When the means and variances of macroeconomic time series vary over time, so do their respective distributions. Since conventional F and t test statistics do not have their usual distribution for a nonstationary series (e.g., a series integrated of order 1), erroneous inferences are made (Endresen, 2005). In fact, approximately 90 years ago, Yule (1926) had already pointed out that calculating correlation coefficients without testing for stationarity tended to produce 'nonsense correlations'. Granger and Newbold (1974) picked up this critical issue again

in the early 1970s, detailing the 'tell tell' signs of 'nonsense correlations' indicative of a spurious regression problem as follows:

> "*It is very common to see reported in applied econometric literature, time series regression Equations with an apparently high degree of fit as measured by the coefficient of multiple correlation R^2 but with an extremely low value for the Durbin-Watson statistic. We find it very curious that whereas virtually every textbook on econometric methodology contains explicit warnings of the dangers of autocorrelated errors this phenomenon crops up so frequently in well-respected applied work*." (Granger and Newbold, 1974, p. 111)

As can be seen in Equation (6.3), the variable y_t is explained by its lagged value (y_{t-1}), the regressor x_t, and the 'white noise' errors[2] ε_t (the ε_t disturbance term encapsulates all other random, i.e., stochastic, influences):

$$y_t = \beta_1 + \beta_2 x_t + \beta_3 y_{t-1} + \varepsilon_t \tag{6.3}$$

Now let us assume that $\beta_1 \neq 0,\ \beta_2 = 0$ and $\beta_3 = 1$, then $\Delta y_t = \beta_0 + \varepsilon_t$. Changes in y_t are, therefore, drawn from the distribution of ε_t. If the error ε_t is 'white noise', then the changes in y_t are entirely drawn from a stochastic distribution. That process is inherently nonstationary and there is a 'unit root problem' (Studenmund, 2001).

When lagged values are substituted into the Equation for y_t in (6.3), so that $y_t = \beta_1 + \beta_3\left(\beta_1 + \beta_3 y_{t-2} + \varepsilon_{t-1}\right) + e_t$, y_t embeds the current and past values of ε_t. By continuing the substitution of lagged values for y_t, it can be shown that the variance for y_t is:

$$Var[y_t] = \sum_{i=0\ldots\infty}\left(\beta_3^{\,i}\right)^2 Var\ [\varepsilon_{t-i}]\ = \sigma^2 / \left(1-\beta_3^{\,2}\right) \tag{6.4}$$

Evidently, it can be seen from Equation (6.4) that the variance of y_t is indeterminate if $|\beta_3| = 1$.

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2 'White noise' errors are normally and independently distributed (uncorrelated), have a mean equal to 0, and a constant and finite variance = σ^2 (i.e., they are homoskedastic), thus satisfying Ordinary Least Square (OLS) assumptions (Kennedy, 1998).

$|\beta_3| = 1$ is equally an obvious requirement for the existence of a finite variance and, in turn, for the stationarity assumption to hold (Green, 2000).

As observed by Endresen (2005), Hendry and Juselius (2000) resorted to the use of a lag-operator to deal with the issue of stationarity and dynamic processes. Consider the lag operator:

$$u_t = \rho L u_t + \varepsilon_t \tag{6.5}$$

where $Lu_t = u_{t-1}$. It follows that *u* can be expressed as:

$$u_t = \frac{\varepsilon_t}{(1-\rho L)} \tag{6.6}$$

$1/(1-\rho L)$ can be expanded as $(1+\rho L + \rho^2 L^2 + \ldots)$ provided $|\rho| < 1$. Therefore, Equation (6.6) can be re-expressed as:

$$u_t = \varepsilon_t + \rho\varepsilon_{t-1} + \rho^2\varepsilon_{t-2} + \ldots \tag{6.7}$$

When $|\rho| < 1$ the impacts of previous errors (ε) decline over time but if $\rho = 1$ then the impacts persist, and u_t has a stochastic trend. u_t is the sum of all previous disturbances. As argued by Hendry and Juselius (2000), such an accumulation represents integration. A process whereby $\rho = 1$ is integrated of order of 1.

For illustration purposes, Hendry and Juselius (2000) present function (6.8) and simplify it as (6.9):

$$y_t = \rho y_{t-1} + \gamma(1-\rho)t + \rho\gamma + (1-\rho)y_0 + u_t \tag{6.8}$$

$$y_t = b_1 y_{t-1} + b_2 t + b_0 + u_t \tag{6.9}$$

where $b_1 = \rho,\ b_2 = \gamma(1-\rho),\ b_0 = \rho\gamma + (1-\rho)y_0$

On the basis of alternative values of γ and ρ in Equation (6.9), four types of models can be identified:

(i) Simple random walk[3], i.e. $\Delta y_t = u_t$ $(\text{where } \rho = 1;\ \gamma = 0)$;

[3]A random walk is a mathematical expression of a path made up of a sequence of stochastic (i.e., random) steps. The path of many series may be modeled as random walks, although they may not be truly random in reality. The term was first introduced by Karl Pearson in 1905 (Pearson, 1905) and random walks processes have since been used (i.e., modeled) in many fields ranging from physics through to economics to explain the observed behaviors of

(ii) Random walk with drift, i.e. $\Delta y_t = \gamma + u_t \ \left(\text{where } \rho = 1;\ \gamma \neq 0\right)$;

(iii) Trend stationary model, i.e. $\Gamma = b_2 / \left(1 - \rho\right)$ (where $|\rho| < 1;\ \gamma \neq 0$);

(iv) Stationary autoregressive model with a constant, i.e. $y_t = \rho y_{t-1} + (1-\rho) y_0 + u_t$ (where $|\rho| < 1;\ \gamma = 0$).

6.3 Short-run models and the error-correction (ECM) specification

Now, let us assume that, in Equation (6.3), $\beta_2 \neq 0$ and $\beta_3 \neq 0$, and that y_t and x_t are trended. Simple OLS estimation would most likely produce the spurious results discussed earlier. First differencing Equation (6.3) gives:

$$\Delta y_t = \beta_2 \Delta x_t + v_t \tag{6.10}$$

where $v_t = \varepsilon_t - \varepsilon_{t-1}$.

The technique of 'differencing' the series would obviously remove unit roots, but Equation (6.10) now only provides information about the short-run. The equilibrium level information of y_t and x_t is absent in Equation (6.10), and hence all the long-run information about the relationship between them is lost (Endresen, 2005).

Now consider three cases for Equation (6.3), where y_{t-1} is (a) in equilibrium, (b) below its long-run equilibrium value, and (c) above its long-run equilibrium value. In (a) there is no reason why y should change during t unless the variables satisfy their equilibrium relations at the end of both period t and $t-1$. In the cases (b) and (c), with the same change in *x* as in (a), where *y*was in disequilibrium at the end of $t-1$, y might change more (less) than indicated by Equation (6.10) in case b (case c). The change in *y* during *t* is contingent upon the change in x during t, but also upon the x and y relationship at the end of period $t-1$.

Estimation of Equation (6.10) yields $\Delta y_t = a\hat{} + \beta_2 \Delta x_t$. Then, if at some point, *x* starts to be constant, then *y* should be so too in the presence of equilibrium, but if *x* becomes constant

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many series in these fields. The random walk process specified in (i) above is described as a 'simple' random walk since various more complex types of random walks can be modeled within the family of Markov chains and Brownian motion processes.

then $\Delta x = 0$, and $\Delta y_t = a^{\wedge}$. It follows that *y* continues to increase (decrease), and no stable equilibrium can be emerge.

The examples above should suffice in illustrating that – in spite of being able of making stationary a series integrated of order 1 - 'first-differencing' does not generally offer a satisfactory solution to the problem of variables containing a unit root. This has led to the development of Error Correction Models (ECMs).

As illustrated by Thomas (1997) in the context of a consumption function, $Y_t = KX_t^{\beta_1}$, can be written in logarithmic form:

$$y_t = \beta_0^* + \beta_1 x_t \tag{6.11}$$

where K and β_1 are constants and β_0^* is the log of K. Equation (6.11) represents a level (long-run) equilibrium relationship. If y is not in equilibrium, then Equation (6.12) expresses the *disequilibrium error*:

$$y_t - \beta_0^* - \beta_1 x_t \tag{6.12}$$

Now let us assume that the short run disequilibrium entails lagged values of both variables:

$$y_t = b_0 + b_1 x_t + b_2 x_{t-1} + \mu y_{t-1} + \varepsilon_t \tag{6.13}$$

where $0 < \mu < 1$. Estimating regression (6.13) involves the levels of variables that might be nonstationary. Thus, re-arranging Equation (6.13) gives:

$$\Delta y_t = b_0 + b_1 \Delta x_t + (b_1 + b_2)\, x_{t-1} - \lambda y_{t-1} + \varepsilon_t \quad (\lambda = 1 - \mu) \tag{6.14}$$

$$\Delta y_t = b_0 + b_1 \Delta x_t + \lambda (y_{t-1} - \beta_1 x_{t-1}) + \varepsilon_t \quad (\beta_1 = (b_1 + b_2)/\lambda) \tag{6.15}$$

$$\Delta y_t = b_1 \Delta x_t - \lambda (y_{t-1} - \beta_0 - \beta_1 x_{t-1}) + \varepsilon_t \quad (\beta_0 = b_0/\lambda) \tag{6.16}$$

Now let us assume that $\beta_0^* = \beta_0$ and $\beta_1 = \beta_1$ in (6.16) vs (6.11). The terms in parenthesis in Equation (6.16) can be seen as the disequilibrium error from $(t-1)$. Equation (6.16) signifies that the current change in *y* depends on the current change in *x,* and, the disequilibrium from the previous period. This process corrects for the shortcoming of 'first differencing' as it allows for disequilibrium in previous periods for *x* and *y*; *y* is corrected for any previous disequilibrium, in this illustration, as a first-order ECM. λ is the adjustment parameter of the disequilibrium from $t-1$ to t, β_1 is the long-run elasticity of y with respect to x, and b_1 is the short-run elasticity.

In Equation (6.11) β_0^* depends on the change in *x* and *y*. If $\emptyset$ is the long-run trend growth in *x*, then $\Delta y_t = \beta_1 \emptyset$. Accordingly, re-expressing Equation (6.16) gives:

$$y_t = \frac{\left(\lambda\beta_0 - \emptyset\left(\beta_1 - b_1\right)\right)}{\lambda} + \beta_1 x_t \tag{6.17}$$

Equation (6.17) is the long-run ECM reduced from Equation (6.16). Yet, for model consistency, Equation (6.17) needs to be equal to Equation (6.11) that represents the equilibrium relationship. For this to be the case:

$$\beta_0^* = \frac{\left(\lambda\beta_0 - \emptyset\left(\beta_1 - b_1\right)\right)}{\lambda} \tag{6.18}$$

It follows that the parameter in the long-run relationship depends on the rate of change of *x*. Only if $\emptyset = 0$, or b_1 (the short run elasticity) is identical to β_1 (the long run elasticity), is β_0^* equal to β_0 (see Thomas, 1997).

6.4 Cointegration

The economic interpretation of cointegration is that "*if two (or more) series are linked to form an equilibrium relationship spanning the long-run, then even though the series themselves may contain stochastic trends (i.e., be nonstationary) they will nevertheless move closely together over time and the difference between them will be stable (i.e., stationary)*" (Kennedy, 1995, p.22).

As observed by Green (2000), the aim of cointegration and error correction techniques is to estimate models whilst preserving the long-run information contained in the data of level relationships. Assume two variables, y_t and x_t. If both of them were drifting upwards, each with their own trend, then the difference between them could also be growing unless the trends were related. But it could also be that if y_t and x_t were both I(1), then there might be a β such that:

$$\varepsilon_t = y_t - \beta x_t \tag{6.19}$$

is I(0).

The partial difference in Equation (6.19) might be stable around a fixed mean if y_t and x_t were I(1). The interpretation of this scenario is that y_t and x_t are drifting together at approximately the same rate. If two series satisfy this requirement, they can be said to be

cointegrated, with vector $[1, -\beta]$ being the *cointegrating vector*. "*Two time-series are said to be cointegrated of order d, b(*$CI(d,b)$ *if they are both integrated of order d, and if there exists some linear combination of them that is integrated of order d – b, where b> 0*" (Thomas, 1997). In other words, if two or more series are linked to give rise to a long-run equilibrium relationship, then even though the series themselves may contain stochastic trends and unit roots (i.e., be *nonstationary*) they will nevertheless co-move over time and the difference between them will be stable, i.e., stationary (Harris, 1995).

A question begs at this point. How do the long-run relationship and the short-run dynamics between y_t and x_t relate to each other? The long-run relationship is the way in which y_t and x_t co-move over time whilst the short-run dynamics reflect how y_t and x_t deviate from their respective long-run trends. Cointegration, therefore, can also be thought of as a restriction of a dynamic specification. Testing for cointegration is equivalent to testing whether u_t in Equation (6.20) is stationary:

$$y_t = \beta_1 + \beta_2 x_t + u_t \tag{6.20}$$

$$u_t = \rho u_{t-1} + \varepsilon_t \tag{6.21}$$

where ε_t is a white-noise error. The test Equation is:

$$\Delta u_t = \sigma u_{t-1} + \varepsilon_t \tag{6.22}$$

where $\sigma = \rho - 1$

The null hypothesis of 'no cointegration' is $H_0 : \sigma = 0$. In this case, u_t is an I(1) random walk process since $\Delta u_t = \varepsilon_t$ .The alternative hypothesis that contemplates 'cointegration' is $H_1 : \sigma < 0$ (and $\rho < 1$) . In this case u_t is stationary, hence I(0), with a test statistic $t_\sigma = \sigma^{\wedge} / SE(\sigma^{\wedge})$. The test described above is known as the *Engle-Granger test* (Engle and Granger, 1987), based on the *Dickey-Fuller unit root test* (see Dickey and Fuller, 1979). However, the critical values of the *Dickey-Fuller unit root test* are not entirely accurate. Hence, Engle and Granger (1987) have calculated the appropriate critical values.

The *Augmented Engle-Granger test*, whichis an equivalent representation of the *Augmented Dickey-Fuller test,* allows for lagged Δu as additional regressors (once again, to be

applied using the relevant Engle and Granger critical values). To '*augment'* the *Engle-Granger test*, Equation (6.22) is modified as follows:

$$\Delta u_t = \sigma u_{t-1} + \delta_1 u_{t-1} + \delta_2 u_{t-2} + ... + \delta_k u_{t-k} + u_t \tag{6.23}$$

where $\sigma = \rho - 1$.

If y_t and x_t are cointegrated, there is long-run equilibrium relationship between them. Yet, this does not necessarily mean that there is an equilibrium combination between them also in the short-run (see Gujarati, 2007).

The ECM corrects for the disequilibrium, so that:

$$\Delta y_t = \alpha_0 + \alpha_1 \Delta x_t + \alpha_2 \hat{u}_{t-1} + \varepsilon_t \tag{6.24}$$

$\hat{u}_{t-1}$ is the residual from the regression of (6.20), lagged one period, while ε_t is white-noise.

As explained by Gujarati (2007), by regressing Equation (6.24), Δy_t is related to Δx_t and $\hat{u}_{t-1}$ (the equilibrating error in the previous period). $\hat{u}_{t-1}$ reflects the adjustment towards the long-run equilibrium, and - if statistically significant - measures the proportion of the disequilibrium in Δy_t that is corrected in the next period.

The *Granger Representation Theorem* (Granger, 1986) proves that "*if two I(1) variables are cointegrated, then their dynamic specification can be written as an error correction model (ECM), and vice versa, if the dynamic relationship between two I(1) variables can be written as an ECM, they are cointegrated*" (Kennedy, 1998, p.408). By implication, with a general-to-specific approach[4], ECMs can be used to test down to the most parsimonious specification. This paves the way for a further test of 'no cointegration':

$$\Delta y_t = \alpha_1 + \alpha_2 \Delta x_t + \alpha_3 \left[y_{t-1} - \gamma_1 - \gamma_2 x_{t-1} \right] + \varepsilon_t \tag{6.25}$$

[4] The *general-to-specific* approach pioneered by Hendry, entails reaching a parsimonious model by sequentially reducing the number of regressors until a more tractable model is obtained. Such a process is undertaken whilst considering the following criteria: (i) data admissibility; (ii) theory consistency; (iii) lack of correlation between the regressors and the error term; (iv) parameter stability; (v) 'white noise' errors; and (vi) the model must be able to explain the results of all rival models (Gujarati, 2007). The main criticism of this approach is that it is data- rather than theory-driven, and the data reduction process can be very time consuming.

The error correction term $[y_{t-1} - \gamma_1 - \gamma_2 x_{t-1}]$ enters the ECM (6.25) if y and x are cointegrated, with $\alpha_3 < 0$, but $\alpha_3 = 0$ if y and x are not cointegrated. Re-expressing the terms in Equation (6.25), we obtain:

$$\Delta y_t = \alpha_1^* + \alpha_2 \Delta x_t + \alpha_3 [y_{t-1} - x_{t-1}] + \alpha_4 x_{t-1} + \varepsilon_t \quad (6.26)$$

where $\alpha_1^* = \alpha_1 - \alpha_3 \gamma_1$ and $\alpha_4 = \alpha_3 (1 - \gamma_2)$.

$H_0 : \alpha_3 = 0$ (no cointegration) is tested against $H_1 : \alpha_3 < 0$ (cointegration) through the statistic $t_{\alpha^3} = \alpha^3 / SE(\alpha^3)$. The critical values for t_{α^3} are non-standard. However, the two-step Engle-Granger approach has been criticised due to it being susceptible to small-sample bias, and to the risk of carrying forward to the second step any mistake incurred in the first step (Harris, 1995).

6.5 Vector Auto Regressive Models (VARs)

Broadly speaking, variables within an economic model can be classified as endogenous or exogenous. The former are determined by and within the model itself, while the latter are assumed to be determined by factors that extend beyond the model (i.e., externally predetermined), which means that they are thought not to be systematically affected by changes in the other variables of the model, especially by changes in the endogenous variables (Maddala, 2001).

Inevitably, the researcher is required to make assumptions about which exogenous variables to include in which regression equations. This approach has been criticised (for example, by Sims, 1980) as it involves ad hoc decisions. Sim's (1980) Vector Auto Regression (VAR) approach deals with this issue by allowing all variables to be treated as endogenous (i.e., determined within the model itself), with no zero-restrictions initially imposed upon the parameters. In the VAR model each variable is 'explained' by its own lagged values and all other variables in the system.

The most general representation of the VAR model is typically specified as

$$\mathbf{z}_t = \sum_{i=1\ldots k} \mathbf{A}_i \mathbf{z}_{t-i} + \boldsymbol{\varepsilon}_t \quad (6.27)$$

where $\mathbf{z}_t$ is a vector of all the variables in the model at time t, $\mathbf{A}_i$ is a matrix of non-zero parameters, and $\boldsymbol{\varepsilon}_t$ is a vector of errors. As underscored by Kennedy (1995), the errors may be contemporaneously correlated but are assumed not to be auto-correlated.

OLS ensures consistent estimators since the lagged values can be assumed to be uncorrelated with the errors. VARs are particularly useful for forecasting since – given the above - a forecast of one period ahead is based on the knowledge of the current values of the variables in the system. Nevertheless, VAR modeling has been criticised for being a-theoretical and – given that its usefulness lies mainly on forecasting - less suitable for policy analysis.

Another more technical problem relates to the number of variables and lags to be included (especially since a sufficient number of lags must be included to ensure the avoidance of autocorrelation) and this can lead to *over-parameterisation* (see Maddala, 2001). The number of regressors quickly becomes untractable, and this makes accurate estimation impossible when working with small samples due to lack of degrees of freedom. Moreover, the possible mix on stationary and nonstationary variables might yield unreliable and/or misleading results.

The disequilibrium error, where both variables are integrated of order 1, and cointegrated, can be written as:

$$y_t = \gamma_1 + \gamma_2 x_t + u_t \tag{6.28}$$

$$z_t = y_t - \gamma_1 - \gamma_2 x_t \tag{6.29}$$

Equation (6.29) is stationary with, at most, one cointegrating vector $(1, -\gamma_1, -\gamma_2)$. As reiterated by Endresen (2005), since with *n* variables, up to $(n-1)$ linearly dependent cointegrating vectors are possible. The two-step Engle-Granger approach, therefore, is inadequate for cases with more than two variables. The *Johansen maximum likelihood approach* is more appropriate, as explained below.

6.6 The Johansen ML cointegration technique

As a means of testing for cointegration (i.e., to determine whether a stable long-run relationship exists between the variables), the Johansen ML approach (see Johansen, 1988, 1995; and Johansen and Juselius, 1990), has considerable advantages over the Engle-Granger two stage approach to cointegration. First of all, since it is a VAR-based technique, endogeneity bias is not a concern as the explanatory variables can be exogenous or endogenous. Second, restrictions can be applied to the cointegrating vectors, something which is not possible with the Engle-Granger procedure. Finally, with the Johansen ML approach the lags in the ECM can be jointly tested for statistical significance so as to establish any short-run 'Granger Causality' among the variables.

The downside of this approach is that it may produce more than one single cointegrating vector of long-run coefficients and resultant ECMs, making interpretation very difficult.

Undoubtedly, the existence of VAR modeling within the Johansen method makes the concept of cointegration even more complex, not only theoretically but also computationally. Accordingly, a simplified illustration is presented below. Assume that a vector of variables Z has the following representation:

$$Z_t = \sum_{i=1}^{m} A_i Z_{t-i} + E_t \tag{6.30}$$

where Z_t contains all n variables of the model and E_t is a vector of random errors. Equation (6.30) can also be expressed as:

$$\Delta Z_t = \sum_{i=1}^{m-1} \Gamma_i Z_{t-i} + \Pi Z_{t-m} + E_t \tag{6.31}$$

where $\Gamma_i = -I + A_1 + ... + A_i$ (I is a unit matrix) and $\Pi = -(I - A_1 - ... - A_m)$. Matrix Π can be expressed in the following form:

$$\Pi = a.b \tag{6.32}$$

where α and β are both $n \times r$ matrices. Matrix β is the *cointegrating matrix* while matrix α is the *adjustment matrix.* The Johansen method allows for direct estimates of the cointegrating vectors whilst also enabling to test for the order (rank) of cointegration, r, through two test statistics: The Trace test and the Maximum Eigenvalue test.

The main difference between the two test statistics is that the Trace test is a joint test where the null hypothesis is that the number of cointegrating vectors is less than or equal to *r*, against a general alternative that there are more than *r* cointegrating vectors. On the other hand, the Maximum Eigenvalue test conducts separate tests on the individual eigenvalues. In the latter, the null hypothesis is that the number of cointegrating vectors is *r*, against an alternative of (*r*+1) cointegrating vectors. The two statistics are:

$$\lambda_{Trace}(r) = -T \sum_{i=r+1}^{g} in(1 - \hat{\lambda}_i)$$
$$\lambda_{Max}(r, r+1) = -T \ln(1 - \hat{\lambda}_{r+1}) \tag{6.33}$$

where $\hat{\lambda}_i$ is the estimated value for the *i*th ordered eigenvalue from the π matrix. The standard approach to the Johansen ML procedure is to first calculate the Trace and Maximum Eigenvalue statistics, and then compare these to the appropriate critical values.

Despite the superiority of the Johansen estimating technique over the Engle-Granger approach, this method too has some shortcomings. First, in small samples, the method is unreliable since the point estimates obtained for the cointegrating vector β may not be particularly meaningful. Second, interpretational difficulties emerge when no unique cointegrating vector is unveiled. The issue of multiple cointegrating vectors is inherently connected to the so-called 'identification problem' (see Granger, 1986), and can be resolved in two ways. The first entails rejecting all but one such cointegrating vectors as economically meaningless. The second, should the model be consistent with the underlying economic theory, entails the estimation of multiple single equations rather than a system; a solution which is nevertheless inconsistent in complete systems-methods such as the Johansen approach.

The critical step, therefore, is to try to give an economic interpretation to the estimation results. A reduced form equation expresses an endogenous variable in terms of exogenous (or weakly-exogenous) variables, i.e. given variables determined outside the model (not within it). On the other hand, a structural equation aims to embed the economic theory underlying each endogenous variable, and it is formulated in terms of both endogenous and predetermined variables. Consequently, cointegrating vectors in VECMs would often reflect an underlying structural system of equations. Yet the reduced form Johansen method can only recognise the interrelationships between the variables in the system, giving rise to interpretative problems (Endresen, 2005).

The underlying issue is that linear combinations of cointegrating vectors can also be cointegrated. If one considers *r* to be the number of the unrestricted cointegrating relations $\beta' \mathbf{x}_{t,} \beta$ is no longer necessarily economically meaningful. This requires the imposition of identifying and over-identifying restrictions on β to ensure an economically meaningful interpretation (Hendry and Juselius, 2001). Various short-run paths can lead to a long-run equilibrium. The researcher, therefore, must make use of theory-based identifying conditions to choose among the different paths (Maddala and Kim, 1998).

'Exact identification' requires the (necessary and sufficient) condition rank $\left(R_i \beta_i\right) = r$. R_i is a matrix of the restrictions for the *i*th cointegrating vector (see, e.g., Abbott and De Vita, 2001). One restriction is required for each cointegrating vector for identification purposes.

Generally, r^2 restrictions are needed for exact-identification[5]. This forms the basis for testing the statistical identification of the system.

As noted by Endresen (2005), when $r = 1$, (and, obviously, $r^2 = 1$), normalisation is the sole restriction to be imposed. This can be done by choosing one of the variables as the normalising variable (typically the dependent variable is chosen for this purpose), and then by dividing the estimated coefficient of that variable by its negative value (the other coefficients are also divided by the same negative value). When $r > 1$, additional $(r^2 - r)$ restrictions need to be imposed.

Wickens (1996) highlights the considerable confusion over what the estimated cointegrating vectors of VECMs really convey. He argues that unless *a priori* information is introduced, the cointegrating vectors derived from ML estimation of unrestricted VECMs are not identified. He concludes that the significance of cointegration analysis in the context of unrestricted VECMs is limited, and solely relevant to instances whereby the variables reflect small and well-defined sub-systems. The long-run reduced form coefficients can be estimated by estimating an unrestricted VECM, but for the long-run structure to be accounted for, the original VECM needs to be transformed to one with *a priori* restrictions. Additionally, further restrictions are required in order to identify the common stochastic trends (Endresen, 2005). These cannot be uniquely defined from the cointegrating vectors unless further restrictions are imposed. Wickens (1996) suggests that the identification of structural coefficients should be based on the estimation of a restricted VECM, or only the structural equations. In the latter case, the variables should be separated in levels and differences to facilitate the distinct estimation of long-run and short-run model specifications (Wickens, 1996).

6.7 Econometric modelling strategy to be employed in this study

The choice and specification of models to be estimated in this PhD study are based on the relevant economic theory and the results of previous applied research by other authors who have investigated the determinants of inward FDI (see Chapter 5). This study initially employs the unit root tests of Ng and Perron (2001). Given the mixed integration order of the series, we then test for cointegration by employing the Autoregressive Distributed Lag (ARDL) bounds testing procedure introduced by Pesaran and Shin (1999) and Pesaran *et al*. (2001).The major advantage

[5] For a discussion of the order and rank conditions of identification, see Gujarati (1995, and 2007).

of the ARDL approach to cointegration is that it can be applied even if the regressors have different orders of integration (I(0) or I(1)). This feature provides flexibility and also helps to avoid a potential "pre-test bias", i.e., the specification of a long-run model on the basis of I(1) variables only (Pesaran *et al*., 2001). In addition, and since the ARDL methodology is based on a single equation, it performs better to small samples compared to alternative multivariate cointegration procedures, for example the Johansen ML method (Romilly *et al*., 2001).

6.7.1 Testing for the order of integration and unit roots

"*In the case where the presence of structural breaks introduces uncertainty as to the true order of integration of the variables, the Autoregressive Distributed Lag (ARDL) bounds testing procedure introduced by Pesaran and Pesaran (1997), Pesaran and Shin (1999) and Pesaran et al. (2001) should be used. The advantage of this is that it yields valid results regardless of whether the underlying variables are I(1) or I(0) or a combination of both*" (De Vita and Abbott, 2002, p. 294).

Variables are cointegrated when a long run linear relationship is obtained from a set of variables that share the same nonstationary properties. Hence, the intuition behind cointegration is that it allows capturing the equilibrium relationships dictated by the economic theory between nonstationary variables within a stationary model. A search is made for a linear combination of such variables such that the combination is stationary. If such a stationary combination exists, then the variables are said to be cointegrated, meaning that they are bound by an equilibrium relationship (De Vita and Abbott, 2002).

An advantage of the cointegration approach is that it provides a direct test of the economic theory and enables utilisation of the estimated long run parameters into the estimation of the short run disequilibrium relationships. Although, Engle and Granger's (1987) original definition of cointegration refers to variables that are integrated of the same order, Enders (2004, p. 66) argues that: "*It is possible to find equilibrium relationships among groups of variables that are integrated of different orders"*. Asteriou and Hall (2007) also explain that in cases where a mix of I(0) and I(1) variables are present in the model, cointegrating relationships might exist.

Similarly, Lutkepohl and Kratzig (2004, p. 89) explain: "*Occasionally, it is convenient to consider systems with both I(1) and* I(0) *variables. Thereby the concept of cointegration is extended by calling any linear combination that is* I(0) *a cointegration relation, although this*

terminology is not in the spirit of the original definition because it can happen that a linear combination of I(0) *variables is called a cointegrating relation"*.

Therefore, even in the presence of a set of variables which contains both I(0) and I(1) variables, cointegration analysis is applicable and the presence of a long run linear combination denotes the existence of cointegrated variables. Hence, it is possible to find long run equilibrium relationships among a set of I(0) and I(1) variables if their linear combination reveals a cointegrating relationship (De Vita and Abbott, 2002).

Significantly, although the ARDL cointegration approach does not require the restrictive assumption that all regressors are integrated of the same order, the presence of $I(2)$ variables can introduce distortions in the distribution of the F test (Pesaran *et al*., 2001), making the testing procedure invalid. Hence testing for the order of integration of the series remains an essential step in estimation.

This study employs the unit root tests advanced by Ng and Perron (2001). Ng and Perron (2001) developed four statistics which are based on GLS demeaned and detrended data, Y_t^{GLS}, and are modified forms of the statistics Z_α and Z_t of Phillips and Perron (1998), of the statistic R_1 of Bhargava (1986), and of the point optimal statistic of Elliott*et al*. (1996).At a first step we define the term φ:

$$\varphi = \frac{\sum_{t=2}^{T}(Y_t^{GLS} - 1)^2}{T^2} \tag{6.34}$$

and following the modified statistics of Ng and Perron (2001) are:

$$MZ_a^{GLS} = \frac{(T^{-1}(Y_T^{GLS})^2 - f_0)}{(2\varphi)} \tag{6.35}$$

$$MZ_t^{GLS} = MZ_a \times MSB \tag{6.36}$$

$$MSB^{GLS} = \left(\frac{\varphi}{f_0}\right)^{1/2} \tag{6.37}$$

$$MP_T^{GLS} = \begin{cases} (\bar{c}^2\varphi - \bar{c}T^{-1}(Y_T^{GLS})^2)/f_0 & \text{if} \quad X_t = \{1\} \\ (\bar{c}^2\varphi + (1-\bar{c})T^{-1}(Y_T^{GLS})^2)/f_0 & \text{if} \quad X_t = \{1, t\} \end{cases} \tag{6.38}$$

where:

$$\bar{c} = \begin{cases} -7 & \text{if} \quad X_t = \{1\} \\ -13{,}5 & \text{if} \quad X_t = \{1, t\} \end{cases} \tag{6.39}$$

The Ng and Perron (2001) unit root tests require the specification of X_t, that is, if the model includes a constant term and/or a time trend. In this study we apply all four test specifications and employ both a model with a constant term only, and a model with a constant term and a time trend. The critical values have been also developed by Ng and Perron (2001). The Ng and Perron (2001) modified statistics are considered to have the good size and power properties in comparison to classic unit root tests such as the Augmented Dickey Fuller test or the Phillips and Perron test (Virmani, 2004), and it is on the basis of these virtues that is it chosen here as a suitably robust unit root test.

6.7.2 The Autoregressive Distributed Lag (ARDL) approach to cointegration using EViews 9.0 software

EViews 9.0is the ideal software to be employed in this study for working with time series data. With EViews 9.0, the researcher can quickly and efficiently manage data, perform econometric and statistical analysis, generate forecasts or model simulations, and produce high quality graphs and tables. The Autoregressive Distributed Lag (ARDL) bounds testing procedure for level relationships was developed by Pesaran and Shin (1999) and Pesaran *et al*. (2001). The major advantage of the ARDL approach to cointegration is that it can be applied even if the regressors have different orders of integration (I(0) or I(1)). This feature provides flexibility and also helps to avoid a potential "pre-test bias", i.e., the specification of a long-run model on the basis of I(1) variables only (Pesaran *et al*., 2001). In addition, and since the ARDL methodology is based on a single equation, it performs better to small samples[6] compared to alternative multivariate cointegration procedures, for example the Johansen ML method (Romilly *et al*., 2001). However, the ARDL approach to cointegration cannot be applied to variables that are I(2), and further, it assumes the existence of only one long-run relation among the variables. Most significantly, thanks to its complex instrumentation, the ARDL bounds testing approach caters for the potential problem of endogeneity, making it an ideal method in testing for cointegration in our setting

[6] In particular, Pesaran and Shin (1999) show that the ARDL approach has better properties in sample sizes up to 150 observations.

(since a number of variables determining FDI may themselves be seen as being influenced by the level of inward FDI).

The ARDL(p,q) cointegration model with two time series y_t and x_t (t = 1, 2, …, T) has the following form:

$$\Delta y_t = \rho + \theta_1 y_{t-1} + \theta_2 x_{t-1} + \gamma z_t + \sum_{i=1}^{p-1} \mu_{1,i} \Delta y_{t-i} + \sum_{i=1}^{q-1} \mu_{2,i} \Delta x_{t-i} + u_t \tag{6.40}$$

where, ρ is the constant term, θ are the long-run multipliers, μ_1 and μ_2 are the short-run parameters, z_t is a vector of deterministic regressors such as trends and other exogenous influences with fixed lags, and u_t is an *iid* stochastic process. Equation (6.34) is estimated using OLS and the optimal ARDL(p,q) model is selected on the basis of information criteria, such as the Akaike Information Criterion (AIC) or theSchwarz Bayesian Criterion (SBC), thus sufficiently correcting for the residual serial correlation and the problem of endogenous regressors (Pesaran and Shin, 1999).

The next step is to test the null hypothesis that the parameters of the lagged level variables in Equation (6.34) are jointly zero, i.e. $H_0 : \theta_1 = \theta_2 = 0$ against the alternative hypothesis $H_1 : \theta_1 \neq 0$ or $\theta_2 \neq 0$. Pesaran *et al*. (2001) show that the above null of 'no cointegration' can be tested by employing a modified F-test (labelled F_{PSS}) with the test procedure involving two critical bounds; an upper bound and a lower bound. If the estimated value of the modified F_{PSS} statistic exceeds the upper critical bound then the null is rejected (i.e., y_t and x_t are cointegrated), if it lies below the lower critical bound the null cannot be rejected (i.e., y_t and x_t are not cointegrated), and if it lies between the critical bounds the test is inconclusive (see, for example, De Vita and Trachanas, 2016).

Alternatively, the null hypothesis of no cointegration can be also tested by means of a modified t-test (labelled t_{BDM}) proposed by Banerjee *et al*. (1998). In this case the relevant hypotheses are $H_0 : \rho = 0$ (no cointegration) against $H_1 : \rho < 0$ (cointegration). The t_{BDM} test procedure also relies on a set of critical bounds, the upper bound and the lower bound. If the estimated value of the t_{BDM} statistic exceeds the upper critical bound, the null of no cointegration

is rejected, if it lies below the lower critical bound, the null cannot be rejected, and if it lies between the critical bounds the test is inconclusive.

Both the F_{PSS} and t_{BDM} statistics follow an asymptotic distribution and, therefore, Pesaran *et al*. (2001) developed suitable critical values (bounds) based on 500 and 1000 observations (as a result of Monte Carlo replications). However, Narayan (2005) argued that the above critical values are inappropriate for small samples such as those typically used in applications in macroeconomics. Accordingly, Narayan (2005) developed critical values for the F_{PSS} bounds test for sample sizes between 30 to 80 observations, which are particularly shown in our empirical analysis presented in the next chapter.

If cointegration is confirmed, the long-run model can be produced from the reduced form solution of Equation (6.34) when the first-differenced variables are jointly equal to zero. In its general form the ARDL(p,q) model is:

$$y_t = \beta_0 + \sum_{i=1}^{p} \beta_{1,i} y_{t-i} + \sum_{i=0}^{q} \beta_{2,i} x_{t-i} + \varepsilon_t \tag{6.41}$$

Using nonlinear functions of the estimated parameters from Equation (6.35), we can then obtain the long-run parameters:

$$a_0 = \frac{\beta_0}{1 - \sum_{i=1}^{p} \beta_{1,i}} \text{ and } a_1 = \frac{\sum_{i=0}^{q} \beta_{2,i}}{1 - \sum_{i=1}^{p} \beta_{1,i}} \tag{6.42}$$

where, a_0 is the constant term and a_1 is the long-run slope coefficient.

At the final step, we can obtain the short-run dynamic coefficients for the respective optimal ARDL(p,q) by estimating the ARDL-ECM:

$$\Delta y_t = \delta_0 + \sum_{i=1}^{p} \delta_{1,i} \Delta y_{t-i} + \sum_{i=0}^{q} \delta_{2,i} \Delta x_{t-i} + \gamma EC_{t-1} + e_t \tag{6.43}$$

where γEC_{t-1} is the error correction term with γ showing the speed of correction after an exogenous shock to the dependent variable y_t.

6.7.3 Testing for parameter stability

The existence of cointegration does not necessarily imply that the estimated coefficients are stable. If the coefficients are unstable then the results might not be valid. Accordingly, Pesaran and Pesaran (2009) suggest applying the cumulative sum of recursive residuals (CUSUM) and the CUSUM sum of squares (CUSUMSQ) tests proposed by Brown *et al*. (1975) to the residuals of the estimated ARDL model to test for parameter constancy.The CUSUM test uses the cumulative sum of recursive residuals based on the first observations and is updated recursively and plotted against a break point. The test is more suitable for detecting systematic changes in the regression coefficients. The CUSUMSQ makes use of the squared recursive residuals and follows the same procedure. However, it is more useful in situations where the departure from the constancy of the regression coefficients is haphazard and sudden (Giles, 2013). If the plot of the CUSUM and CUSUMSQ stays within the 5 percent critical bounds, the null hypothesis that all coefficients are stable cannot be rejected.

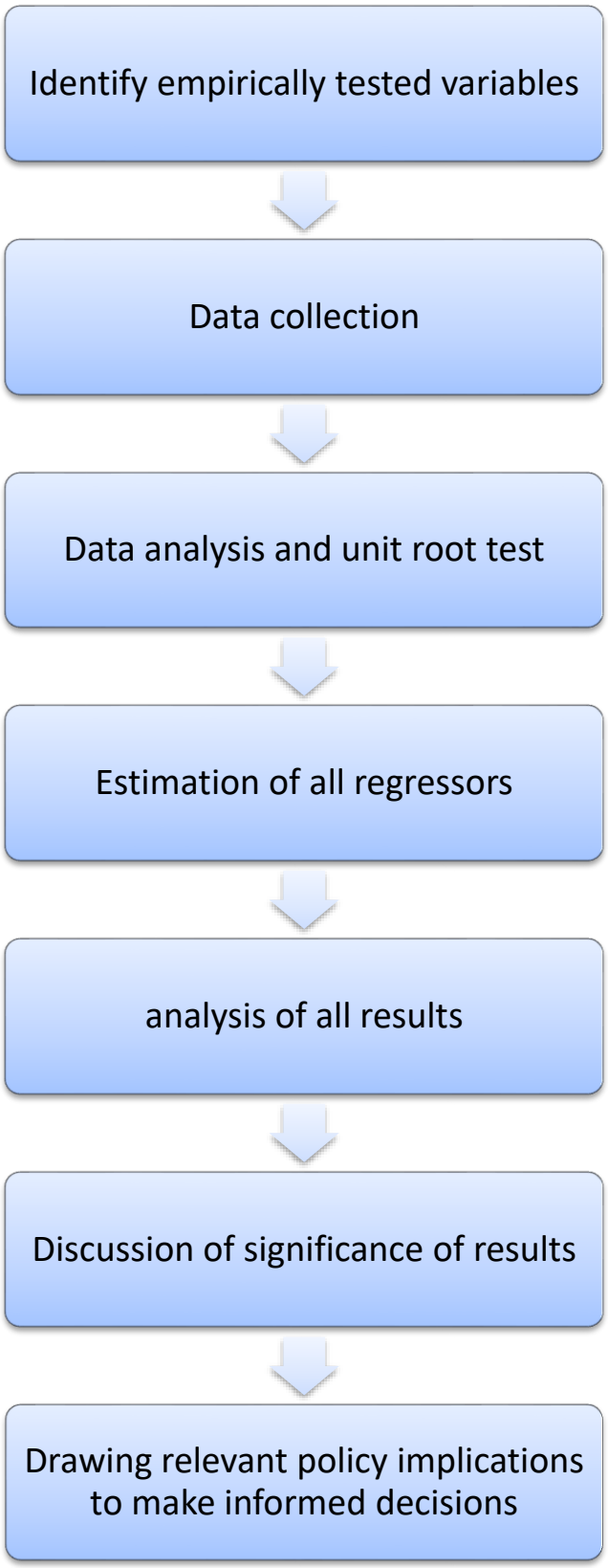
6.8 Research process

Below is the process undertaken during the course of this research:

(1) The researcher chose to investigate the problem involving the knowledge about the determinants of FDI in Nigeria.
(2) A large empirical body of literature in this subject area was critically reviewed and analysed.
(3) The main research question was identified.
(4) Having reviewed the literature, the most appropriate research approach was chosen and how the variables were to be measured was identified.
(5) The data collection method was selected.
(6) Data were collected from IFS and WDI databases of the IMF and World Bank.
(7) Collected data were analysed using the EViews 9.0 software and ARDL econometric methodology.
(8) Analysed data were discussed and interpreted.
(9) Policy implications were drawn from interpreted results to make informed decisions.

6.9 Model development

Figure 6.1 Model development diagram



In figure 6.1 above, a diagram explaining the model development process is shown. In the diagram above, we see a step-by-step approach, detailing a conceptual framework devised and used as a guide in understanding the developmental process involved in the model used in order to form a platform for making informed decisions and continued development.

6.10 Concluding remarks

This chapter discussed the methodology applied in this study. The evolution of cointegration techniques was examined from the most basic concepts of stationarity and unit roots through the development of successive multivariate cointegration techniques, including a discussion of their relative advantages and limitations. Particular emphasis was placed on discussing the Ng and Perron (2001) unit root test (the unit root test employed in the present study) and the ARDL bounds testing approach to cointegration developed by Pesaran and Pesaran (1997), Pesaran and Shin (1999) and Pesaran *et al.* (2001), which is the cointegration method used in the econometric analysis presented in the subsequent chapter.

CHAPTER 7: EMPIRICAL RESULTS AND DISCUSSION

7.1 Chapter overview

This chapter presents and discusses the econometric results. The chapter begins by providing a detailed description of the data and variable measures employed to undertake the econometric study. Then, some stylised facts regarding the evolution over time of each of the series (variables) are presented. Next, the results of the Ng and Perron (2001) unit root test and of the ARDL cointegration methodology (Pesaran *et al*., 2001) are presented and discussed. A final section of further discussion of the significance of the findings ends the chapter.

7.2 Data

The data used for the investigation are at annual frequency, from 1970 to 2014. They have been obtained from the World Development Indicators (WDI) database of the World Bank and from the International Financial Statistics (IFS) database of the International Monetary Fund (IMF).

The variables examined are: FDI net inflows as a percentage of GDP (FDI); the lending interest rate (IR); the natural logarithm of the total external debt owed to non-residents repayable in currency, goods, or services in current US dollars ($DEBT$); oil rents as a percentage of GDP defined as the difference between the value of crude oil production at world prices and total costs of production (OIL); trade defined as the sum of exports and imports of goods and services as a percentage of GDP ($TRADE$); exchange rate volatility which is constructed by the author and is defined as the standard deviation of the moving average of the natural logarithm of the rate between the Nigerian national currency per US dollar at end of each period ($EXRVOL$); Gross Domestic Product (GDP) growth defined as the annual percentage growth rate of GDP at market prices based on constant local currency with aggregates based on constant 2010 US dollars ($GDPGROWTH$); GDP per capita growth rate defined as the annual percentage growth rate of GDP per capita based on constant local currency with aggregates based on constant 2010 US dollars ($GDPpcGROWTH$); and GDP in constant local currency (GDP). Table 7.1 below provides the definitions as provided by the WDI and IFS databases while Table 7.2 reports the descriptive statistics.

Table 7.1 Variables employed and their definitions

Variable	Definition
FDI	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.
IR	Lending rate is the bank rate that usually meets the short- and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing. The terms and conditions attached to these rates differ by country, however, limiting their comparability.
DEBT	Total external debt is debt owed to nonresidents repayable in currency, goods, or services. Total external debt is the sum of public, publicly guaranteed, and private nonguaranteed long-term debt, use of IMF credit, and short-term debt. Short-term debt includes all debt having an original maturity of one year or less and interest in arrears on long-term debt. Data are in current U.S. dollars.
OIL	Oil rents are the difference between the value of crude oil production at world prices and total costs of production.
TRADE	Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.
EXRVOL	Standard deviation of the moving average of the natural logarithm of the rate of national currency per US dollar end of period.
GDPGROWTH	Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.
GDPpcGROWTH	Annual percentage growth rate of GDP per capita based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.
GDP	GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant local currency.

Source: World Developments Indicators (http://data.worldbank.org/data-catalog/world-development-indicators) and International Financial Statistics (http://data.imf.org/?sk=5DABAFF2-C5AD-4D27-A175-1253419C02D1) databases.

Table 7.2 Descriptive statistics

Variable	Mean	Median	Maximum	Minimum	SD	Skewness	Kurtosis	Jarque-Bera
FDI_t	2.65	2.46	10.83	-1.15	2.17	1.77	7.04	54.06 [0.000]
IR_t	15.18	16.72	31.65	6.00	6.48	0.17	2.24	1.30 [0.523]
$DEBT_t$	23.30	23.66	24.41	20.54	1.15	-1.23	3.16	11.31 [0.003]
OIL_t	30.06	30.04	62.21	3.29	12.35	0.08	3.02	0.05 [0.976]
$TRADE_t$	48.27	48.29	81.81	19.62	16.13	0.03	2.14	1.39 [0.499]
$EXRVOL_t$	0.04	0.01	0.44	0.00	0.09	3.43	14.49	335.52 [0.000]
$GDPGROWTH_t$	4.45	4.89	33.74	-13.13	7.99	0.96	6.52	30.05 [0.000]
$GDPpcGROWTH_t$	1.76	2.10	30.34	-15.46	7.83	0.96	6.52	30.27 [0.000]
GDP_t	12.41	12.40	12.86	12.06	0.24	0.23	1.69	3.61 [0.165]

Notes: p-values are displayed in square brackets.

7.3 Stylised facts

Figures 7.1 to 7.8 below represent the evolution of the variables used in the empirical analysis. Figure 7.1 represents evolution of FDI (as a percentage of GDP) from 1970 to 2014. The average value for Nigeria during that period was 2.61 percent with a minimum of -1.15 percent in 1980 and a maximum of 10.83 percent in 1994. There has been a steady decline from a level of 7.3 percent in 1989 to 1.56 percent in 1994. FDI has been unstable over the years. In 1980, Nigeria recorded a 12.5 percent decrease in FDI and this was due to the decline in world oil prices which fell from over US$20.0 per barrel to about US$9.0 per barrel (Ekpo, 1997). Following the adoption of the Structural Adjustment Programme in 1986 and the subsequent liberalisation of some aspects of the Nigerian economy, FDI in the economy rose considerably between 1992 and 1994. Empirical studies have confirmed that the decline in the level of FDI in Nigeria post-1994 was due to economic crises, declining productivity, reduced capacity utilisation and other factors, mainly policy reversals which tended to send uncertainty signals to potential investors (Ekpo, 1997).

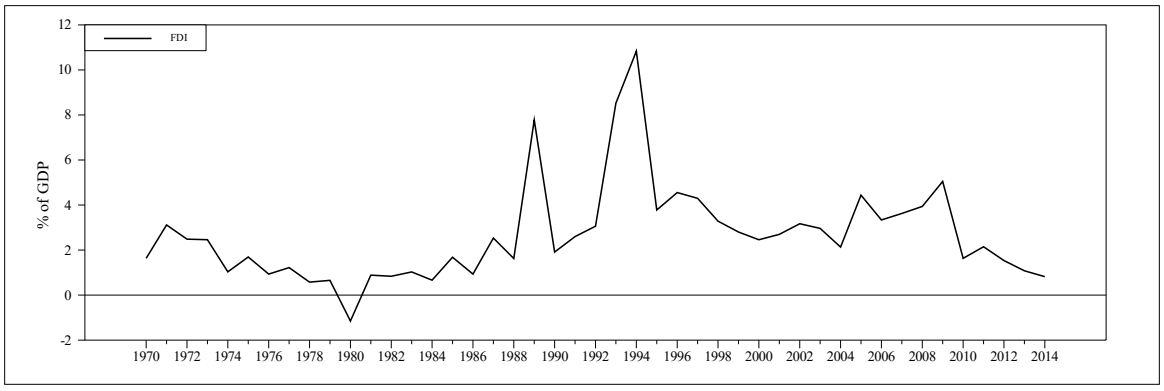


Figure 7.1 The evolution of FDI (% of GDP)

Figure 7.2 presents the evolution of the Interest Rate (%) in Nigeria. For Depositors, up to the early 1980s, the deposit rates were generally low, except for the period 1986-1989 immediately following liberalisation and the 1990-1995 period of banking sector distress. For lenders/borrowers, relative to the periods 1986-1998, lending rates in the last few years have been low largely because inflation has declined on a sustained basis. This is the first time since 1995 that lending rates have recorded such a feat (CBN Statistical Bulletin, 2014). The wide gap between lending and deposit rates in Nigeria is dominantly explained by: the depth of financial markets, level of inflation, risks and uncertainty. Prior to 1986, interest rates were fixed administratively by the Central Bank of Nigeria. This decision was intended to yield a socially optimum resource allocation and promote orderly growth in the financial market. To facilitate the flow of credit to the preferred sectors (agriculture, manufacturing, etc.), the nominal interest rate was lowered during this period, but the price paid was high inflation. Real interest rates were generally negative as a result of the repressed regime; financial disintermediation was the consequence, leading to low savings, low investment and low growth (CBN, Statistical Bulletin, 2014).

Following the liberalisation of interest rates in 1986 with the adoption of SAP, the level of interest rates has been market-determined. Interest rates have risen relative to the era of the 'repressed regime'. The inflation rate moderated significantly (lowered) since then, particularly during the 1998-2006 period (with the exception of the period between 1993 and 1998, known as the period of "guided deregulation"; CBN, Statistical Bulletin, 2014). Going by the CBN's monetary policy, pursuing the goals that they have set out, has allowed to achieve a fairly stable interest rate since 2006, because of the CBN's action (CBN, Statistical Bulletin, 2014).

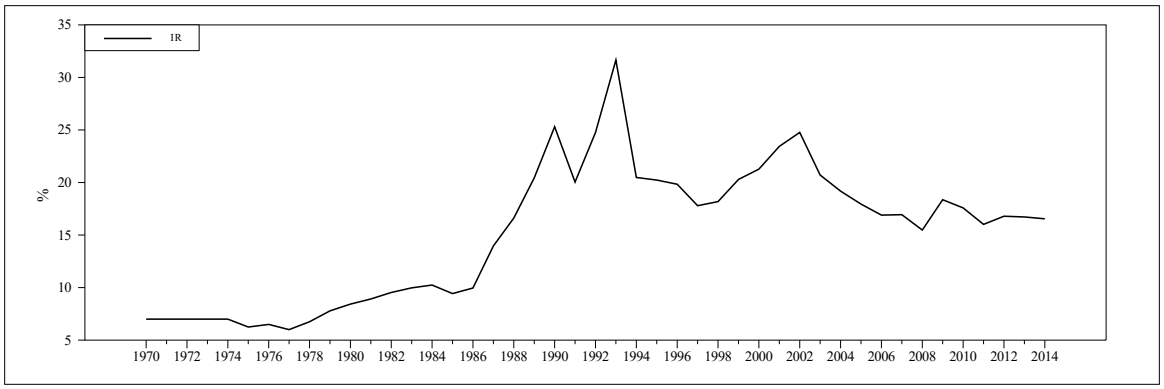


Figure 7.2 The evolution of the Interest Rate (%)

Figure 7.3 represents the evolution of Debt (natural logarithm, external debt stocks, US dollars, current prices). Nigeria's external indebtedness dates back to the pre-independence period. However, the quantum of the debt was small until 1978. The debts incurred before 1978 were mainly long-term loans from multilateral and official sources such as the World Bank and the country's major trading partners. The debts were not much of a burden on the economy because the loans were obtained on soft terms. Moreover, the country had abundant revenue receipts from oil, especially during the oil boom of 1973-1976. However, the fall in oil prices and hence oil receipts in 1977/78 forced the country to raise the first jumbo loan of more than $1.0 billion from the international capital market. The loan, which had a grace period of three years, was used to finance various medium and long-term infrastructural projects, which did not directly yield returns for its amortisation (James Akperan, 2015).

According to Zouhaier and Fatma (2014), the recovery of the oil market from 1979, with oil prices rising to an all-time high of US$39.00 per barrel in 1980/81, led to the notion that the economy was buoyant. Consequently, some deflationary measures put in place in 1978 were relaxed. A consumption pattern that favoured imported goods emerged which was aggravated and sustained by the import substitution industrialisation strategy that depended heavily on imported raw materials and machinery as well as overvalued exchange rate regime. A critical point was reached in 1986 when creditors refused to open new credit lines for imports to Nigeria. Therefore, the government approached the creditors for debt relief leading to the restructuring arrangements with the Paris Club in 1986, 1989, 1991 and 2000 (Sulaiman and Azeez, 2012).

During 2005 Nigeria achieved a milestone agreement with the Paris Club of lending nations to eliminate all of its bilateral external debt. Under the agreement, the lenders cancelled most of the debt, and Nigeria is expected to pay off the remainder with a portion of its energy revenues. The arrangement provided for the capitalisation and restructuring of accumulated debt service arrears, their penalties, late and moratorium interests as well as maturities within the consolidated periods and this led to the sharp drop in 2006. As can be seen from Figure 7.3, despite the rescheduling, Nigeria's total projected annual debt service payment is still high, which Nigeria is still finding difficult to pay (Sulaiman and Azeez, 2012).

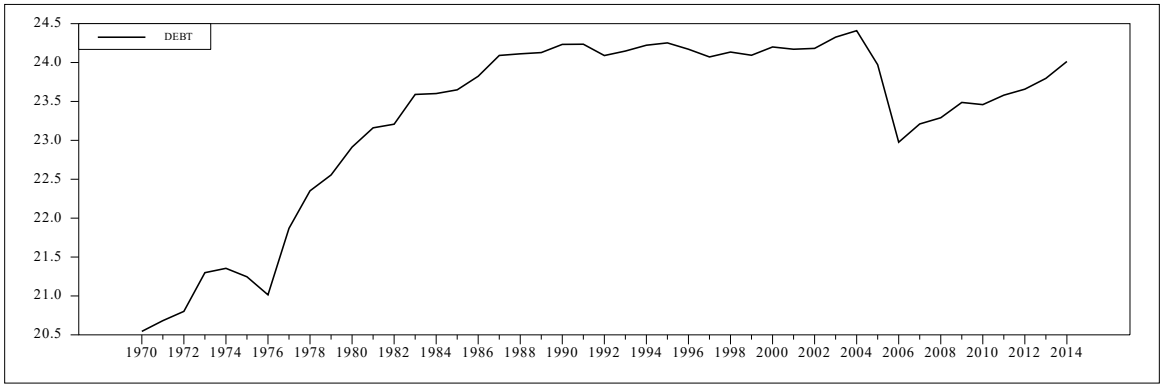


Figure 7.3 The evolution of Debt (natural logarithm, external debt stocks, US dollars, current prices)

Figure 7.4 represents the evolution of OIL rents (% of GDP) in Nigeria. Production of oil declined sharply in 1967 and 1968 as a result of the civil war. The oil boom of the 1970s led Nigeria to neglect its strong agricultural and light manufacturing bases in favour of an unhealthy dependence on crude oil percent. In 2000 oil and gas exports accounted for more than 98 percent of export earnings and about 83 percent of federal government revenue (Romanova, 2014). Starting in 1973 the world experienced an oil shock that rippled through Nigeria until the mid-1980s. This oil shock was initially positive for the country, but with mismanagement and military rule, it became an economic disaster. As the country's oil prospects improved and the government's bargaining power consequently increased, these terms were progressively revised to take account of the changed conditions. These changes resulted in a significant increase in government oil revenues, particularly in 1973 and 1974 (Akinlo, 2014).

As noted above, a large part of the increase in oil revenues was accounted for by the huge increase in crude oil prices during 1973-74. However, production increased from 395.7 million

barrels in 1970 to 660.1 and 845.5 million barrels in 1975 and 1979, respectively. The increase in production witnessed during this period was precipitated by Middle East crisis and the 1973/74 oil embargo which caused a sharp reduction in world oil supply (Akinlo, 2014). According to Ayanwale (2007), the increased oil prices that the crisis generated helped to boost local oil production in the country. However, this was short-lived as the early 80s witnessed a glut in the international crude oil market owing to over-supply, which culminated in sharp drop in prices and eventual reduction in the production quotas by OPEC member countries. Consequently, oil production in Nigeria dropped from 760.1 million barrels in 1980 to 535.9 and 383.3 million barrels in 1986 and 1987, respectively (as illustrated in the trend of oil rents depicted in Figure 7.4). The situation improved in the 1990s as crude oil output rose from 383.3 million barrels in 1987 to 711.3, 742.3 and 772.9 million barrels in 1993, 1996 and 1999, respectively. The trend continued through the 2000s (Akinlo, 2014), but as figure 7.4 shows, with a gradual decline from 2005.

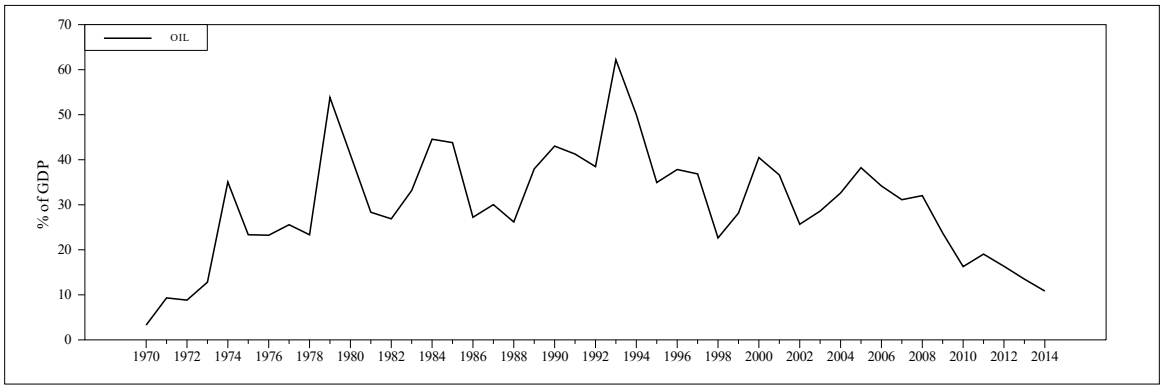


Figure 7.4 The evolution of OIL rents (% of GDP)

Figure 7.5 presents the plot of the evolution of TRADE (% of GDP) in Nigeria. The top exports of Nigeria are Crude Petroleum ($74B), Petroleum Gas ($13.2B), Refined Petroleum ($4.23B), and Pyrophoric Alloys ($1.9B) (Nwachukwu, 2012). Nigeria has a large export income, with petroleum and petroleum products accounting for 95 percent of exports. The real export of goods and services fell by about 8 percent between the 1980-1985 period and rose by about 13 percent in the period between 1985 and 1990. These variations can be attributed to fluctuating terms of trade as well as internal macroeconomic crises (Centre for Global Development, 2013). However, by 1990–1994, the improved export performance witnessed in

the previous period was not sustained as real export of goods and services declined by over 5 percent. Nonetheless, exports rose up to 2003, after which, annual fluctuations notwithstanding, they experienced a decline.

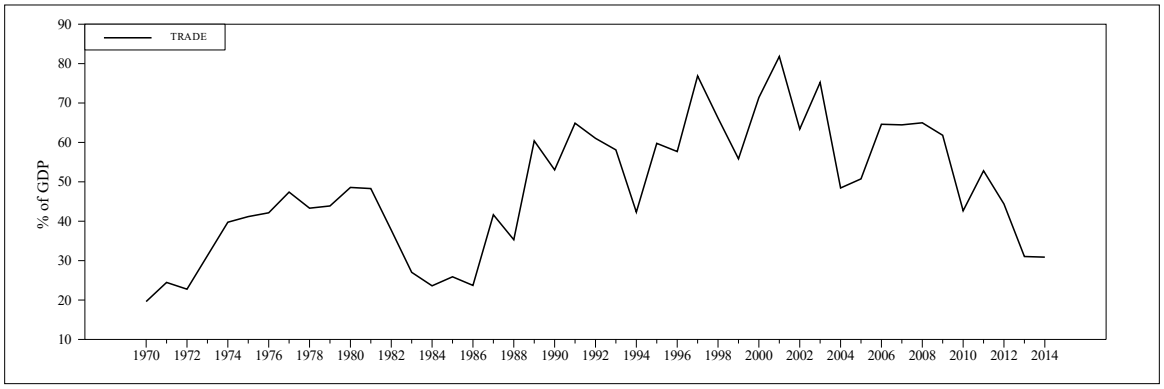


Figure 7.5 The evolution of TRADE (% of GDP)

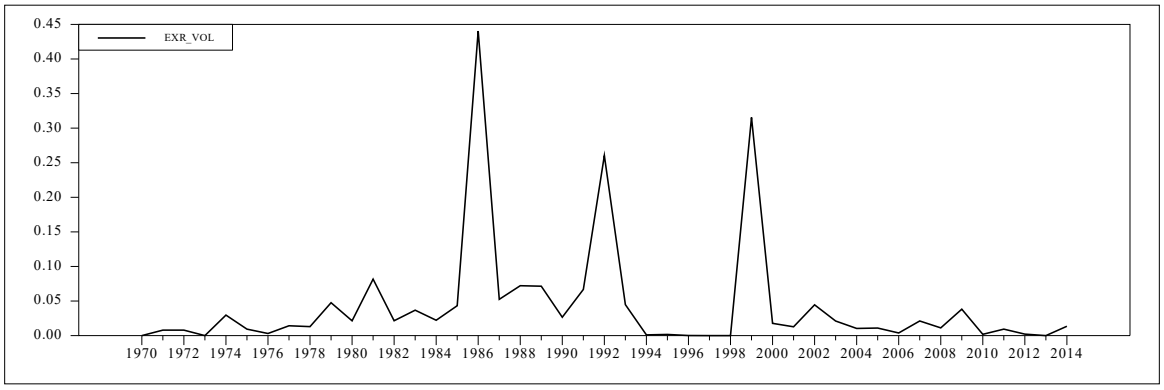


Figure 7.6 The evolution of the exchange rate volatility

Figure 7.6 presents the evolution of the exchange rate volatility in Nigeria. It has been observed that a proportionate change in oil price leads to a more than proportionate change in exchange rate volatility in Nigeria; which implies that exchange rate is susceptible to changes in oil price, hence the sameness in the patterns observed by both oil rents and exchange rate volatility (see Figures 7.4 and 7.6). Since 1986, looking at Figure 7.6, the Nigerian naira's relationship with the US dollar (and other foreign currencies) has been erratic, unpredictable, and full of 'heartbreak and tears' (Sanusi, 2004). In September 1986, the Second-Tier Foreign Exchange Market (SFEM) was introduced as part of a package of IMF reforms that General Ibrahim Babangida (IBB) was forced to accept given the mess that Nigeria had managed to find itself. The rate at which the naira depreciated in those few years probably explains why

Nigerians have never gotten over the idea of a strong currency as the mark of a 'strong' economy (Ojebiyi and Wilson, 2015). Between 1993 and 1998, when President Sanni Abacha took over power, the Autonomous Foreign Exchange Market (AFEM) was introduced in 1995 as a way for the Central Bank of Nigeria (CBN) to sell forex to end users at 'market' rates (Ojebiyi and Wilson, 2015).

This rigid exchange rate gave birth to a phenomenon that is now a permanent fixture today, the mainstreaming of the forex black market. It does not take a genius to know that if the black market rate was four times the official rate, people made an absolute fortune from the arbitrage (Mordi, 2014). Joseph Sanusi, the Central Bank of Nigeria (CBN) Governor between 1999 and 2004, introduced the Interbank Foreign Exchange Market (IFEM). Within a year, the gap with the black market had closed considerably, but in addition to low oil prices, Nigeria was also struggling to service its $33 billion foreign debt which was eating up valuable foreign exchange Adeoye and Atanda, 2013). Between 2004 and 2009, Nigeria experienced the oil boom. It was also during this period of rising oil prices that Nigeria obtained its $18 billion debt relief from the Paris Club. It was like being in heaven. In a short while, the different rates converged to within one naira of each other given that there was no need to go to the black market or bureaux de change to get forex when you could get it officially from your bank. And then the inevitable happened, oil prices started to fall from late 2008 to less than $50 by the end of the year Adeoye and Atanda, 2013).

As soon as oil prices recovered, the new Central Bank governor Sanusi Lamido Sanusi (SLS), having resumed office in 2009, restored the Interbank and WDAS markets that Soludo had previously banned (between 2009 and 2014). But he then faced a somewhat strange problem later on. Oil prices were high but Nigeria was not building up its reserves for reasons that are perhaps now obvious (Englama and Duke, 2015). This meant that he did not have enough dollars to defend the naira and keep it stable as he wanted. To solve this problem, he removed the one-year restriction on foreign investors who wanted to buy government bonds (previously, any foreign investor who wanted to buy Nigerian government bonds needed to hold the bonds for one year). The dollars came pouring in. But then this was what is known as 'hot money' i.e., since one did not need to hold the investment for one year, the money poured in and out rapidly. JP Morgan's requirement to include Nigeria in its index was always that the market was kept liquid. As soon as this was done with the removal of the restriction, there was not much else

standing in the way of Nigeria being included in the index. Given that oil prices remained high throughout SLS time in office, some measure of stability was achieved (Englama and Duke, 2015).

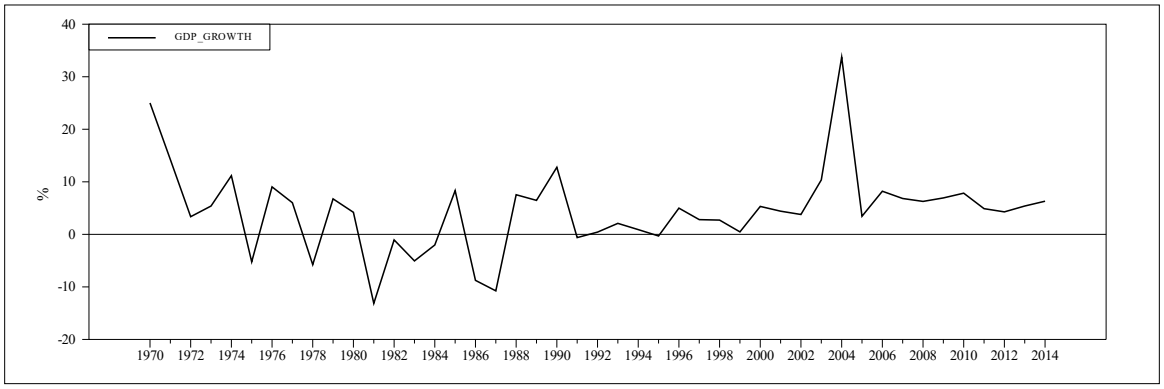


Figure 7.7 The evolution of GDP growth (%)

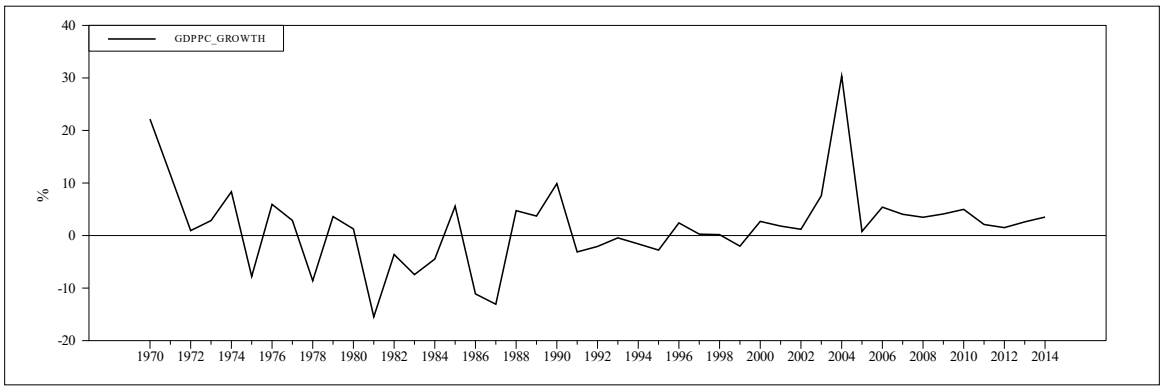


Figure 7.8 The evolution of GDP per capita growth (%)

Figures 7.7 and 7.8 present the evolution of GDP growth and GDP per capita growth in Nigeria. Looking at both figures, we see similarities in their trends. The process of colonial rule and formal economic exploitation ended in 1960 but left Nigeria a relatively strong but undiversified economy. From independence in 1960, the state took up the direction and planning of economic growth and development. Secondary industries and automobile assembly plants were established to create more employment opportunities. Because of the paucity of native or local private capital, these activities were undertaken and financed by the government, often with foreign assistance from such countries as Britain and the United States. The problem of food shortages and imports was addressed in the late 1970s and early 1980s (Ayanwale and Bamire, 2010). In the late 1970s the military government of Olusegun Obasanjo embarked upon

Operation Feed the Nation. His civilian successor, President Shehu Shagari, continued the program as the 'Green Revolution'. Both programs encouraged Nigerians to grow more food, and urged unemployed urban dwellers to return to the rural areas to grow food crops (Ayanwale and Bamire, 2010).

Another relevant feature of the Nigerian economy was a series of abrupt changes in the government's share of expenditures. As a percentage of GDP, national government expenditures rose from 9 percent in 1962 to 44 percent in 1979, but fell to 17 percent in 1988. The economic collapse in the late 1970s and early 1980s contributed to substantial discontent and conflict between ethnic communities and nationalities, adding to the political pressure to expel more than 2 million illegal workers in early 1983 and May 1985. The lower spending of the 1980s was partly the result of the Structural Adjustment Program (SAP) in effect from 1986 to 1990, first mooted by the International Monetary Fund and carried out under the auspices of the World Bank, which emphasised privatisation, market prices, and reduced government expenditures. This program was based on the principle that, as GDP per capita falls; people demand relatively fewer social goods and relatively more private goods, which tend to be essential items such as food, clothing, and shelter. By the late 1960s, oil had replaced cocoa, peanuts and palm products as the country's biggest foreign exchange earner (Sanusi Lamido Sanuso, 2012).

In 1971, Nigeria, by then the world's seventh-largest petroleum producer, became a member of the Organization of the Petroleum Exporting Countries (OPEC). The dramatic rise in world oil prices in 1974 caused a sudden flood of wealth. Much of the revenue was intended for investment to diversify the economy, but it also spurred inflation and underscored inequities in distribution. In 1975, production fell sharply as a result of the sudden decrease in world demand, and prices moved downward until late in the year when OPEC intervened to raise prices. Nigeria fully supported OPEC policies (Atser, 2014). The oil boom which Nigeria experienced in the 1970s helped the nation to recover rapidly from its civil war and at the same time gave great impetus to the government's program of rapid industrialization. Many manufacturing industries sprang up and the economy experienced a rapid growth of about 8 percent per year that made Nigeria, by 1980, the largest economy in Africa (Atser, 2014). A major feature of Nigeria's economy in the 1980s, as in the 1970s, was its dependence on petroleum, which accounted for 87 percent of export receipts and 77 percent of the federal government's revenue in 1988. Falling oil output and prices contributed to another note worthy aspect of the economy in the 1980s, the

decline in per capita real gross national product, which persisted until oil prices began to rise in 1990. Indeed, Gross National Product (GNP) per capita per year decreased 4.8 percent from 1980 to 1987, which led in 1989 to Nigeria's classification by the World Bank as a low-income country for the first time since the annual World Development Report was instituted in 1978 (Romanova, 2014).

In 1989, the World Bank also declared Nigeria poor enough to be eligible for concessional aid from an affiliate, the International Development Association (IDA). By the late sixties and early seventies, Nigeria had attained a production level of over 2 million barrels of crude oil a day. Although production figures dropped in the eighties due to economic slump, 2004 saw a total rejuvenation of oil production to a record level of 2.5 million barrels per day. The petroleum industry is central to the Nigerian economic profile. It is the 12th largest producer of petroleum products in the world. The industry accounts for almost 80 percent of the GDP share and above 90 percent of the total exports. Owing to the surge in international oil prices during 2007-2008, Nigeria managed an annual GDP of US$352.3 billion. The nation now ranks 33rd in the world in terms of GDP. The GDP per capita is US $2,400. Presently development strategies are aimed at increasing production to 4 million barrels per day (Romanova, 2014).

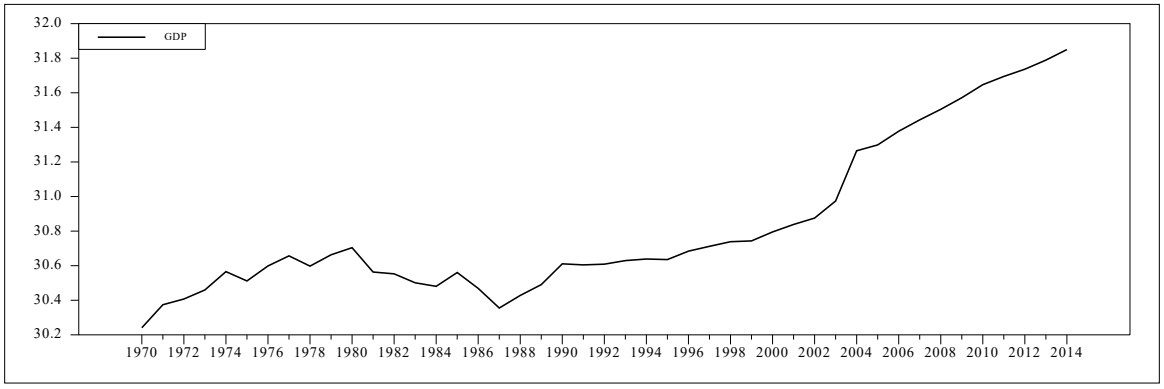


Figure 7.9 The evolution of GDP (natural logarithm, LCU, constant prices)

7.4 Unit root tests results

The ARDL cointegration methodology (Pesaran *et al*., 2001) employed in this study, allows for the inclusion of both*I*(0) and *I*(1) regressors in a long-run relationship and does not require all the regressors to be integrated of the same order. However, according to Pesaran *et al*. (2001) the

possible presence of $I(2)$ variables will turn the estimated F_{PSS} statistic invalid and, therefore, pretesting for the order of integration of the series remains essential.

Table 7.3 presents the Ng and Perron (2001) unit root tests results on the level and first differences of the variables employed (for a discussion of the merits of this unit root test vis-à-vis alternative tests available see Chapter 6). The values of the MZ_a^{GLS}, MZ_t^{GLS}, MSB^{GLS} and MP_T^{GLS} statistics results suggest that the foreign direct investment (FDI) and exchange rate volatility ($EXRVOL$) variables are integrated of order zero ($I(0)$), i.e. they are stationary in levels, while the variables of the interest rate (IR), external debt ($DEBT$), oil rents (OIL), trade ($TRADE$), GDP growth rate ($GDPGROWTH$), GDP per capita growth rate ($GDPpcGROWTH$), and GDP (GDP) are all integrated of order one, i.e.,$I(1)$. Given the above results, the ARDL cointegration methodology is the only linear cointegration methodology that can be applied to this specific dataset (within a time series framework) which includes a mixture of stationary and first difference stationary variables.The results of the unit root tests can be further confirmed by a visual inspection of the plots of the first differences of the variables employed (see Figures 7.10 to 7.18).

Table 7.3 Ng-Perron (2001) unit root tests

	constant only					constant and time trend				
Variables	MZ_a^{GLS}	MZ_t^{GLS}	MSB^{GLS}	MP_T^{GLS}	k	MZ_a^{GLS}	MZ_t^{GLS}	MSB^{GLS}	MP_T^{GLS}	k
FDI_t	-15.4020***	-2.7599***	0.1791**	1.6479***	0	-16.6988*	-2.8372*	0.1699*	5.7698*	0
IR_t	-2.9223	-1.1685	0.3998	8.2830	0	-6.4344	-1.7165	0.2667	14.1633	0
$DEBT_t$	-0.0053	-0.0046	0.8651	43.4666	0	-1.5619	-0.7934	0.5080	49.7839	0
OIL_t	-6.3984	-1.7772	0.2777	3.8672*	0	-9.7329	-2.0707	0.2127	9.9348	0
$TRADE_t$	-5.7089	-1.6859	0.2953	4.3023*	0	-10.3858	-2.0700	0.1993	9.7184	0
$EXRVOL_t$	-21.7315***	-3.2958***	0.1516***	1.1291***	0	-21.8424**	-3.3010**	0.1511**	4.1944**	0
$GDPGROWTH_t$	-2.3744	-1.0542	0.4440	10.0965	2	-4.6197	-1.5036	0.3254	19.6074	2
$GDPpcGROWTH_t$	-2.3081	-1.0371	0.4493	10.3583	2	-4.5284	-1.4884	0.3287	19.9953	2
GDP_t	2.9233	2.6636	0.9111	80.7491	0	-1.1002	-0.5385	0.4894	50.3662	0
ΔFDI_t	-19.9554***	-3.1532***	0.1580***	1.2471***	0	-18.9840**	-3.0806**	0.1622**	4.8017**	0
ΔIR_t	-21.1104***	-3.2485***	0.1538***	1.1618***	0	-21.0379**	-3.2432**	0.1541**	4.3315**	0
$\Delta DEBT_t$	-20.2316***	-3.1743***	0.1569***	1.2329***	0	-20.9743**	-3.2095**	0.1530**	4.5189**	0
ΔOIL_t	-21.2495***	-3.2503***	0.1529***	1.1849***	0	-51.0676***	-5.0529***	0.0989***	1.7850***	1
$\Delta TRADE_t$	-19.7378***	-3.1399***	0.1590***	1.2468***	0	-18.7676**	-3.0611**	0.1631**	4.8684**	0
$\Delta EXRVOL_t$	-36.2855***	-4.2592***	0.1173***	0.6757***	1	-36.7328***	-4.2851***	0.1166***	2.4835***	1
$\Delta GDPGROWTH_t$	-20.5682***	-3.1966***	0.1554***	1.2271***	0	-18.5392**	-3.0434**	0.1641**	4.9221**	0
$\Delta GDPpcGROWTH_t$	-20.5879***	-3.1980***	0.1553***	1.2266***	0	-18.5516**	-3.0444**	0.1641**	4.9188**	0
ΔGDP_t	-18.2492***	-3.0191***	0.1654***	1.3482***	0	-19.9983**	-3.1599**	0.1580***	4.5702**	0
Critical values										
1%	-13.80	-2.58	0.174	1.78		-23.80	-3.42	0.143	4.03	
5%	-8.10	-1.98	0.233	3.17		-17.30	-2.91	0.168	5.48	
10%	-5.70	-1.62	0.275	4.45		-14.20	-2.62	0.185	6.67	

Notes: Δ denotes the first-difference operator while k denotes the optimal lag length and it has been chosen based on the Schwarz Information Criterion starting with max 4 lags. The critical values are from Ng and Perron (2001). ***, ** and * denote the rejection of the null of a unit root at the 1%, 5% and 10% significance level, respectively.

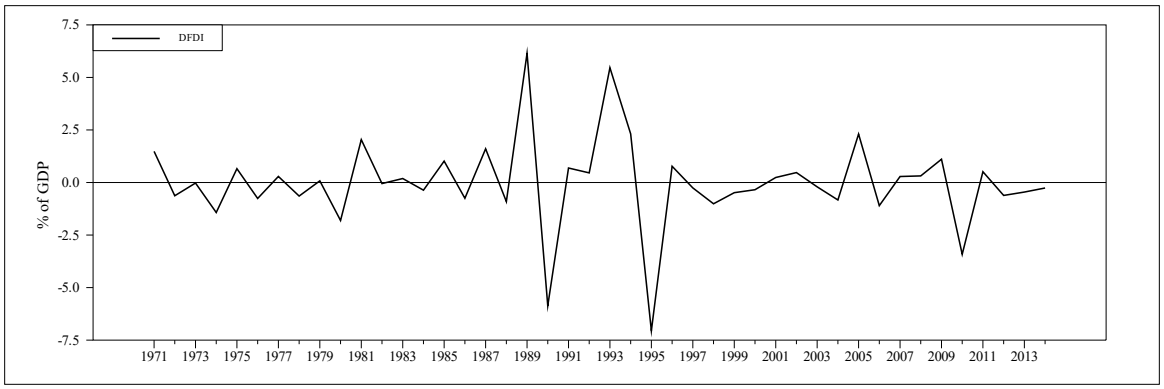


Figure 7.10 The evolution of the first differences of FDI (% of GDP)

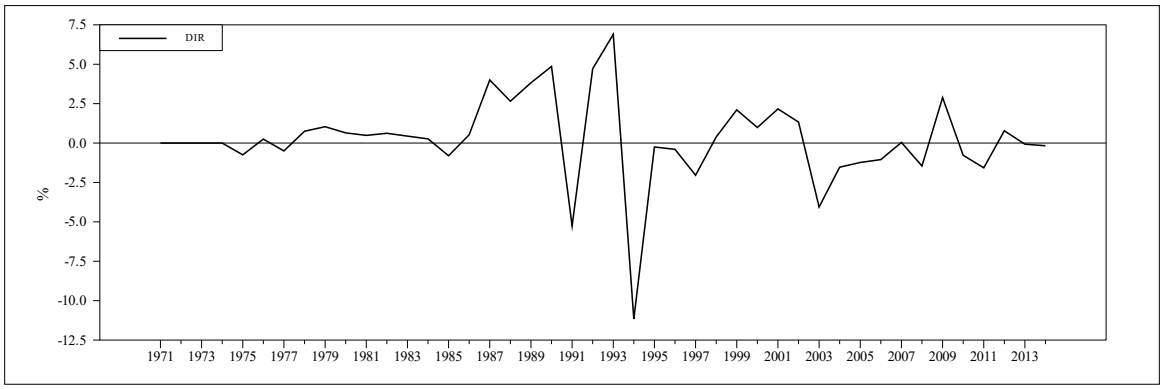


Figure 7.11 The evolution of the first differences of the Interest Rate (%)

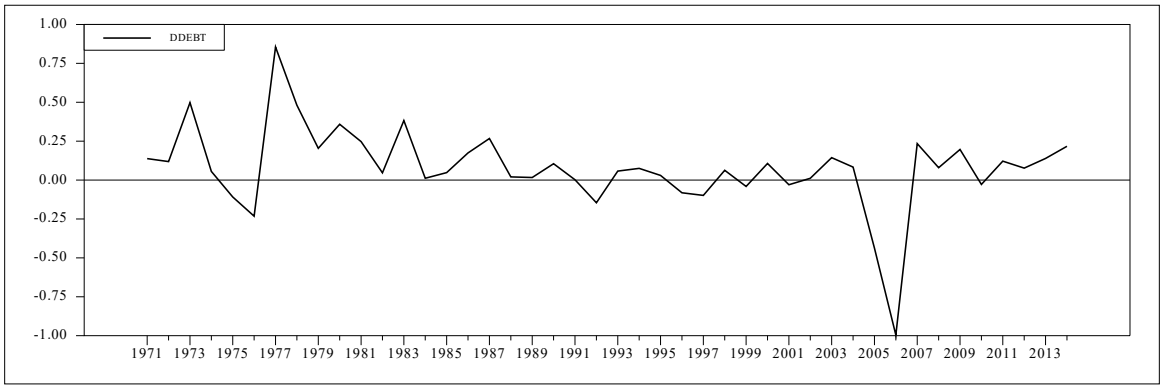


Figure 7.12 The evolution of the first differences of Debt (natural logarithm, external debt stocks, US dollars, current prices)

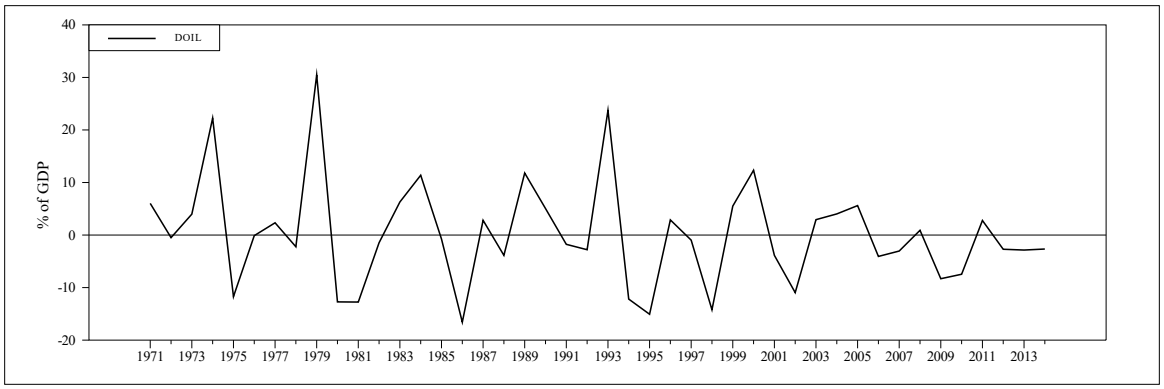


Figure 7.13 The evolution of the first differences of OIL rents (% of GDP)

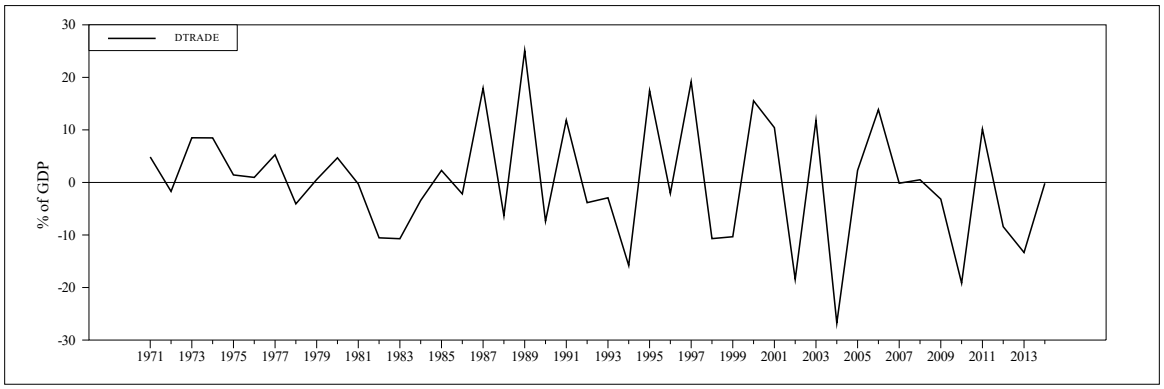


Figure 7.14 The evolution of the first differences of TRADE (% of GDP)

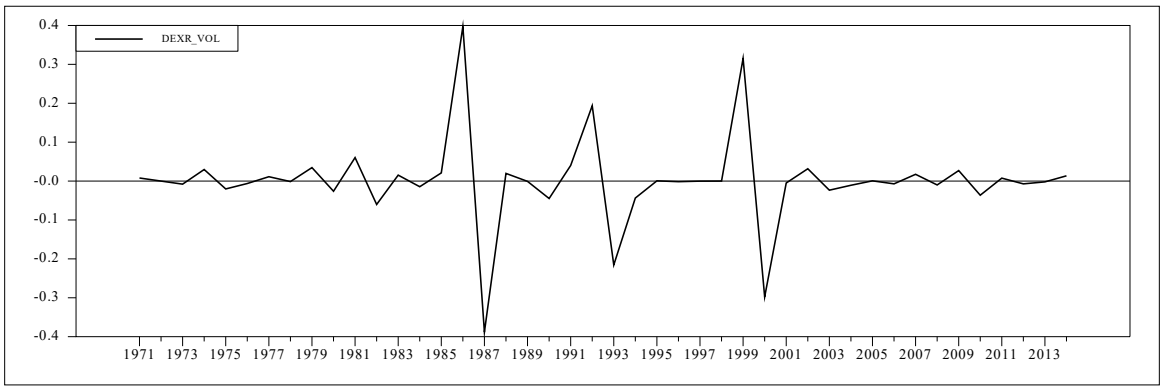


Figure 7.15 The evolution of the first differences of the exchange rate volatility

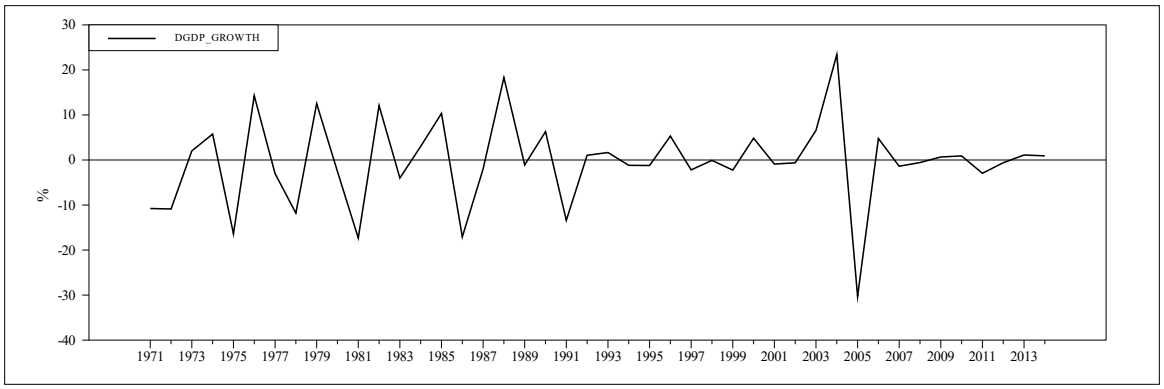


Figure 7.16 The evolution of the first differences of GDP growth (%)

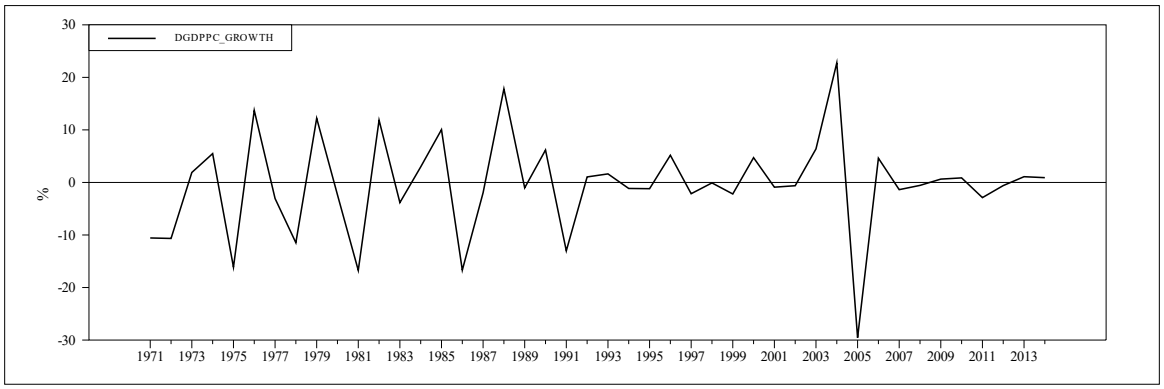


Figure 7.17 The evolution of the first differences of GDP per capita growth (%)

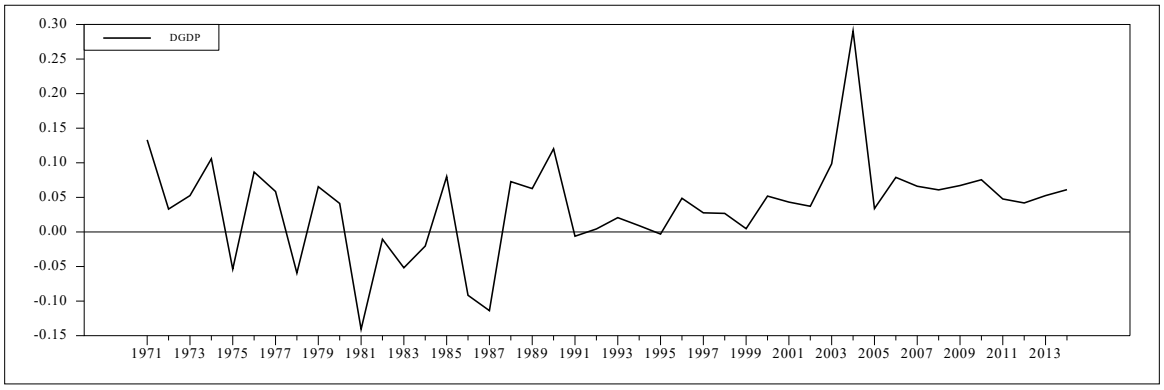


Figure 7.18 The evolution of the first differences of GDP (natural logarithm, LCU, constant prices)

7.5 ARDL cointegration results

Having confirmed the order of integration of the variables, we proceed to the cointegration analysis. As a first step, and to ensure that multicollinearity among the variables is not an issue, we estimated the correlation matrix of the variables employed (Table 7.4 below). According to the correlation analysis results, high pair-wise correlation coefficients among the variables (i.e. higher than 0.8) are not detected and, therefore, we can safely proceed with the cointegration testing and analysis.

Table 7.4 Correlation matrix

Variable	FDI_t	IR_t	$DEBT_t$	OIL_t	$TRADE_t$	$EXRVOL_t$	$GDPGROWTH_t$	$GDPpcGROWTH_t$	GDP_t
FDI_t	1.00								
IR_t	0.59	1.00							
$DEBT_t$	0.32	0.78	1.00						
OIL_t	0.38	0.42	0.49	1.00					
$TRADE_t$	0.38	0.66	0.51	0.39	1.00				
$EXRVOL_t$	-0.07	0.09	0.21	0.10	-0.07	1.00			
$GDPGROWTH_t$	0.02	0.08	-0.17	-0.16	-0.01	-0.33	1.00		
$GDPpcGROWTH_t$	0.03	0.09	-0.17	-0.17	-0.01	-0.33	1.00	1.00	
GDP_t	-0.36	-0.40	-0.44	-0.47	-0.26	-0.34	0.26	0.25	1.00

In order to test for the existence of a linear cointegrating relation between the variables we employ the ARDL(p,q) model of the following form:

$$\Delta FDI_t = \rho + \theta_1 FDI_{t-1} + \theta_2 IR_{t-1} + \theta_3 DEBT_{t-1} + \theta_4 OIL_{t-1} + \theta_5 TRADE_{t-1} + \theta_6 EXRVOL_{t-1} + \theta_7 GDPGROWTH_{t-1} + \sum_{i=1}^{p-1} \alpha_{1,i} \Delta FDI_{t-i} + \sum_{i=1}^{q-1} \mu_{2,i} \Delta IR_{t-i} + \sum_{i=1}^{q-1} \mu_{3,i} \Delta DEBT_{t-i}$$
$$+ \sum_{i=1}^{q-1} \mu_{4,i} \Delta OIL_{t-i} + \sum_{i=1}^{q-1} \mu_{5,i} \Delta TRADE_{t-i} + \sum_{i=1}^{q-1} \mu_{6,i} \Delta EXRVOL_{t-i} + \sum_{i=1}^{q-1} \mu_{7,i} \Delta GDPGROWTH_{t-i} + u_t \quad (7.1)$$

The choice of the optimal ARDL specification is based on the Schwarz Information Criterion (SIC), which is asymptotically consistent for the lag length and is favoured by Pesaran and Shin (1999), starting with maximum lag length of four given the small sample size. Figure 7.19 presents the best 20 models as selected by SIC where it is apparent that the ARDL model with specification (1, 1, 0, 0, 0, 0, 0) is the optimal.

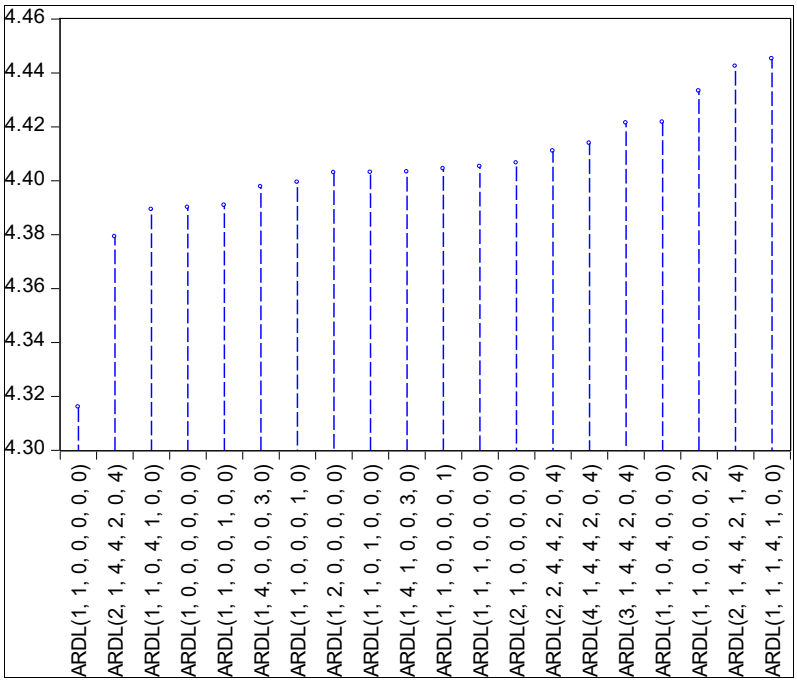


Figure 7.19 The top 20 optimal models as selected by the Schwarz Information Criterion (from a total of 62,500 models that were evaluated)

Table 7.5 reports the estimates of the optimal unrestricted ARDL-ECM of Equation (7.1) while Table 7.6 presents the estimates of the optimal ARDL model along with diagnostics test results for heteroscedasticity, autocorrelation, and normality. In particular, the results from the Breusch (1978) and Godfrey (1978a) serial correlation LM test and the Breusch and Pagan (1979) and Godfrey (1978b) homoscedasticity LM test suggest that the selected ARDL model does not present statistical significant evidence of autocorrelation or heteroscedasticity. In addition, the Bai and Ng (2005) normality test for time series observations suggests that the residuals are normally distributed. We should note here that the classic Jarque and Bera (1987) test of normality has not been applied in the present analysis since it is a large sample test and if used with a small sample such as ours "it may provide misleading results" (Gujarati, 2015, p. 145). Moreover, Figures 7.20 and 7.21 display the resulting plots of the cumulative sum (CUSUM) and cumulative sum of squares tests (Brown *et al*., 1975) for the selected ARDL model. Reassuringly, there is no statistical evidence of parameter instability.

Table 7.5 The unrestricted ARDL-ECM test equation

Variable	***Coefficient***	***Std. Error***	***t-Statistic***	***p-value***
Constant	23.1279**	9.4293	2.4527	0.0193
FDI_{t-1}	-0.9276***	0.1538	-6.0300	0.0000
IR_{t-1}	0.4038***	0.1049	3.8467	0.0005
$DEBT_{t-1}$	-1.1240**	0.4498	-2.4989	0.0173
OIL_{t-1}	0.0381	0.0259	1.4694	0.1506
$TRADE_{t-1}$	-0.0399*	0.0233	-1.7095	0.0962
$GDPGROWTH_{t-1}$	0.0094	0.0350	0.2706	0.7882
$EXRVOL_{t-1}$	2.6142	3.5381	0.7388	0.4649
ΔIR_t	0.1337	0.1158	1.1542	0.2562

Statistics			
R^2	0.5640	AIC	3.9312
$\bar{R}^2$	0.4643	SBC	4.2961
F-statistic	5.6596*** [0.0001]		

Notes: p-values are displayed in square brackets. ***, ** and * denote significance at the 1%, 5% and 10% significance level, respectively.

Table 7.6 The ARDL model

ARDL model: $FDI_t \mid IR_t, DEBT_t, OIL_t, TRADE_t, GDPGROWTH_t, EXRVOL_t$

Specification: (1, 1, 0, 0, 0, 0, 0)

Variable	***Coefficient***	***Std. Error***	***t-Statistic***	***p-value***
Constant	24.3400***	6.7209	3.6215	0.0009
FDI_{t-1}	0.1087	0.1598	0.6800	0.5009
IR_t	0.1125	0.1278	0.8806	0.3845
IR_{t-1}	0.2570	0.1626	1.5809	0.1229
$DEBT_t$	-1.1851***	0.3150	-3.7617	0.0006
OIL_t	0.0464**	0.0205	2.2617	0.0300
$TRADE_t$	-0.0214	0.0196	-1.0939	0.2815
$GDPGROWTH_t$	-0.0570	0.0262	-2.1736	0.0366
$EXRVOL_t$	-1.0003	1.5308	-0.6534	0.5177

Statistics and Diagnostics			
R^2	0.5875	AIC	3.9095
$\bar{R}^2$	0.4932	SC	0.2753 [0.8714]
F-statistic	6.2312*** [0.0000]	HET	3.7676 [0.8775]
SBC	4.2745	$NORM$	1.5008 [0.4721]

Notes: The choice of the optimal ARDL specification is based on the Schwarz Information Criterion, starting with max q = max p = 4. The White heteroskedasticity-consistent SEs are used. SC denotes the Breusch- and Godfrey serial correlation LM test, HET denotes the Breusch, Pagan and Godfrey homoscedasticity LM test, $NORM$ denotes the Bai and Ng (2005) normality test for time series observations. p-values are displayed in square brackets. *** and ** denote significance at the 1% and 5% significance level, respectively.

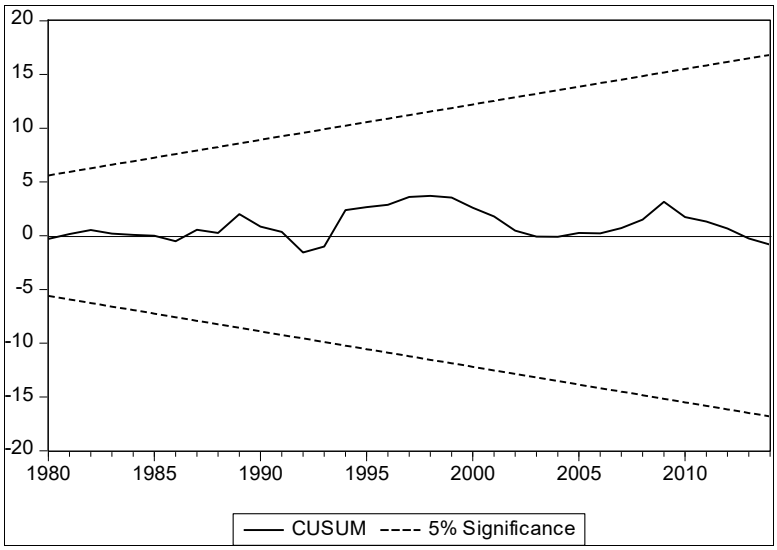


Figure 7.20 Cumulative sum (CUSUM) test on the selected ARDL model

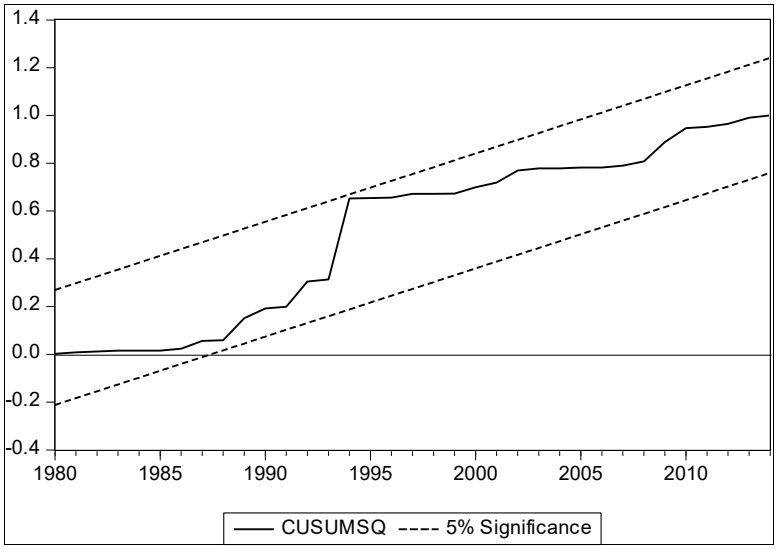


Figure 7.21 Cumulative sum of squares (CUSUMSQ) test on the selected ARDL model

The next step is to test the null hypothesis that the parameters of the lagged level variables in Equation (7.1) are jointly zero, i.e. $H_0: \theta_1 = \theta_2 = \theta_3 = \theta_4 = \theta_5 = \theta_6 = \theta_7 = 0$. Table 7.7 presents the estimated values of the F_{PSS} and t_{BDM} statistics along with the 95% and 99% lower and upper critical bounds taken from Pesaran *et al.* (2001). Given the small sample of this study we also report the critical bounds taken from Narayan (2005). According to the results, the estimated F_{PSS} is 6.439 while the t_{BDM} is

6.030 and since they are both greater than the 99% upper bound we conclude in favour of the rejection of the null hypothesis of no cointegration.

Table 7.7 Bounds testing for cointegration

ARDL model: $FDI_t \mid IR_t, DEBT_t, OIL_t, TRADE_t, GDP\_GROWTH_t, EXR\_VOL_t$

Specification: (1, 1, 0, 0, 0, 0, 0)

		99% Lower Bound	***99% Upper Bound***	***95% Lower Bound***	***95% Upper Bound***
F_{PSS}	6.439 [a]	3.15	4.43	2.45	3.61
		3.79	5.41	2.76	4.12
t_{BDM}	6.030 [a]	-3.43	-4.99	-2.86	-4.38

Notes: F_{PSS} denotes the Pesaran *et al*. (2001) F statistic testing the joint null hypothesis of no cointegration $H_0 : \rho = \theta = 0$. t_{BDM} denotes the Banerjee *et al*. (1988) *t* statistic testing the null hypothesis of no cointegration $H_0 : \rho = 0$ against $H_1 : \rho < 0$. The critical values correspond to $k = 6$ and were obtained from Pesaran *et al.* (2001) and Narayan (2005). [a] denotes rejection of the null hypothesis of no cointegration at the 1% significance level.

Since cointegration is confirmed, the next and final step is to estimate the long-run cointegrating relationship and also the ARDL Error Correction Model in order to make inferences also for the short-run horizon. Table 7.8 presents the estimates of both the long-run relationship (Panel A) and of the ARDL-ECM (Panel B). In the long-run relationship (Equation 7.2 below) we notice that the interest rate (IR), the external debt ($DEBT$), oil rents (OIL), and the GDP growth rate ($GDPGROWTH$) trade ($TRADE$), are statistically significant at the 5 and 1% significance level, while trade ($TRADE$) and exchange rate volatility ($EXRVOL$) are found to be statistically insignificant.

$$\widehat{FDI}_t = \underset{(8.02)}{27.30} + \underset{(0.09)}{0.41} IR_t - \underset{(0.37)}{1.32} DEBT_t + \underset{(0.02)}{0.05} OIL_t - \underset{(0.02)}{0.02} TRADE_t - \underset{(1.78)}{1.12} EXRVOL_t - \underset{(0.03)}{0.06} GDPGROWTH_t \quad (7.2)$$

The interest rate is found to have a positive effect on inward FDI, with an estimated coefficient of 0.4147. This result is consistent with the findings by ÇEviŞ and Çamurdan (2007) and Uwubanmwen and Ajao (2012). This result can be explained by the fact that MNEs investing in Nigeria are not deterred by rises in interest rates since they do not tend to raise capital there but in their own country for such investment. Moreover, rising interest rates can signal to MNEs that stringent monetary policy is being implemented to curb inflationary trends, thus reassuring foreign investors about future price stability and, more widely, the stability of the macroeconomic environment.

Debt is found to have a negative and significant effect, with an estimated coefficient of -1.3297. A similar finding is reported by Azam and Khan (2011) and Ostadi and Ashja (2014). Azam and Khan's (2011) estimated debt coefficient is 1.5848, showing a similar magnitude of how public debt obstructs

FDI inflows to Pakistan. The result implies that FDI is negatively affected by the country's bad debt condition. Ostadi and Ashja (2014), in their research findings, show that foreign (external) debt has a negative effect on inward FDI since increasing foreign debt destroys foreign investors' attitude and creates negative expectations which in turn reduce inward investments. The debt coefficient obtained from their estimations was relatively small in magnitude though, i.e., -0.012602. Our finding, therefore, supports the existing literature. Since Nigeria is a country characterised by high debt relative to available resources, it is exhibiting relatively low productive investment which is detrimental to economic growth. It is generally known that external debt has burdened Nigeria due to over-borrowing, inherited debt, and the high cost of debt and inability to repay. Inherited debt and excessive debt repayments have acted as a tax on the future output of the country and thus, reduced the incentive for savings and funds available for investments. External debt has also impeded the productivity of investments in the country as well as decreased spending on important determinants of economic growth such as health, education and infrastructure.

The positive effect of the oil rents (0.0521) is also confirmed by Nwankwo (2006), Akenbor and Oghoghomeh (2014) and Dinda (2014). According to Dinda (2014), who used Nigeria as a case study too, FDI is highly elastic with respect to natural resources. His results too show that FDI flows to Nigeria are co-integrated with natural resources. Thus, natural resources are the crucial factor that determines FDI flows to natural resource-rich Nigeria. Nwankwo (2016), who also used Nigeria as a case study, confirmed that countries with an abundance of natural resources would receive more FDI. Akenbor and Oghoghomeh (2014) confirmed with their results that natural resource endowments (especially oil) attract FDI flows into Nigeria. Hence, once again, our finding supports *a priori* expectations and some previous results in relevant literature. Natural resources can positively impact on economic growth and encourage foreign investment, if resources are utilised well, especially where industrialisation is low. Nigeria's natural resources are potential sources of national wealth and such income could be used for infrastructure development, human capital development and health, all of which can support increased output levels within the country. Also, the country's natural resources can facilitate participation of foreign investors and if effectively managed can help diversify an economy into other productive sectors, thereby creating an enabling environment for FDI. Yet, although our results confirm oil rents as a powerful determinant of Nigeria's inward FDI, the extent to which this inward investment can create a virtuous spiral of higher GDP and further inward FDI remains questionable.

The statistical insignificance of trade (***p-value*** = 0.3130) is also explained by Ayanwale (2007) whose results confirm that 'Openness to trade', is not FDI inducing. Oregwu and Onuoha (2013), argued that, based on their findings, the insignificance of the openness of trade could be justified on the basis that Nigeria's foreign sector needs to perform better in the areas of manufacturing and value addition for the foreign account balance to improve. Previous studies show that trade is a major determinant of FDI but this is contrary with Nigeria's case because the FDI that goes to Nigeria is resource-oriented, making the level of trade in Nigeria an insignificant determinant of FDI, as argued by Ayanwale (2007). FDI inflows to Nigeria have a negative relationship with trade because the Nigerian economy depends only on one sector (Oil sector).

The government has always focused on policies that attract FDI to the sector and neglected other sectors such as agriculture and manufacturing. Prior to the discovery of oil in Nigeria, in the 1960s, the agricultural sector contributed 64 percent to total GDP (Oji-Okoro, 2011). This share declined to 48 percent in the 1970s, and 20 percent in the 1980s. Historically, the root of the crises in the Nigerian economy lie in the neglect of the agricultural sector by the Federal Government towards developing dependence on a mono-cultural economy based on oil. FDI that goes to Nigeria (oil sector) led to the neglect of other sectors and as a result of this neglect, production dropped in other sectors and led to reduction in the level of trade. This research goes in line with the assertion that sees natural resources as a curse rather than a blessing (Sachs and Warner, 1995).

The statistical insignificance of the exchange rate volatility (***p-value*** = 0.5334), with its negative sign (-1.1224), is also supported by the study by Nyarko (2010). His findings indicated that the exchange rate volatility coefficient is negative but statistically insignificant on Ghana's FDI. De Vita and Abbott (2007) postulated a negative relationship between the exchange rate level and inward FDI. Using a measure of FDI based on the number of foreign entries in 61 US wholesale industries over the period 1981 to1987. Campa (1993) found volatility to be negatively correlated with the number of events of entry, and that this effect is stronger in industries where sunk costs are relatively high (De Vita and Abbott, 2007). Udomkerdmongkol *et al.* (2006) findings also indicated that volatile exchange rates discourage FDI. Khandare (2016), using China as a case study, found that the correlation between FDI and exchange rate in China is negative. He reported a *p-value* of 0.238 which indicated that the exchange rate volatility variable does not exert a significant influence on FDI in the case of China. This result supports our findings in Nigeria also.

The reason for the Nigerian case could be because Nigeria's inward FDI is so oil-dependent that the degree of exchange rate volatility, albeit likely to deter investment, appears to have an insignificant effect statistically. Nevertheless, the high exchange rate volatility in Nigeria, has led to a precarious operating environment which may explain why Nigeria has been unable to attract foreign investment to its fullest potential.

Table 7.8 The estimates of the long-run relationship and of the Error Correction Model

Panel A: Long-run relationship

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*p-value*
Constant	27.3094***	8.0229	3.4039	0.0017
IR_t	0.4147***	0.0947	4.3784	0.0001
$DEBT_t$	-1.3297***	0.3762	-3.5339	0.0012
OIL_t	0.0521**	0.0250	2.0797	0.0449
$TRADE_t$	-0.0241	0.0235	-1.0236	0.3130
$GDPGROWTH_t$	-0.0639**	0.0305	-2.0970	0.0433
$EXRVOL_t$	-1.1224	1.7844	-0.6290	0.5334

Panel B: Error Correction Model

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*p-value*
ΔIR_t	0.1125	0.1278	0.8806	0.3845
$\Delta DEBT_t$	-1.1851***	0.3150	-3.7617	0.0006
ΔOIL_t	0.0464**	0.0205	2.2617	0.0300
$\Delta TRADE_t$	-0.0214	0.0196	-1.0939	0.2815
$\Delta GDPGROWTH_t$	-0.0570**	0.0262	-2.1736	0.0366
$\Delta EXRVOL_t$	-1.0003	1.5308	-0.6534	0.5177
ECT	-0.8912***	0.1598	-5.5745	0.0000

Notes: *** and ** denote significance at the 1% and 5% significance level, respectively.

Perhaps the most interesting finding from our results is the negative coefficient of the GDP growth rate. This result seems, *prima facie*, to go against *a priori* expectations since theory predicts that the growth rate of the host economy induces a higher level of inward FDI. But some previous studies seem to confirm our findings. For example, Dinda (2014) found that GDP has no significant role in attracting FDI to Nigeria over the sample period 1970-2006. Dinda (2014) rationalises this result by arguing that GDP is not the determining factor of FDI flows to Nigeria since such flows are mainly resource seeking. The findings suggest that FDI flow to Nigeria can be explained by resource-seeking FDI irrespective of any specific trade relation (i.e., either North-South or South-South). Trading partners

like the UK in N-S and China in S-S trade relation have a strong influence on Nigeria's natural resources. Their aim is to extract resources from the resource-rich Nigeria. Oregwu and Onuoha (2013) argued that, based on their findings, the negative sign of the Nigeria's GDP growth was because it had no direct correlation with the level of FDI to the domestic economy. According to them, this is an indication that economic growth in Nigeria is not brought about by expansion in the overall investment but determined by the oil sector which is not sufficient to bring the needed FDI in Nigeria.

Also the findings by Nurudeen, Wafure and Auta (2007), suggest that Nigeria's GDP has a significant negative effect on FDI. They argued that government has failed to employ policies to further open up the economy in a manner conducive to attract more FDI. They further argued that the inability of the government to increase its investment in the development of the nation's infrastructure (power supply, roads, telecommunication, etc.) in order to reduce the cost of doing business has drastically reduced FDI into the country. They further explained that the failure of the government to encourage production activity via production incentives and/or subsidies in sectors than oil has led to a reduction in the economy's GDP. Therefore, a negative and significant coefficient, as reflected in our findings, could be explained on the basis of the fact that this FDI going into Nigeria is predominantly resource (oil) seeking FDI. Given that much of it is purely aimed at exploiting such natural resources and that much of the profits are repatriated abroad it maybe plausible that a negative relationship between inward FDI and Nigeria's GDP growth could emerge. This anomaly lies at the very heart of the "resource curse" argument which suggests that natural resources can actually create more damage than benefits if they are not governed to the advantage of host economies.

The importance of this result and its reliability are critical in the interpretation of the findings of this PhD thesis. Accordingly, to double check the accuracy of this result, we also re-estimated two identical models in which we replaced GDP growth with GDP per capita growth and GDP. If our interpretation of a negative GDP coefficient is, in fact, correct, we should find that also GDP per capita growth and GDP are negative and statistically significant. As can be seen from Tables 7.9 and 7.10, this is exactly what we find, with hardly any variation in all the other estimated coefficients. These further estimations, therefore, corroborate and further validate the reliability of our previous results using GDP growth as our income measure.

Table 7.9 The estimates of the long-run relationship and of the Error Correction Model using the GDP per capita growth variable

Panel A: Long-run relationship

Variable	***Coefficient***	***Std. Error***	***t-Statistic***	***p-value***
Constant	27.1662***	8.0327	3.3819	0.0018
IR_t	0.4157***	0.0954	4.3557	0.0001
$DEBT_t$	-1.3311**	0.3782	-3.5197	0.0012
OIL_t	0.0520**	0.0251	2.0711	0.0458
$TRADE_t$	-0.0242	0.0236	-1.0276	0.3112
$GDPpcGROWTH_t$	-0.0648**	0.0313	-2.0663	0.0463
$EXRVOL_t$	-1.0910	1.7866	-0.6106	0.5454

Panel B: Error Correction Model

Variable	***Coefficient***	***Std. Error***	***t-Statistic***	***p-value***
ΔIR_t	0.1128	0.1278	0.8830	0.3832
$\Delta DEBT_t$	-1.1857***	0.3161	-3.7502	0.0006
ΔOIL_t	0.0463**	0.0206	2.2521	0.0307
$\Delta TRADE_t$	-0.0216	0.0197	-1.0986	0.2794
$\Delta GDPpcGROWTH_t$	-0.0577***	0.0269	-2.1447	0.0390
$\Delta EXRVOL_t$	-0.9718	1.5333	-0.6337	0.5303
ECT	-0.8907***	0.1599	-5.5703	0.0000

Notes: *** and ** denote significance at the 1% and 5% significance level, respectively.

Table 7.10 The estimates of the long-run relationship and of the Error Correction Model using the GDP variable

Panel A: Long-run relationship

Variable	***Coefficient***	***Std. Error***	***t-Statistic***	***p-value***
Constant	42.3510***	11.8802	3.5648	0.0011
IR_t	0.3624***	0.0851	4.2553	0.0001
$DEBT_t$	-1.2418***	0.3237	-3.8360	0.0005
OIL_t	0.0356	0.0249	1.4294	0.1617
$TRADE_t$	-0.0219	0.0230	-0.9490	0.3491
GDP_t	-2.1817*	1.2623	-1.7282	0.0927
$EXRVOL_t$	-1.2544	1.8965	-0.6614	0.5126

Panel B: Error Correction Model

Variable	***Coefficient***	***Std. Error***	***t-Statistic***	***p-value***
ΔIR_t	0.0781	0.1469	0.5319	0.5981
$\Delta DEBT_t$	-1.1730***	0.3094	-3.7905	0.0006
ΔOIL_t	0.0336	0.0213	1.5758	0.1241
$\Delta TRADE_t$	-0.0207	0.0207	-0.9998	0.3242
ΔGDP_t	-2.0609	1.3732	-1.5007	0.1424
$\Delta EXRVOL_t$	-1.1850	1.7969	-0.6594	0.5139
ECT	-0.9446***	0.1777	-5.3157	0.0000

Notes: *** and * denote significance at the 1% and 10% significance level, respectively.

The error correction model (ECM) representation (see Panel B in Table 7.8) also reassures as to the validity of the long run estimates reported in Panel A of Table 7.8. Indeed, the statistical significance, sign and magnitude of the short-run estimates reported in panel B of Table 7.8 are fairly consistent with the values of the long-run coefficients reported in Panel A of Table 7.8. The estimated error correction term (ECT) is -0.8912, and it is highly statistically significant. The estimated ECT value of -0.8912, indicates that nearly 90% of the adjustment from short-run disequilibrium to the cointegrating long-equilibrium is completed within one year. Very similar ECT values are obtained in the re-estimations using the GDP per capita growth variable in table 7.9 (-0.8907) and GDP in table7.10 (-0.9446).

CHAPTER 8: CONCLUSIONS

8.1 Chapter overview

This chapter presents and discusses the conclusions of this study. The next section summarises the main findings of the research, structured by original objectives as outlined in the Introduction (Chapter 1). In the following section the key policy implications flowing from the findings are highlighted. Next, a clear and succinct summary of the overall contributions of this thesis is provided. The final section offers a discussion of the limitations of the study and profitable avenues for future research.

8.2 Summary of findings

The primary aim of this thesis was to ensure a gap is filled in the knowledge about the determinants of inward FDI in Nigeria using a cointegration analysis. Specifically, the objectives were:

(i) To critically review past literature, both theoretical and empirical, on the key determinant factors affecting Nigeria's inward FDI;

(ii) To collect relevant data and formulate an adequate model specification;

(iii) To choose the most suitable econometric technique to undertake the empirical analysis using a state-of-the-art cointegration technique (the ARLD bounds testing approach to cointegration);

(iv) To interpret and discuss the results, identifying the main findings, and draw out key policy implications

8.2.1 Objective (i): Reviewing past literature, both theoretically and empirically

Chapter five provided a critical and systematic review of the large body of empirical literature that has investigated FDI determination. Here, past empirical studies and findings on the determinants of FDI were discussed.

FDI has long been a subject of interest and testing for the determinants of FDI inflows has been very popular in the empirical literature in economics and finance. This interest has been renewed in recent years due to the strong expansion of world FDI flows recorded since the 1980s, an expansion that has made FDI even more important than trade as a vehicle for international economic integration (Lemi, 2011). Given this fact, it should come as no surprise that a large number of theoretical explanations as to the very existence of FDI have been advanced over the years, with many studies focusing on the

investigation of the determinants of such investment. However, despite the abundance of research, there is at present no universally accepted model of FDI. These unresolved issues are of special importance to developing countries that now more than ever, seek to attract FDI to fuel economic growth (De Vita and Lawler, 2004).

The literature is vast and uses various methodologies to investigate the influences of various determinants of FDI. For example, using a panel data set of bilateral flows of FDI, Bevan and Estrin (2004) studied the determinants of FDI from Western countries, mainly in the European Union, to Central and Eastern European ones. Their study identified the most important influences to be unit labour costs, gravity factors, market size and proximity. Interestingly, host country risk proves not to be a significant determinant according to their results.

According to De Vita and Kyaw (2008), since the mid-1990s, FDI has become the largest component of external financing for developing countries. It is estimated that FDI to developing countries increased to about $200 billion in 2000 from $183 in 1999 (World Bank, 2008). FDI declined in 2001 and most of the decline was due to a recession affecting the world's major economies. Most of the FDI went to developed countries (UNCTAD, 2002).

Also, using panel data from 68 low income and lower-middle income developing countries, Abdul-Mottdaleb and Kalirajan (2010) examined the factors that determine FDI inflows to developing countries. Based on a comparative discussion focusing on why some countries are successful in attracting FDI, their study demonstrated that countries with a high GDP, higher growth rates, higher proportion of international trade and a more business friendly environment, are more successful in attracting FDI.

Nigeria has the potential to become Sub-Saharan Africa's largest economy and a major player in the global economy because of its rich human and material resources as well as natural endowments. It follows that Nigeria has the potential to build a prosperous economy, reduce poverty significantly and provide health, education and infrastructural services as per the needs of its population. However, this has not been achieved because all major productive sectors have shrunk in size with the over dependence on oil ('resource course'). Nigeria's income distribution is also markedly skewed, resulting in one of the most unequal societies in the world, with over 50 percent of the population having only 8 percent of the national income (Sala-i-Martin and Subramaniam, 2004). The economy remains highly uncompetitive and with an average annual investment rate of barely 10 percent of GDP, Nigeria is far

behind the minimum investment rate of about 30 percent of GDP required to unleash a poverty-reducing growth rate (Sala-i-Martin and Subramaniam, 2004).

Most of the inward FDI in Nigeria goes into the oil and extractive sectors and as a result of this, the economic structure remains highly undiversified, with oil accounting for 95 percent of exports (USAID, 2009). However, the Nigerian Government has acted to stimulate non-oil businesses through the promotion of Small and Medium Enterprises (SMEs). These efforts and the momentum provided to the nation by the return of a democratic government, are reflected in the 'Improvement and Optimism Indexes' compiled by the World FDI Intelligence Group, which ranks Nigeria fourth among 12 African countries in terms of 'Best Overall', and second among 12 African countries in terms of 'Best Economic Potential' (Report on African Countries of the Future 2013/2014 Winners).

Theoretical and empirical evidence suggest that Nigeria possesses the capacity to adequately attract FDI and though Nigeria has embarked on policies and structural reforms to increase openness, lowering barriers to trade, liberalising domestic financial markets and removing restrictions on capital movements, FDI inflows have remained mainly limited to the oil sector of the economy (from which the country derives over 90% of its exports). According to Ekpo and Egwakhide (2005), FDI is influenced, in theory at least, by the size of the market for the products, expected increase in higher profit rates, availability of relevant raw materials, the existence of protectionist policies, level of domestic investment, low labour and production costs, political stability and an enduring investment climate, international product differentials, cordial supplier relationships, favourable regulatory environment, and financial infrastructural facilities. In theory, the principal determinants of FDI are related to the economic and political conditions of the host country's nation.

The determinants of investment demand in Nigeria, from 1960 to 1980 were traced to the absorptive capacity and government policies (Osuagwu, 1982). Obadan's (2004) study confirmed that market size, trade policies and raw materials are critical determinants of FDI in Nigeria. Anyanwu's (2011) analysis highlighted the significance of domestic investment, openness of the economy and indigenisation policy as factors playing major role in determining the flow of FDI to Nigeria. Ajakaiye (2010) posited that the rising bank lending rate profile in Nigeria during the 1987-2007 period discouraged productive investment. Obadan (2004) also traced the importance of the exchange rate on FDI inflows, noting that a sustained exchange rate misalignment in terms of over-valuation or under-valuation is a major source of macroeconomic disequilibrium, thus affecting strongly a country's FDI attraction.

8.2.2 Objective (ii): Collecting data and formulating an adequate model

In terms of access, the present study benefited from data available through many reputable, publicly available sources (databases). The sample period was from 1970 to 2014. The measures employed were obtained from the World Development Indicators (WDI) database of the World Bank and from the International Financial Statistics (IFS) database of the International Monetary Fund (IMF).

The methodology chapter covered in depth the core elements of cointegration theory and analysis, which represents the overall methodological framework of this PhD study. The evolution of cointegration techniques was examined from the most basic concepts of stationarity and unit roots through to the development of successive multivariate cointegration techniques, including a discussion of their relative advantages and limitations. This study initially employs the unit root tests of Ng and Perron (2001) to ascertain the order of integration of the individual time series. Given the mixed integration order of the series, we then test for cointegration by employing the Autoregressive Distributed Lag (ARDL) bounds testing procedure introduced by Pesaran and Shin (1999) and Pesaran *et al*. (2001).

The major advantage of the ARDL approach to cointegration is that it can be applied even if the regressors have a different order of integration, i.e., I(0) or I(1). This feature provides flexibility and also helps to avoid a potential 'pre-test bias', i.e., the specification of a long-run model on the basis of *I*(1) variables only (Pesaran *et al*., 2001). With the aim of preparing the ground for the empirical analysis of the determining factors affecting inward FDI to Nigeria, a baseline model was distilled from the review of the literature. The model aimed at capturing all the theory-based and empirically-tested variables that can reasonably be expected to exert a systematic influence on Nigeria's inward FDI, and for which data was available. Variables employed in the model were foreign direct investment (*FDI*), the lending interest rate (*IR*), total external debt (*DEBT*), oil rents (*OIL*), trade (*TRADE*), exchange rate volatility (*EXRVOL*), Gross Domestic Product (*GDP*) growth, GDP per capita growth rate (*GDPpcGROWTH*) and GDP.

8.2.3 Objective (iii): Interpreting and discussing main findings (implications are discussed in the next section)

The study used time series data for the period 1970-2014, and the ARDL bounds testing approach to cointegration. The existence of cointegration and hence a long-run relationship was examined. The

model was ultimately reduced to the examination of six determinants of inward FDI: trade openness, GDP growth, exchange rate volatility, interest rate, natural resources (oil rents) and debt.

The empirical analysis of the Nigerian data shows that Nigeria's GDP does not bring about FDI into the economy, as a negative coefficient was obtained. This is an indication that the country's GDP *per se* does not attract FDI as investors are more concerned about exploiting the natural resources of the country. This may be partly explained by the fact that whatever profits are made from such oil-based foreign investments, they are mostly repatriated abroad. This, therefore, tends to impede the economic growth of the country, bringing about a negative relationship with FDI.

The variable representing 'oil' exhibits a positive relationship with FDI, an indication that FDI flows to Nigeria can be explained by resource-seeking FDI irrespective of any specific trade relation. Trading partners have a strong influence on Nigeria's natural resources outflow. Their basic target is to extract resources from the resource-rich Nigeria and repatriate as much profit as possible. The findings will help to formulate appropriate policies for resource-rich poor-countries.

Trade openness was found to be statistically insignificant, revealing the need to have more competitive products for international markets to begin to demand for more of Nigeria's exportable commodities. Nevertheless, being FDI mostly resource-seeking in nature in Nigeria, Nigeria's overall level of exports and imports does not appear to have been a key factor in inducing inward FDI.

External debt was found to be negatively and significantly related to FDI according to our results for Nigeria. FDI has been adversely affected by Nigeria's bad debt. As explained in the previous chapter, negative expectations are created in investors towards a country ridden with both bad debt and bad debt servicing policies.

The empirical results unveiled a positive and statistically significant estimated coefficient for the interest rate variable. Foreign investors are not discouraged by rises in interest rates since they do not tend to raise capital in Nigeria but in their own country for such investment. On the contrary, higher interest rates provide incentives to foreign investors looking for a higher return, therefore, high interest rates can lead to increased FDI.

Our result on exchange rate volatility suggests that no single theoretical proposition on how exchange rate volatility affects inward FDI applies indiscriminately in every country. For the case of Nigeria, our research findings show that the effect of exchange rate volatility is not statistically significant. This result may be rationalised on the basis that most FDI flowing to Nigeria is resource-

seeking, and hence, because of this, undeterred by short term fluctuations in the value of the Nigerian currency.

8.3 Policy implications (Objective iv)

This section refers to **objective (iv)** of the thesis, the resulting policy implications. There is need for a substantial growth of the nation's GDP as foreign investors will be motivated and attracted when they are certain that the host country creates the needed market for their products. This can be achieved if government creates an enabling environment and provides incentives for production activities as well as creating employment. There should be concerted efforts to boost the performance of the non-oil sector in Nigeria through more investments by directing relevant authorities in the country to channel resources via long term loans to encourage more participation by investors in the agricultural and industrial sectors which will make the growth of the economy spread across other sectors and, in turn, encourage foreign investment in such areas.

Countries in the region endowed with natural resources should pursue policies targeted at full deregulation (privatisation) of their natural resource sector to better utilise the abundance of their natural resources and to attract additional FDI. The conflicts and instability often generated as a result of natural resources must be addressed in order to maximise the exploration and production of natural resources and encourage a fair distribution of the wealth.

With asset-seeking motives strongly related to FDI, state support for human capital accumulation is important as FDI is increasingly directed towards R&D and innovation activity. Thus, asset-seeking FDI should widen the region's access to new markets, new technologies and product development competencies that should result in spillovers from foreign firms to the domestic economy.

Nigeria's local content policy started in 1971 through the establishment of the National Oil Company (NOC) to promote the indigenisation of the oil and gas sector. NOC became Nigerian National Petroleum Corporation (NNPC) in 1977. A serious attempt was, however, made in 2010 with the promulgation of the Nigerian Oil and Gas Development Law. This law defines local content as: "*the quantum of composite value added to or created in Nigeria through utilisation of Nigerian resources and services in the petroleum industry resulting in the development of indigenous capability without compromising quality, health, safety and environmental standards"* (Oyewole, 2015, p. 10). The policy is framed within the context of growth of Nigerian entrepreneurship and the domestication of assets to

fully realise Nigeria's strategic development goals. Table 8.1 below presents a summary of the achievements obtained since the introduction of the policy.

Table 8.1 Achievements of the Local Content Policy

Item	**Before Local Content**	**After Local Content**
Average Industry Spend	US$14 Billion	US$10 Billion
Contribution to National Revenue	71%	80%
Contribution to Export earnings	90%	97%
Contribution to GDP	12%	25%
Local Value Added	10-15%	40%
Use of Workforce	More Expatriates	More Nigerians

Source: Developed by the author (2017), drawing from Oyewole (2015).

Nigeria should pursue better debt management practices. When debts are acquired, they should be targeted towards future consumption and longer term investments and not for current consumption because loans acquired for current consumption will have little or no impact on capital formation, economic growth and in attracting FDI.

Although the high exchange rate in the country which is supposed to attract foreign investors is not favourable for growth in the country, our result still shows a negative and insignificant impact on FDI. This result suggests that a highly volatile currency would discourage foreign investors to engage in FDI in Nigeria but this is not the case currently since most FDI is purely directed at the oil sector, and the resource-seeking nature of this investment appears to override short-term exchange rate volatility considerations. The federal government and the central bank of Nigeria should have a strong policy on exchange rate that would help the manufacturers in producing rather than buying goods from outside the country. In doing this, in the long-run, the naira would gain value and gain stability.

The Nigerian government should create the necessary environment that will regulate macroeconomic and specifically monetary policy (interest rate) which is essential for the attraction of FDI inflows into the economy. Most importantly, as an import-dependent economy, the Nigerian government should also formulate export-driven and fiscal policies that will stabilise and balance Nigeria's trade relationship with other world economies.

Nigeria should ensure that the quality of exportable commodities is improved so as to bring about international competitiveness. Both private and public sector goods in Nigeria should have a high level of 'value-added' foreign investors can tap into. This can be achieved through fostering the development of indigenous technology.

The present Nigeria is an economy on the verge of economic growth and development and still plagued by the 'resource curse', which is the bane of Nigeria's present crisis. But the government is still making efforts to ensure the right quantum of FDI is attracted into the country. The findings from this study are very relevant and valid under the current government and has provided a blueprint for policy makers to establish appropriate policies to ensure a stringent monetary policy is in place, use debt obtained for long term investments to attract more FDI, diversify the economy to ensure growth and development across other sectors and ensure resources are fairly and equitably distributed to avoid sectarian violence and ethnic conflicts. These recommendations stem from my findings and are relevant in ensuring a better business environment for investment in Nigeria.

8.4 Further discussion on findings

The findings reported and discussed in chapter seven are very interesting and are certainly worthy of further elaboration. It could be said that due to the characteristics of emerging and developing countries and due to the fact that FDI theories were developed mostly in advanced countries, there is no single framework which could adequately identify the determinants of FDI in the context of Nigeria. This research has contributed to the process of identifying the determinants of FDI by developing a framework for a better understanding of the determinants of inward FDI in the Nigerian economy.

This research contributes not only to the theoretical literature on the determinants of FDI but also to the field of international business studies, because it increases our knowledge of the Nigerian context and how the latter interacts with the investment decisions of foreign investors. This work fills gaps in the empirical literature on the Nigerian context concerning the determinants of FDI, thereby offering guidelines on how efforts can be put in place to better attract greater FDI flows to the Nigerian economy. Using state-of-the-art econometric techniques to identify the main determinants of FDI flows to Nigeria, the findings revealed the major obstacles constraining the flow of FDI into the Nigerian economy.

Variables that have been employed in this study are the interest rate (IR), external debt ($DEBT$), oil rents (OIL), the GDP growth rate ($GDPGROWTH$), trade ($TRADE$) and exchange rate volatility (

$EXRVOL$). Our empirical results showed that the interest rate (IR), external debt ($DEBT$), oil rents (OIL), and the GDP growth rate ($GDPGROWTH$), are statistically significant at the 5 and/or 1% significance level, while trade ($TRADE$) and exchange rate volatility ($EXRVOL$) are found to be statistically insignificant. With the exception of the GDP growth rate, the sign of the statistically significant coefficients is consistent with theory.

Previous results have shown that a high interest rate has a positive effect on inward FDI. Our estimated coefficient of real interest rate is positive and significant. This result is in line with the results reported in Asiedu (2002), Chakrabarti (2001), Onyeiwu and Shrestha (2004) and Bende - Nabende (2002).

Another variable included in this study is debt. Previous research findings such as those by Kareem *et al*. (2012) and Azam and Khan (2011) have indicated that the presence of a large external debt burden can play a significant role in reducing investment activities. This is because the higher debt service payments associated with a large external debt reduce the funds available for investment promotion and attraction. Secondly, the existence of a large debt overhang in the form of a high ratio of external debt to GDP can reduce the incentives for investment, because much of the returns from investment must be used to pay existing debt. Thirdly, substantial external debt leads to difficulties in meeting debt service obligations, which may strain relations with external creditors and make it costlier to finance or attract private investment (Azam and Khan, 2011). The results obtained from our study are also consistent with prior research on this variable because a rise in the level of foreign debts causes the confidence and attitude of investors to be destroyed and this creates fears and negative expectations in them. When this happens, the quantum or amount of foreign investments expected to flow into the country reduces drastically.

Previous studies have shown trade openness to be positive and significant. This supports the extent to which a country allows free movement of goods and services, which determines the level of FDI inflows. A range of surveys suggests a widespread perception that “open” economies encourage more foreign investment. One indicator of openness is the relative size of the export sector. These studies indicate that exports, particularly manufacturing exports, are a significant determinant of FDI flows and that tests show that there is strong evidence that exports precede (Granger-cause) inward FDI flows. These results are seen in the studies conducted by Asiedu (2002), Buloke (2011), Chakrabarti (2001), and Bhavan *et al*. (2011). However, our findings are quite different and show trade to be statistically insignificant. This may be because the FDI that goes to Nigeria is resource-oriented, making

the level of trade in Nigeria an insignificant determinant of FDI. This is a peculiar case in that much of Nigeria's imports and foreigners' activities into the country are on this sector to develop the exploration of Nigeria's natural endowments (oil) as the government has always focused on policies that attract FDI to the oil sector and neglected other sectors such as agriculture and manufacturing.

'Natural resources' are another variable tested in this study. Dunning (1993) emphasises that the first motive for FDI is resource or asset seeking. The reason for this type of FDI is the unavailability of resources (e. g. raw materials or low cost labour), or high costs in the home country. In this case firms become further rivals in the potential and existing markets, and then decide to go abroad, particularly if exportation is the purpose of investment, because the reduction of their costs is a very important factor. Moreover, the motives for this type of FDI are to increase the firm's profit and to elevate its competitive level in the market served or in the market it wants to serve (Dunning, 1993). This kind of FDI is attracted to countries with rich natural resources (Campos and Kinoshita, 2003). Sometimes the purpose of this type of FDI is to take advantage of resources in a specific area and, FDI in this case is location-based (Tekin-Koru, 2007). Other previous studies like Asiedu (2006) investigated the influence of natural resources in directing FDI flows to the region. The results suggest that countries in Africa that are endowed with natural resources will attract more FDI. According to Morisset (2003) and Asiedu (2006), the common perception among many observers is that FDI in African countries is largely driven by their natural resources. Morisset (2003) found that natural resources availability has a positive influence on FDI inflows. Our finding is consistent with prior research. Therefore, natural resources are confirmed to be the crucial factor that determines FDI flows to Nigeria and our results have confirmed that countries with an abundance of natural resources would receive more FDI.

Previous studies done on GDP as a determinant of FDI have confirmed its positive effect and significance on inward FDI. Asiedu (2002), Bevan and Estrin (2004) and Alvinasab (2013), established a correlation between FDI and the size of the market (proxied by the size of GDP). Their studies found GDP growth rate to be a significant explanatory variable. Greater output growth means that greater investment can be induced. It is obvious that a market (economy) that is thought to grow fast should be favourable to absorb FDI inflows. Thus, economic growth should be expected to have a positive effect on FDI inflows. But our findings, interestingly, contradict previous findings, with a negative coefficient of the GDP growth rate. The justification for this is that this FDI going into Nigeria is predominantly resource (oil) seeking FDI. Given that much of it is purely aimed at exploiting such natural resources

and that much of the profits are repatriated abroad it maybe plausible that a negative relationship between inward FDI and Nigeria's GDP growth could emerge.

Exchange rate volatility is another variable that was tested. Previous studies such as Goldberg and Kolstad (1994) found high exchange rate variability to act as an impediment to FDI inflows to the United States, Canada, Japan and the United Kingdom. On the other hand, our findings indicate that exchange rate volatility has a negative, yet statistically insignificant relationship with FDI inflows into Nigeria. This result may be explained by the fact that Nigeria's inward FDI is so oil-dependent that the degree of exchange rate volatility, albeit likely to deter investment, appears to have an insignificant effect statistically. The next section sets out the contributions this study has made to knowledge both methodologically and theoretically in advancing previous work on FDI and its determinants in Nigeria.

8.5 Overall Contributions of the Thesis

The study has contributed to knowledge by providing vital information on FDI determinants to guide the government in decision making and to future researchers in the study of FDI in Nigeria. The analysis of FDI determinants in the Nigerian economy yielded reliable, robust and economically meaningful results thereby offering an insight into the driving factors of inward FDI. This study focused on the period 1970–2014 and made use of time series data obtained from the World Development Indicators (WDI) database of the World Bank and from the International Financial Statistics (IFS) database of the International Monetary Fund (IMF).

The results revealed that the main FDI determinants in the Nigerian economy are interest rate, natural resources, and debt as these variables showed the expected sign and were statistically significant. Therefore, plans should be put in place to reduce debt to increase the confidence of investors and create positive expectations in them. When this happens, the quantum of FDI expected to flow into the country increases greatly. Rising interest rates can signal to MNEs that stringent monetary policy is being implemented to curb inflationary trends, thus reassuring foreign investors about future price stability and this brings about an increase in inward FDI. Natural resources are confirmed to be the crucial factor that determines FDI flows to Nigeria and our results have confirmed that countries with an abundance of natural resources would receive more FDI.

However, the insignificance of the GDP growth variable indicates that FDI going into Nigeria is predominantly resource (oil) seeking FDI. Given that much of it is purely aimed at exploiting such natural resources and that much of the profits are repatriated abroad it is plausible that a negative

relationship between inward FDI and Nigeria's GDP growth could emerge, making GDP growth have a negative coefficient. Trade did not emerge as a statistically significant determinant of FDI in Nigeria because the FDI that goes to Nigeria is resource-oriented. This is a peculiar case in that much of Nigeria's imports and MNEs' activities into the country are to develop the exploitation of Nigeria's natural endowments (oil). This is because the government has always focused on policies that attract FDI to the oil sector and neglected other sectors such as agriculture and manufacturing. Exchange rate volatility has a negative and yet statistically insignificant relationship with FDI inflows into Nigeria. As noted earlier, this result may be explained by the fact that Nigeria's inward FDI is so oil-dependent that the degree of exchange rate volatility, albeit likely to deter investment, appears to have an insignificant effect statistically.

The significance of FDI in our economy and the low level and fluctuation of FDI to Nigeria at the moment signifies that some aspects of the economy need to be looked into and also worked upon by the Nigerian government. In effect, countries have recently begun to pursue targeted policies towards attracting FDI. The findings of this PhD study will enable policy makers to plan and formulate both short and long term policies that would be beneficial for Nigeria in attracting FDI, as elaborated above.

8.5.1 Theoretical contributions

Having done a detailed study and analysis of Nigeria, the researcher has been able to identify, using the most up to date and latest econometric technique, the main determinants of FDI flows into Nigeria which are natural resources, debt and interest rates. The author has also been able to identify variables such as exchange rate volatility and trade that do not exert any influence on attracting FDI into the country. My results have established that the GDP of the Nigeria does not have a positive influence on FDI in Nigeria due to the fact that profits generated from oil are not re-invested in the economy to bring about the needed growth and development across all sectors. Based on my findings, I have been able to provide policy makers with a blueprint to establish favourable FDI policies.

8.5.2 Methodological contributions

Through this study, the researcher has been able improve on what was known before in terms of:

(1) Updated econometric technique: I have used the most recent, up to date and latest state-of-the-art co-integration technique which is ARDL, which has not been used in the application to the investigation of inward FDI in the context of Nigeria.

(2) Longer sample period: Previous studies only managed to use very short sample periods. But in order to correct this error and ensure validity of results obtained, I used a longer sample period, which involved a sample period of 44 years.
(3) More variables of interest: Previous studies failed to specify a comprehensive model of theory-based FDI determinants which could lead to model specification bias. I formulated a comprehensive model of theory-based determinants of FDI in Nigeria, thereby producing valid results.
(4) Reliable data sources: This study made use of data from internationally accredited sources namely, the World Development Indicators database of the World Bank and the International Financial Statistics database of the IMF.

8.6 Limitations and profitable avenues for future research

8.6.1 Limitations of the research

There are still a number of limitations in this PhD study that should be acknowledged. Although this study has extended and developed previous research in several ways, a complete and systematic time-series study on FDI and its determinants in Nigeria would require more resources than were available for this study. The researcher encountered a number of constraints in the course of this work, including data sourcing and data inconsistencies due to the poor nature of information management in Nigeria. Other constraints were the time factor, financial limitations, and a host of other constraints dictated by the fact that the researcher is a mother, a wife and continued to work while undertaking this PhD.

The researcher could not take a number of variables under empirical consideration because of the unavailability of time series data for the 44 years of the original sample period. Ideally, all the data stated as FDI determinants were required for the analysis especially the Corruption and Transparency indices which are seen to be major factors in deterring economic growth and development in the country but due to limitations in getting data on some of them, this study was confined to the following six variables: FDI, GDP growth rate, openness, exchange rate, natural resources and interest rates.

The findings that have emanated from this study are applicable to Nigeria as well as to other oil-rich developing countries. It is highly plausible that the results from the variable ‘oil’ are only applicable to all oil exporting developing countries excluding countries that are not rich in oil.

A better coverage over a longer period of years would have allowed for the analyses involving sector performance to be carried out with respect to identifying the determinants of FDI. Also, the

direction this research had taken meant that some parts of this study did not fully attach to the current wave. That is, most recent studies in the FDI literature have employed sector level data to explain FDI determinants in a particular country. However, due to data unavailability for Nigeria, this study used only aggregate country level data to explain FDI activities. An additional sectoral analysis would have added considerably to this study.

8.6.2 Profitable avenues for future research

Based on the limitations of this study as discussed above, a number of possible avenues for future research have been identified. The first possible future research direction would be the improvement and update of both historical and current data, making data readily available. This thesis only investigated FDI in Nigeria using secondary data from official databases. Secondary data is usually more authoritative and accurate and does not involve a large amount of time in data collection. However, secondary data may not perfectly suit the research needs for a study and sometimes it cannot reflect the latest information compared to primary data sources. Collecting primary data on FDI for analysis is, therefore, worth being explored in the future. This approach could overcome the problem of lack of certain data. In this way, the patterns discovered from data sourced from standard databases could be compared to results based on primary data.

Another possible extension could entail using alternative methodologies. This study chose an empirical and quantitative approach that used a large-scale dataset to derive conclusions. Although there are obvious advantages for using the chosen methodology (the ARDL bounds testing approach to cointegration), other analytical approaches such as 'Propensity Score Matching' or even a 'Case Study' method have their own merit. The Case Study approach is a qualitative method that could provide in-depth information and details about the particular phenomenon being studied so it is a perfect means to undertake an intensive description and analysis of individuals/objects or a group of individuals/objects, in our case, foreign investors' drivers to invest in Nigeria. In the context of this study, it would be interesting and helpful to use a case study methodology to delve into, qualitatively, some of the empirical patterns unveiled by the cointegration analysis.

A further extension could entail a deeper policy-based analysis of FDI. This remains an interesting and fruitful research direction despite the econometric difficulties of employing adequate measures to capture the effect of policy, beyond the typical use of time dummies. Finally, data

availability permitting, it would be valuable to investigate inward FDI at sectoral level within Nigeria, because sectoral factors may have an impact on the responses of different determinants.

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APPENDIX

Table 4.1 A taxonomy of FDI definitions

Author	Definition	Key features/emphasis
IMF's Balance of Payments Manual (5th Edition, 1993), p. 34	*"Direct investment reflects the aim of obtaining a lasting interest by a resident entity of one economy (direct investor) in an enterprise that is resident in another economy (the direct investment enterprise)".*	Lasting interest
OECD's Benchmark Definition of Foreign Direct Investment (3rd Edition, 1996) pp.7-8	*"Foreign direct investment is defined as incorporated or unincorporated enterprise in which a foreign investor owns 10 per cent or more of the ordinary shares or voting power of an incorporated enterprise or the equivalent of an unincorporated enterprise".*	Threshold of ownership
Fu (2000, pp. 95-96)	*"Foreign direct investment is a particular type of foreign capital, as opposed to domestic investment. Fu argues that it does not include loan capital provided by international organizations, foreign governments, or private commercial banks. Nor does it automatically include portfolio investments such as stocks and bonds purchased by foreigners. What makes investment "direct" as opposed to other forms of foreign capital is the concept of managerial control over an enterprise in which foreign capital participates".*	Control
Jones (1998, p.21)	He distinguishes three major types of FDI as follows: *"Market-seeking – the purpose of the investment is to ensure access to the market of the destination country; Resource-seeking – the investment is made to ensure more reliable supplies of natural resources; Platform-seeking – the purpose of the investment is to provide a "platform" for production and/or sales activities in a regional market".*	Motive
De Vita and Lawler (2004, p. 14)	*"The concept of FDI refers to the setting up of an overseas operation (greenfield investment) or the acquisition of an existing enterprise located within another economy. FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the host country".*	Degree of influence/ management dimension
System of National Accounts, authored by European Commission, IMF, OECD,	*"Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy".*	Control or a significant degree of influence

United Nations and the World Bank (2008), pp. 16-23		
UNCTAD, World Investment Report (2013), p. 13	*"Foreign direct investment (FDI) is defined as an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy in an enterprise resident in an economy other than that of the foreign direct investor".*	Significant degree of influence/control and lasting interest.
OECD, Benchmark Definition Fourth Edition, 2008, p. 14	*"Foreign direct investment (FDI) is a category of investment that reflects the objective of establishing a lasting interest by a resident enterprise in one economy in an enterprise that is resident in an economy other than that of the direct investor".*	Lasting interest
OECD (1992), p. 24	*"FDI is an investment involving a long term relationship that control of a resident entity in one economy reflects a lasting interest and in that enterprise resident in an economy other than that of the foreign direct investor".*	Control and lasting interest
World Bank (1999), pp. 16-17	*"FDI refers to 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 the investor".*	Lasting interest, threshold of ownership
Graham and Spaulding (2005), pp. 20-24	*"Foreign direct investment in its classic definition, is defined as a company from one country making a physical investment into building a factory in another country".*	Lasting interest
Economy Watch (2010), p. 31	*"FDI is a type of investment that involves injections of foreign funds into an enterprise that operates in a country of origin different from the investor".*	Injection of foreign funds
Teng, Chern, and Kim (2001), pp. 62-68	*"FDI is the flow of capital across national boundaries for maintaining control over production activities conducted by the firm's overseas subsidiary, and for establishing service facilities and conducting business activities in a foreign market".*	Control
Borensztein, Gregorio, and Lee (1998) pp. 115- 135	*"FDI in the presence of advanced technology is a tool used for transferring technology to increase economic growth of the host country rather than increase investment in the domestic market, thus having a negative effect on the economic growth of the home country".*	Transferring technology
US Department of Commerce (1953); the outward survey for	They provided a more precise definition, covering four categories of FDI:	Threshold of ownership

1950, p. 4	*1. "Foreign corporations, the voting securities of which were owned to the extent of 25% or more by persons or groups of affiliated persons, ordinarily resident in the US."* *2. "Foreign corporations, the voting stock of which was publicly held within the US to an aggregate of 50 % or more, but distributed among stockholders, so that no investor, or group of affiliated investors, owned as much as 25 %."* *3. "Sole proprietorships, partnerships, or real property (other than property held for the personal use of the owner) held abroad by residents of the US."* *4. "Foreign branches of US corporations."*	
(IMF, 1997, p.23).	*"Foreign Direct Investment as an investment that is made to acquire a lasting interest in an enterprise operating in an economy other than that of the investor, and the investor's purpose being, having an effective voice in the management of the enterprise".*	Lasting interest
Karluk (2001, p.100).	*"Foreign direct investment is an investment which brings technology, business administration and control authorization of investor to a country from another, by buying a firm, providing initial capital to a current firm and increasing capital of a current firm".*	Control
Hayter (1997, p.6)	*"FDI involves issues of direct control as resources are transferred internally within firms rather than externally between independent firms. In the case of FDI, parent companies have control over both day to day operations of their investment and their nature and scope in the long run"* .	Control

Source: Developed by the author (2015), drawing from the original sources cited.

Table 5.1 Tabular presentation of FDI determinants globally

Author/Year	Sample period	Sample countries	Methodological approach	Key findings	Statistical significant variables
Caves (1988)	1975 to 1985 (quarterly)	US	OLS	He found that the strength of a country's currency relative to the US dollar was an important explanatory variable for that country's direct investment into the US	Exchange rate

Froot and Stein (1991)	1973 to 1988 (annual)	US	OLS technique	Results found that when regressing inflows of FDI into the US against the exchange rate, FDI was negatively correlated to the value of the US dollar.	Exchange rate
Goldberg (1993)	1970 to 1989 (annual)	US	The conditional logit model	Results suggested that the real exchange rate has a significant positive impact on FDI flows into the US.	Real exchange rate
Campa (1993)	1981 to 1987 (annual)	US	Basic OLS technique	He found volatility to be negatively correlated with the number of events of entry, and that this effect is stronger in industries where sunk costs are relatively high	Exchange rate
Dewenter (1995)	1975 to 1989 (quarterly)	US	Survey approach	Dewenter's study concluded that, after controlling for overall investment levels and relative corporate wealth, the measure of foreign investment relative to domestic investment shows no significant exchange rate sensitivity.	Real exchange rate.
Blonigen (1997)	1975 to 1992 (annual)	US	The conditional logit model	He found that real dollar depreciations lead to substantial increases in acquisition FDI in industries that more likely have firm-specific assets, namely, manufacturing industries with high R&D	Exchange rate
Miniam and Chatterjee (1998)	1962 to 1994(annual)	India	Ordinary least square	Market size, growth rate of the market size, trade balance and exchange rate all had positive impact on FDI.	Market size, growth rate of the market size, trade balance, exchange rate.
Cheng and Kwan (2000)	1985 to 1995(annual)	China	Ordinary least square OLS/regression method	They found that a large market size, good infrastructure and preferential policy had a positive effect on FDI but wage cost had a negative effect on FDI	Market size, infrastructure, preferential policy, wage cost.

Galan and Gonzalez-Benito (2001)	1980 to 2000(annual)	Spain	The survey approach	Government incentives were found not to be important. Location factors, include the size and growth of the market, were most important, as was cultural factor. However, factors such as infrastructure, transportation costs and political stability came 'in the second order of importance.	Government incentives, location factors, market size, market growth, culture, infrastructure, transportation costs, political stability.
Chakrabarti (2001)	1990 to 2000(quarterly)	Three developing countries	Extreme bound analysis (EBA)	The EBA upholds the robustness of the correlation between FDI and market size but indicates that the relation between FDI and tax, wage, openness, exchange rate, tariff, growth and trade balance is barely significant.	Market size, tax, wage, openness, exchange rate, tariff, growth, trade balance
Asiedu (2002)	1970 to 2000 (quarterly)	23 developing countries	OLS technique	Results suggests that there is a positive and significant relationship between inward FDI and economic growth	Economic growth
Bevan and Estrin (2004)	1985 to 1990(quarterly)	Western countries	Panel data set	They identified the most important influences to be labour costs, gravity factors and market size. Interestingly political risk proves not to be a statistically significant determinant.	Labour costs, gravity factors, market size, political risk.
Ali and Guo (2005)	1990 to 2005(annual)	22 firms in China	OLS method	Results showed that market size is a major factor for FDI. Low labour costs are also a main factor.	Market size, labour costs.
Jensen (2006)	1980 to 2000 (annual)	17 Latin American countries	OLS technique	Results found that trade openness has a positive and significant effect on inward FDI.	Trade openness
Asiedu (2006)	1980 to 2004	Developing	Basic OLS	Results proved that infrastructure is the	Infrastructure

		countries	technique	most significant determinant of inward FDIs in emerging countries	
De Vita and Abbott (2007)	1975 to 2001 (quarterly)	UK	Fixed effects and dynamic generalised methods of moments (GMM) panel estimation techniques	They found strong evidence of a negative and significant relationship between real exchange rate volatility and FDI inflows. These results proved robust to tests for parameter stability, to tests for asymmetries in the investment response coefficients across appreciation and depreciation intervals and to re-estimation by the Arellano- Bond GMM corrective procedure. Their results also showed that, after controlling for endogeneity problems, the real exchange rate appears to have no statistically significant influence on UK inward FDI.	Real exchange rate
Safarian (2009)	1981 to 1995(quarterly)	17 Latin American countries	Panel data sets	Results found a positive relationship between openness of the host country and FDI.	Openness
Al Naseer and Gomez (2009)	1990 to 2005(annual)	3 developing countries	OLS technique	Results supported that FDI is strongly and positively correlated with private credit offered by the host country's banking sector	Private credit
Khan and Nawaz (2010)	1998 to 2009 (annual)	Pakistan	Binomial logistic model	Their analysis identified some economic determinants of FDI in Pakistan, like GDP growth rate, volume of exports, human population, tariff on imports and price index. Volume of exports emerged the most powerful determinant of FDI.	GDP growth rate, exports, population, tariff on imports and price index
Khan and Nawaz (2010)	1989 to 2009(annual)	Pakistan	The binomial logistic model	Their analysis identified GDP growth rate, exports, human population, tariff on imports and price index as determinants of FDI. Volume of exports emerged as the most powerful determinant of FDI.	GDP growth rate, exports, population, tariff on imports, price index, exports

Abdul-Mottaleb and Kalirajan (2010)	1980 to 2008(annual)	68 developed and developing countries	Panel data set	Their results demonstrated that countries with a higher GDP, a higher GDP growth rate, a higher proportion of international trade and a more business-friendly environment attract FDI	GDP, growth rate, international trade, business friendly environment.
Cuvvers *et al* (2011)	1995 to 2005(annual)	Cambodia	Unbalanced panel data sets	Here they concluded that the home country's GDP, its bilateral trade with the host country and the exchange rate have a positive impact on FDI inflow to Cambodia but geographic distance negatively affects the level of FDI into the country.	Exchange rate, GDP, bilateral trade, geographic distance
Buloke, (2011)	1990 to 2009 (annual)	EEC countries	OLS technique	Results proved that inward FDI from the United States to EEC countries are positively and significantly related to GDP growth	GDP growth
Loungani (2012)	1990 to 2011(quarterly)	10 developing countries	OLS technique	His results suggests inflation has a positive and significant effect on inward FDI in emerging economies and used as a pull factor in attracting inward FDI. On the contrary, it is suggested that high inflation rates, which are usually caused by economic and political instability, have a negative effect on inward FDIs	Inflation, economic instability.
Kareem (2012)	1980 to 2010(annual)	78 developed and developing countries	Data mining techniques of attribute analysis, association and classification	They found a positive and significant relationship between banking sector development and FDI.	Financial sector development
Skouloudakis and Tampakoudis (2013)	1985 to 2010 (quarterly)	5 Asian countries	Survey technique	Results showed that financial sector development could have a negative effect on inward FDI on another aspect. In other words, an integrated financial system offers limited availability of capital which	Financial sector development

				is negative associated with inward FDI.	
Delgado (2013)	1990 to 2011 (annual)	10 Latin American countries	OLS technique	Results found a positive relationship between openness and inward FDI. But the significance of openness on the dependent variable was found to be very low.	Openness.
Alvinasab (2013)	1991 to 2009(quarterly)	Iran	A simple econometric model and basic ordinary least square technique	Results of the study revealed the positive significant effects of real GDP growth, imports and infrastructure on FDI while the effect of government consumption on FDI inflows was found to be statistically insignificant.	GDP growth, imports, infrastructure, government consumption.
Alam and Shah (2013)	1985 to 2009(quarterly)	Ten OECD member countries	Granger causality tests	Their results indicated that market size, labour costs and infrastructure all have positive impact on FDI.	Market size, labour cost, infrastructure
Abubakar and Abdullahi (2013)	2000 to 2011(annual)	India	Regression analysis	They reported that there is a positive causality running from market size, inflation, openness and the financial sector of the country.	Inflation, openness, financial sector, market size
Asiedu (2002), Buloke (2011), Chakrabarti (2001)	1970 to 1990(annual)	China and Bangladesh	The survey approach was adopted in this study	They concluded that openness, market size and economic development of the economy all attracted FDI.	Market size, exports, openness, economic development.

Source: Developed by the author (2015)

Table 5.2 Tabular presentation of FDI determinants in Africa

Author/Year	Sample period	Sample countries	Methodological approach	Key findings	Statistical significant variables
Agodo (1978)	1970 to 1975 (quarterly)	Kenya	Survey approach	GDP and GDP per capital were found to be a positive influence, whilst GDP growth was insignificant.	GDP, GDP per capital, GDP growth
Agarwal (1980)	1975 to 1979 (quarterly)	2 African countries	Survey method	Results showed that the specific determinants of FDI include market size and growth, availability of natural resources, human capital costs and skills and availability of good infrastructure. Others are openness of the economy, political and economic stability, institutional quality, investment regulation and international treaties and guarantees. Investment promotion, return on investment and other factors such as cost - related factors, concentration of other investors, investment incentives, privatisation and inflows of bilateral Official Development Assistance (ODA) are also FDI drivers.	Market size, labour costs, skills, infrastructure, openness, political and economic stability, regulation, privatisation, ODA.
Sachs and Sievers (1998)	1985 to 1995 (annual)	Egypt	Survey method	They find that the greatest concern of firm owners is stability, both political and macroeconomic.	Political stability and macro-economic stability.
Bhinda *et al* (1999)	1984 to 1994 (annual)	Tanzania, Uganda and Zambia	Survey method	They found that problems related to mobilizing local banking, leasing and equity finance were on the top of the list of factors discouraging investors in Tanzania, Uganda and Zambia.	Local banking, leasing and equity finance

Schoeman *et al*. (2000)	1989 to 1999 (annual)	South Africa	OLS method	The results suggest that the higher the budget deficit relative to South African GDP the greater the negative impact on FDI relative to South African GDP, They also find that corporate tax rates impact negatively on FDI to South Africa.	Fiscal stability, corporate tax rates.
Morisset (2000)	1990 to 1997 (quarterly)	29 African countries	Panel data set method	The results of the study indicated that both market size and natural resources availability have a positive influence on FDI flows. Also they find that political instability is not a significant determinant of FDI flows in Africa. Launching an attractive privatisation programme is among the strategic actions recommended by Morisset (2000) for the improvement of the investment climate for FDI	Market size, natural resources, economic growth, political instability, privatisation.
Odenthal (2001)	1990 to 2000 (quarterly)	Mauritius	OLS technique	Results show that attracting FDI is partly explained by the relatively cheap, adaptable and well trained workforce	Cheap workforce
Asiedu (2002a)	1990 to 2001 (quarterly)	15 countries	Fixed effects panel estimation	Here she provided evidence that good infrastructure promotes FDI to Africa.	Infrastructure
Basu and Srinivasan (2002)	1989 to 2001 (annual)	Ghana	Survey method	Results reported that excessive market regulations, i.e. domestic investment policies on profit repatriation and on entry into some sectors of the economy were not conducive to the attraction of FDI in Ghana	Market regulations
Kolstad and Tondel (2002)	1985 to 2001 (annual)	Angola	OLS technique	Results show that countries rich in oil and other natural resources, such as Angola, are able to attract heavy FDI inflows. They also find that countries that are less risky attract more FDI per capita.	Natural resources, stability
Bende-Nabende (2002)	1970 to 2000 (annual)	19 African countries	Panel data set method	Their empirical evidence suggested that that the most dominant determinants are market growth, export-orientation strategy and policy liberalisation. These	Market growth, policy liberalisation,

				were followed by exchange rates and market size. Bottom on the list is the openness of the economy.	exchange rate, market size, openness.
Morisset (2003)	1995 to 2000 (annual)	South Africa	Survey method	Results found that there is room for the South African government to transform its economy into an investor - friendly environment, by adjusting fiscal policy. The main finding is that fiscal policy variables have a negative effect on FDI flows to South Africa.	Fiscal policy
Rogoff and Reinhart (2003)	1992 to 2000 (quarterly)	Somalia and Rwanda	Co-integration technique	They found that wars are more likely to occur in Africa than in other regions and there is a negative correlation between FDI and conflict in Africa. Results also show a statistically significant negative correlation between FDI and the following indicators of political and economic instability in Somalia and Rwanda: conflicts; inflation; probability that the parallel market premia is above 50 percent.	political instability, inflation, economic instability
Asiedu (2003)	1990 to 1997 (quarterly)	Mali and Mozambiq ue	Survey approach	Her results indicated that GDP growth rate and trade openness can be used to fuel the interest of investors. She found that an efficient legal framework promotes FDI to Africa, while corruption deters investment flows to the region.	GDP growth rate, openness, legal framework.
Lemi and Asefa (2003)	1987 to 1999 (annual)	29 African countries	Generalised autoregressive conditional heteroscedastic (GARCH) model	Their results show that political instability and government policy commitments are important factors of FDI. Other factors such as labour, trade connection, size of the export sector, external debt and market size are also significant in affecting FDI flows to African economies.	Political instability, government policy, labour, export size, market size, trade connection, eternal debt.
Onyeiwu and Shrestha (2004)	1975 to 1999 (annual)	29 African countries	Panel data methodology	They find that political instability is not a significant determinant of FDI flows in Africa. They also provide evidence that countries with high inflation tend to attract less FDI.	Economic growth, natural resources, political instability,

					inflation
Nonnemberg and Cardoso de Mendonca (2004)	1975 to 2000 (quarterly)	8 African countries	Panel data methodology	The findings of this study reveal that the average rate of growth in previous 5 years and the size of the market were strongly significant, while the level of educational and openness were important determinants of FDI. In large sample, inflation was negatively related to FDI, while in small one and with RISK factor the result showed it was not significant. With respect to RISK factor, it had a negative sign as expected. Regarding DOW JONES, the study illustrated that it was a very important determinant of outward FDI. GGDPOECD was found to be significant if RISK was not included in the equation, and lastly ENERCON was not significant.	Market size, education, openness, inflation, risk rating, energy consumption, GGDPOECD, DOW JONES index, GDP.
Asiedu (2004)	1980 to 1999 (annual)	10 African countries	Panel data methodology	Here she discovered that Africa's reformed institution, improved infrastructure and liberalised FDI regulatory framework can improve its attraction of FDI.	Openness, infrastructure, policy-related measures.
Yasin (2005)	1990 to 2003 (annual)	Angola	Survey method	The results indicate that a positive relationship exists between bilateral ODA and FDI while multilateral ODA is not a critical requirement for FDI activities by the multinationals located in these countries. Also the availability of an abundant and cheap labour force has the expected positive effects on FDI to Africa. They also find that political instability is not a significant determinant of FDI flows in Africa.	Official Development Assistance (ODA), political instability, labour, openness, GDP.
Alfarsi and Almanasory (2006)	1983 to 2005 (quarterly)	Libya	Survey methodology	The most important factors that discouraged FDI from investors' point of view were (according to investors' ranking) weak structure of communication and transport, lack of data and information required by investors, absence of a stock market, and lastly lack of labour in terms of both quality and quantity.	Labour, transportation, stock market, lack of data and information.
(Fedderke and Romm, 2006).	1986 to 2005 (quarterly)	South Africa	OLS and LM techniques	They find that corporate tax rates impact negatively on FDI to South Africa. Results also show that wage costs impact negatively on FDI to Africa.	corporate tax rates, wage costs

Dupasquier and Osakwe (2006)	1985 to 2005 (annual)	South Africa	OLS technique	They argue that the lack of good legal and judiciary systems is a possible deterrent to FDI in South Africa. The institution of the judiciary is critical to protecting property rights and improving property rights, in turn, it was found to raise the attractiveness of South Africa as a location of FDI	Legal system
Asiedu (2006)	1984 to 2000 (quarterly)	22 African countries	Panel data set approach	Here she discovered that African countries endowed with natural resources or have large market sizes will attract FDI. However small countries that lack natural resources can improve their attraction of FDI by improving their institutions, policy environment and having good infrastructure.	Natural resources, market size, government policy, political instability, infrastructure.
Abubakar and Abdullahi (2013)	1986 to 1995 (quarterly)	Angola, Ghana and Nigeria	Conditional logit model (CLM)	Their findings indicated that GDP growth was identified as a major determinant like Angola and Ghana indicating that small market size need not be a constraint in the case of resource, endowed, export oriented economies.	GDP growth, market size, natural resources and export.

Source: Developed by the author (2015)

Table 5.3 Tabular presentation of FDI determinants in Nigeria

Author/Year	**Sample period**	**Sample countries**	**Methodological approach**	**Key findings**	**Statistical significant variables**
Osuagwu (1982)	1960 to 1975 (annual)	Nigeria	OLS	Results show that the determinants of investment demand in Nigeria were the absorptive capacity and government policies.	The absorptive capacity and government policies.
Obadan (1982)	1970 to 1980 (quarterl	Nigeria	OLS and LM methods	Results concluded that market size, trade policies and raw materials are very important determinants of FDI in Nigeria.	Market size, trade policies and raw materials

	y)				
Obadan (1994)	1983 to 1993 (annual)	Nigeria	CLM	Results confirmed that the importance of market size, trade policies and raw materials are critical determinants of foreign direct investment in Nigeria. Results also traced the importance of exchange rate on inflows of foreign private investment. An over-value negatively affects the foreign private investment environment.	Market size, trade policies, raw materials, exchange rate.
Ekpo (1997)	1986 to 1989 (annual)	Nigeria	Pooled OLS and lanragian multiplier tests (LM)	Results show that high bank lending rate that was witnessed during the deregulation era of late 1980's has contributed significantly in limiting FDI. The provision of credit to investor in form of subsidized loans, loans guarantees, and export credit will definitely attract foreign investors.	Lending rate, export credit, loans.
Ekpo (1997)	1970 to 1994 (quarterly)	Nigeria	Co-integration technique	The results suggested that the, interest rate, credit rating, and debt service explained the variance of FDI inflows into Nigeria.	interest rate, credit rating, and debt service
Ajakaiye (1997)	1987 to 1990 (annual)	Nigeria	Survey	Results showed that a rising bank lending rate discourages productive foreign direct investment in Nigeria.	Bank lending rate
Aremu (1997)	1987 to 1990 (annual)	Nigeria	Survey method	Results showed that the high bank lending rate that existed during the early days of deregulation has affected internal rate of return (IRR) on investment negatively, thereby limiting investment inflows.	Internal rate of return (IRR)
Louis (1998)	1980 to 1995 (annual)	Nigeria	Error correction specification	Results found political factors to be insignificant in the determination of FDI in Nigeria and that economic factors are the key determinants.	Political and economic factors

Louise (1998)	1980 to 1996 (annual)	Nigeria	Error correction specification	Result shows that both political and economic factors constitute the major determinants of FDI in Nigeria.	Political and economic factors
Anyanwu (1998)	1983 to 1996 (annual)	Nigeria	Co-integration technique	Results found political factors to be insignificant in the determination of FDI in Nigeria and that economic factors are the key determinants. His results also confirmed the positive role of domestic market size in determining FDI flow to the country.	Political factors, market size
Essien and Onwioduokit (1999)	1975 to 1990 (annual)	Nigeria	OLS	Results confirmed that a long run equilibrium relationship exists between FDI flow and such variables as debt service, interest rate differential, nominal effective exchange rate	debt service, interest rate differential, nominal effective exchange rate
Salako and Adebusuyi (2001)	1970 to 1998 (annual)	Nigeria	Co-integration and error correction techniques	Results find that rate of inflation and real per capita income were the major factors which influenced foreign direct investment in Nigeria	rate of inflation and real per capita income
Iyoha (2001)	1985 to 1999 (annual)	Nigeria	OLS regression analysis	His result shows that market size attracts FDI to Nigeria whereas inflation discourages it.	Market size and inflation
Ayanwale (2007)	1985 to 2005 (annual)	Nigeria	Co-integration technique	His results pointed out that domestic investment, openness and indigenization policy are all very important determinants of FDI in Nigeria	Domestic investment, openness and indigenisation policy.
Ekpo (2007)	1995 to 2006 (annual)	Nigeria	CLM	His results showed that the public (government) should invest in infrastructures which give an enabling	Infrastructure

				environment for private investors, consequently it will help in attracting foreign direct investment to Nigeria.	
Obwona and Egesa (2007)	1983 to 2005 (annual)	Nigeria	Survey method	Results show that these factors play an important role in FDI inflows.	Skilled labour staff, development of banking and financial institutions.
Ogunkola and Jerome (2007)	1992 to 2005 (annual)	Nigeria	OLS and LM methods	Results emphasized the role of privatisation in attracting FDI into Nigeria.	Privatisation
Olatunji (2010)	1990 to 2000 (annual)	Nigeria	POLS and RE methods	His results show that poor infrastructure, general insecurity, sectarian violence, the arm revolt in the Delta region and the pervasive indiscipline that is becoming the order of the day in the Nigerian economy, all deter FDI inflow into Nigeria. Another important issue that deters many investors to come to Nigeria is the issue of the stock exchange market	Poor infrastructure, general insecurity, sectarian violence, stock exchange.
Wafure and Abu (2010)	1985 to 2005 (annual)	Nigeria	ECM	Results confirmed that the market size, deregulation, political instability, and exchange rate depreciation were the main determinants of FDI in Nigeria.	Market size, deregulation, political instability, and exchange rate depreciation

Source: Developed by the author (2015).