

**The Effects of FDI on the Performance and Stability
of the Economies: Evidence from Nigeria and South
Africa**

Helen Hembadoon Akula

Submitted to the
Institute of Graduate Studies and Research
in partial fulfilment of the requirements for the degree of

Master
of
Business Administration

Eastern Mediterranean University
June 2016
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

Prof. Dr. Cem Tanova
Acting Director

I certify that this thesis satisfies the requirements as a thesis for the degree of Master of Business Administration.

Prof. Dr. Mustafa Tümer
Chair, Department of Business Administration

We certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Business Administration.

Prof. Dr. Sami Fethi
Supervisor

Examining Committee

1. Prof. Dr. Sami Fethi
2. Prof. Dr. Salih Katircioglu
3. Assoc. Prof. Dr. İlhan Dalcı

ABSTRACT

This study examine the connections between foreign direct investment and economic growth using sample data covering the period of 1971 to 2013 on the Nigerian and South African economies by employing the Johansen Co-integration and Vector Error Correction (VECM) as estimation techniques. The results suggest that FDI is not a strategic driver for growing the economy in both the long and short- terms of the Nigerian economy whereas Openness, labor and physical capital have positive impact. The findings also display that openness does not have any impact on productivity in either the short or long- term periods whereas Foreign Direct Investment, Physical capital and labor have positive influence on growing the economy in the case of the South Africa. As a result of this finding there is need for expanding the labor force and focusing policy on education to promote the standard of human capital as well as physical capital and promote policies that encourage flow of FDI into these economies.

Keywords: economic growth, FDI, physical capital, labor, openness, co-integration,

ÖZ

Bu tez ampirik olarak Nijerya ve Güney Afrika ekonomisindeki ekonomik büyüme ile doğrudan yabancı yatırımlar arasındaki uzun ve kısa dönemli ilişkiyi Johansen'nın Eşbütünleşme Testi ve Vektör Hata Düzeltme Modeli ile ölçer. Johansen Eşbütünleşme Testi ve Vektör Hata Düzeltme Modeli kullanılarak 1971 ile 2013 yılları arasında Nijerya ve Güney Afrika'nın karşılaştırılmalı ekonomik büyümesi incelenmiştir. Ampirik bulgular Nijerya ekonomisi için doğrudan yabancı yatırımlarının hem uzun hemde kısa dönemli ekonomik büyüme üzerinde etkili olmadığı bulunmuştur. Bulgular ayrıca emek, sermaye ve açıklık politikası ekonomik büyüme üzerinde positif etkisi olduğu ispatlanmıştır. Bunun paralelinde bulgular Güney Afrika ekonomisi için açıklık politikasının hem uzun hemde kısa dönemli ekonomik büyüme üzerinde etkili olmadığı bulunmuştur. Bulgular ayrıca emek, sermaye ve doğrudan yabancı yatırımlarının ekonomik büyüme üzerinde positif etkisi olduğu ispatlanmıştır.

Anahtar kelimeler: Ekonomik büyüme; Johansen Eşbütünleşme Testi; yolsuzluk, Nijerya Ekonomisi, Güney Afrika ekonomisi, doğrudan yabancı yatırımlar, emek, sermaye, açıklık politikası

ACKNOWLEDGMENT

I desire to express my heartfelt appreciations and gratitude to God Almighty for his love and grace He gave me in the quest of writing this thesis work. To my family and friends for their support, encouragement and contribution to the success of this thesis work.

My gratitude especially goes to my thesis supervisor; Prof. Sami Fethi who took the pains to supervise every bit and stage of my work even at the expense of his leisure time and his enormous contribution to the completion of this work. I want to also use this opportunity to express my profound gratitude to my Lecturers and the entire Faculty of Business Administration for their copious kindness and compassion towards me during my time of study. God bless you all.

TABLE OF CONTENTS

ABSTRACT.....	iii
ÖZ.....	iv
ACKNOWLEDGMENT.....	v
LIST OF TABLES.....	viii
LIST OF ABBREVIATIONS.....	ix
1 INTRODUCTION.....	1
1.2 Aim of Study.....	2
1.3 Theoretical Background.....	2
1.4 Research Questions.....	3
1.5 Results of the Study.....	3
1.6 Outline of the Study.....	4
2 LITERATURE REVIEW.....	5
2.1 Introduction.....	5
2.2 Theoretical Framework.....	5
2.3 Empirical Framework.....	7
3 SYNOPSIS OF THE NIGERIAN AND SOUTH AFRICAN ECONOMY.....	10
3.1 Brief History of the Nigerian Economy.....	10
3.2 Sectorial Analysis of FDI Influx into Nigeria.....	10
3.3 Brief History of South African Economy.....	13
3.4 Sectorial Analysis of FDI Influx into South Africa.....	14
4 DATA, MODEL AND METHODOLOGY.....	16
4.1 Data.....	16
4.2 Model.....	16

4.3 Methodology	17
5 DATA ANALYSIS AND RESULTS.....	18
5.1 Correlation Matrix.....	18
5.2 Unit Root Test	19
6 CONCLUSION, RECOMMENDATION, SUGGESTION AND REMARKS	26
6.1 Conclusion.....	26
6.2 Recommendation.....	26
6.3 Suggestions for Further Studies	27
6.4 Remarks.....	28
REFERENCES	29

LIST OF TABLES

Table 1: Sectorial Structure of FDI in Nigeria by percentage from 1980 to 2009	12
Table 2: Yearly FDI Influxes to South Africa from 1993 to Q2 2001(Rand millions)	15
Table 3: Sectorial Analysis of FDI Stock, 31 December 1999(Rand millions).....	15
Table 4: Estimated Correlation Matrix of Variables.....	19
Table 5: Unit Root Tests	20
Table 6: Nigeria: Johansen Maximum Likelihood Test.....	21
Table 7: South Africa: Johansen Maximum Likelihood Test	21
Table 8: Nigeria: Johansen long-run and short-run estimates.....	22
Table 9: South Africa: Johansen long-run and short-run estimates	24

LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
NEPAD	New Partnership for Africa's Development
FDI	Foreign Direct Investment
AGOA	Africa Growth and Opportunity Act
WTO	World Trade Organization
GEAR	Growth, Employment, and Redistribution Framework
FTA	Free Trade Agreement
SADC	South African Development Community
TISA	Trade and investment South Africa

Chapter 1

INTRODUCTION

1.1 Background of the Study

In Nigeria the creation of the New Partnership for Africa's Development (NEPAD) aimed at attracting external investors to Africa as a key element brought the importance of FDI as a tool for economic growth to limelight. As a foremost economy with a huge market for services and imports among the emerging nations FDI inflow into the country was valued to be \$2.23billion (US \$) and increased to \$5.31 billion in 2004 an estimated 138% upsurge. It exponentially increased by 87% in 2005 calculated at US\$9.92 billion, experienced a slight degeneration in 2006 to US\$9.44 billion. However, over 60% of FDI inflow to Nigeria is to the extractive oil industry. One of the reasons for the New Partnership for Africa's development (NEPAD) was growing accessible funds from a mixture of restructurings, resource organization in addition to a favorable setting to attract FDI. (Funke and Nsouli, 2003).

FDI is a vital aspect of South Africa's growth strategy and it is insistently pursued because it is believed to have a positive contribution towards economic development and expansion. This is underpinned by the ideology that it creates downward linkages which encourage growth through tricking down of skills, technology transfers and employment opportunities. (Moolman,et al, 2006). FDI into South Africa has been on a broad-spectrum mounting drift ever since 1994 according to

official statistics. Year 2000 recorded inflow of R6billion. In 2001 R1, 7billion was realized during the first quarter and R52billion in the 2nd quarter. This is suggestive of the measure and type of FDI South Africa is drawing. South Africa's economy has always been robust with a mining base therefore the major store of FDI is in this industry and has accrued over the last century. Nevertheless, revitalizing the automobile sector has appealed to European investors in apparel and textiles over the past years essentially to take advantage of the special admittance to the US marketplace via AGOA.

I decided to examine Nigeria and South Africa because these two countries have very similar economic indices. They are the two countries comparable in geographic size and population in sub Saharan Africa and probably attract the highest flow of FDI. They are both rich in natural resources and have bought been the leading economy in Africa, Nigeria currently and South Africa before then. I wanted to see comparatively how much of their economic growth can be attributed to FDI flows.

1.2 Aim of Study

This thesis investigates the relationship amongst economic growth and foreign direct investment employing sample data covering the period of 1971 to 2013 on the Nigerian and South African economy by conducting the Johansen Co-integration and Vector Error Correction Model techniques.

1.3 Theoretical Background

Economic growth has always been the focus of most country's economic policy. Attracting foreign direct investment as a tool has led to the lowering of trade barriers and restrictions between countries. The movement of capital flows that involves ownership and control by investors overseas is known to be foreign direct

investment. It includes green field investments, partnerships, joint ventures, franchises, licensing agreements, real estate investments and purchasing more than 10% of outstanding common stock of the foreign company. FDI is usually desired as a tool for economic growth compared to other forms of capital flow, the reason being that FDI distributes cutting-edge high-tech and innovative administration practices through the host country. Tang et al (2008) are of the opinion that transnational initiatives diffuse knowledge and organization expertise to local businesses.

According to Lipsey (1999) accessible statistics submit that FDI flows tend to be steadier than other forms of capital flow investments. This stability results from the long term view of the market that direct financiers have, making them more resilient to crowd behavior associated with capital flow investments and from absolute exertion of liquidating assets at short notices. Sadik & Bolbol (2001) aptly captured the benefits of FDI as the most predictable of investment streams as well as its intended and unintended special impact on growing the economy. FDI also benefits countries through employment creation, transference of know-how and better local rivalry and other constructive externalities (Ayanwale, 2007).

1.4 Research Questions

- Is there a relationship between Foreign Direct Investment and Economic Growth in the countries under consideration?
- Is there a relationship between the other relative significant factors and Economic Growth in the countries under consideration?

1.5 Results of the Study

In the case of Nigeria, Physical capital, openness, and labor are statistically significant at the 10% level except Foreign Direct Investment in the long-run

relationship. In the short run, Foreign Direct Investment is also insignificant whereas Openness, labor and physical capital have positive impact. Estimates also show that the ECT is significant at the one percent level and negative. The degrees of the matching factors indicate 24% of previous period's imbalance is adjusted next year.

In the case of South Africa, Foreign Direct Investment, Physical capital, openness, and labor are statistically significant at 10% level in the long-run relationship. In the short run Openness is found insignificant whereas Foreign Direct Investment, labor and physical capital are statistically significant and have positive impact. Estimates also show that the ECT's factor is significant at the one percent level and negative. The degrees of the matching factors indicate 35% of preceding period's imbalance is adjusted next year.

1.6 Outline of the Study

Chapter 2 examines the related works on FDI and economic growth. Chapter 3 covers a general idea of Nigerian and the South African economies. Chapter 4 presents data, methodology and the theoretical modeling. Chapter 5 presents the regression model and experimental outcomes. In chapter 6 final comments are presented as well as recommendation and propositions for extra study.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

The relevance of foreign direct investment on growing an economy cannot be overstated. FDI's major impact on the establishment of management skills, new machineries, goods and a viable commercial setting remains an irrepressible stimulus for economic growth. Most nations and particularly evolving economies are more inclined to strategies which attract the influx of foreign direct investment for the reason that the helpful spillover linked by means of the delivery of capital plus proficiency is expected to aid lesser domestic firms to grow and become more efficient in a way that may not be realized from monetary investments or the sale of products and services only. Asiedu, E. (2005).

2.2 Theoretical Framework

There are differing observations of notions about the influence and determining factors of FDI into beneficiary nations making it difficult for researchers to determine what true and proven theory is. This is because of the diverse environmental conditions of nations globally. Exchange rate volatility is the conventional opinion of what affects sales and inspires location decisions of firms that want to seize domestic markets as well as competition and innovation. Others postulate business environment, availability of labor, market size, infrastructure and other externalities of recipient countries are key factors in attracting FDI (Vernon, 1966; Dunning, 1973; 1980 and 1988).

According to Hymer (1976), when the benefits of exploiting firm-specific advantages overshadow the comparative cost of operations overseas FDI has the potential to take place. He proposed that the introduction of FDI to beneficiary countries stands determined by the market imperfections characterizing those marketplaces. Buckley, Cleggy, Wang, and Cross (2002) are of the opinion that the scope by which FDI impacts on growing an economy is contingent on the superiority of existence within the business environs of the host nation. The value of investments means how much households are committed to save in the recipient nation, the degree of trade openness, the rate of capital and availability labor required. Conversely, poor state of infrastructure, high levels of corruption, weak legal frame work, poor political climate and lack of security will negatively influence FDI inflow to any country (CBN report, 2010).

In his electric theory on international production and sometimes referred to as “OLI framework”, Dunning (1988), suggest three variables as the most important determinant of FDI namely; ownership-specific, location-specific and internalization. He asserts the totality of these elements is significant in defining the degree as well as form of FDI. Ownership-specific variables are tangible resources that include natural endowments, human resources, and capital formation as well as resources such as equipment in addition to information, promotion, decision-making plus innovative abilities and structural organizations referred to as intangible. Factor endowments, marketplace organization, administrative regulation besides guidelines, the politically aware, lawful and ethnic environment where FDI is assumed are called location-specific variables. To conclude, internalization denotes toward a firm’s intrinsic litness and ability to create and advertise specific core divisions efficiently.

More than a few theories have been advanced to elucidate FDI based on business approaches and investment choices of firms facing global rivalry and in the framework of electing to operate in a foreign location instead of going into a licensing contract or exporting. Shatz and Venables (2002) state two types of divergent theoretical models; first, one in which the intention is to decrease the rate of delivering to the marketplace, the horizontal FDI model and second where the purpose is to take advantage of the low cost of manufacture in a particular location, the vertical FDI model. Finally, Basu and Srinivasan (2002) put forward that five all-encompassing classifications of factors are essential in prompting FDI. These are market demand and size, cluster infrastructure, cost related factors, savings environment and country risk.

2.3 Empirical Framework

Economic Development and the effect of FDI among evolving economies has generated ample study attention among economist hence there is an enormous body of experimental evidence on the issue even though it is mixed. De Gregorio (2005) asserts that FDI may increase productivity levels in the economy by allowing a state to transport in know-hows and information not voluntarily accessible to local venture capitalist. X. Li and X Liu (2005) in their work suggest that FDI affects growth directly and secondarily as a result of its interface with human capital. However, there is an undesirable coefficient for FDI when it was regressed with knowledge gap between the home as well as the host country. Similarly, Borensztein et al (1998) found that internal FDI has affirmative impact on economic advancement with sturdiest influence coming from the interface amongst FDI and labor. He argued that FDI contributes relatively more to growth as a tool for the transfer of technology than domestic investment and also increases local investment.

In a context that correlated actual per capita advancement regarding preliminary stages of the variables like the store of human and physical capital with regulated variables, observed as significant features of the economic regional growth of Russia during 1996-2003, Ledyeva and Linden (2006) demonstrates the effects of FDI in 74 Russian districts. The outcome of the studies implied that FDI generally did not add considerably to economic growth for the duration of the period. Nonetheless, some proof of affirmative cumulative FDI effects on advanced earnings areas is pertinent.

FDI's affirmative effects on economic growth in emerging and industrialized nations is mutually positive according to De Mello (1997) however he determines spillover of information and expertise from financing countries is the reason for long-run growth in recipient nations. Comparable results are established from their theory that growth effect is negative for import relying nations but hypothetically positive for export supporting ones according to Balasubramanyam et al (1996). Blonigen and Wang (2005) in comparing evidence from advanced and emerging nations observed that FDI flows across income groups are affected by different factors. They discover that the crowd out effect of FDI on local venture is true only for wealthy group of nations but discover proof of favorable FDI only for emerging economies.

Literature is replete with revisions on the correlation concerning economic development and FDI in Nigeria. The influence of FDI on growing the economy is cooperatively determined in Nigeria and there is an affirmative response from FDI to growth and vice versa according to O. J. Umoh et al (2012). They establish this by employing single and simultaneous equation systems to test any positive connection

between economic development & FDI in Nigeria. An optimistic correlation is also found by Aluko (1961), Brown (1962), and Obinna (1983).

Accordingly, Egwaikhide (2012) disaggregated FDI into several constituents using the Johansen Cointegration technique and Vector Error Correction method; found that the effect of the disaggregated FDI on real growth in petroleum sectors, mining, Agriculture and manufacturing are insignificant in Nigeria excluding the Telecom sector with a hopeful prospect in the long run.

It is commonly deliberated that FDI can act as a spur for investment and economic improvement in South Africa. Borensztein, De Gregario and Lee (1995), and Moody and Murshid (2002) indicate that FDI can ‘crowd-in’ domestic investment as competence spillovers make private investment more profitable.

Chapter 3

SYNOPSIS OF THE NIGERIAN AND SOUTH AFRICAN ECONOMY

3.1 Brief History of the Nigerian Economy

Colonialism is a foremost piece of the economic history of Nigeria. With 25% of Africa's population the nation after independence looked very auspicious as a developing economy. Conversely, this prospective never happened, a sequence of unsuccessful political and economic events have hindered the Nigerian economic growth but all the same the country still plays a vital economic role globally, principally as a producer of fossil fuels. Nigeria was declared the leading economy in Africa founded on the rebased figures in April 2014. She is rated 26th in the world in relations to GDP and is on trajectory to one of the 20th biggest economies in the world by 2020. Its re-emergent, though at present underachieving industrial sector is 3rd largest on the continent. The country is an unindustrialized mixed economy with a middle income, and an increasing financial service, communications technology and entertainment sectors. Wikipedia (2007).

3.2 Sectorial Analysis of FDI Influx into Nigeria

The growth of foreign direct investment in Nigeria was scamped by the Federal government indigenization policy of 1970 as well as political instability. However, Nigeria made some policy reforms that provided foreign investors with colossal prospect to contribute to the economy. These include; the Exchange control Act of 1962 and the later replacements with the Nigerian Investment Promotion Council

degree of 1995; the abrogation of the Nigerian Enterprises Promotion degree and the publication of an industrial policy for Nigeria in 1989; The company and Allied Matters act 1990; the Foreign Exchange degree of 1995 intended to relax transactions relating to foreign exchange sanctioning for unrestricted movement of investment in and out of the country; and the Nigerian Investment Promotion commission degree 1999 provided an official structure for the creation, registration of business names and incorporation trusteeship as well as the administration and winding up of companies in Nigeria. To deregulate and enhance the development of the Nigerian Capital market for grander inflows of foreign capital, the Investment and securities Act 1999 was established. There were also policy reforms in the economic and financial sectors designed to reduce barriers, increase the Capital base of the banking industry, and give tax holidays and the ease of import and custom controls.

The table below indicates the Nigerian structure of FDI by sectors beginning from the year 1980 to 2009. Even though FDI in Nigeria has been conventionally focused in the extractive industry, there has been some branching out into the industrial sector as well. From the table the manufacturing sector got the most consideration. Its total share was 38.3% and mounted to 43.7% from 1990 to 1994 and cut down in 1995 to 1999 to 23.6%; rising again in 2005 to 2009 to 40.7%, however not to its initial peak. Second to it, is the mining and quarrying sector that received an average percentage share of 14.1 between 1980-84, attaining the topmost in 1995-99 of 43.5% and 22.6 % deterioration from 2005-09. Agriculture, forestry and the fisheries sector was the vilest hit next to Transport and Communication. From 1980 to 1984 it was 2.6%, decreased to a low 0.7% in 2000 to 2004 from an incremental increase of 2.3 percent in 1990-94, and fell to an all worst ever 0.4 percent in 2005-09. Trading and business as well as other miscellaneous services also received some

improvement though nothing compared to the former sectors. The building and construction sector was more or less 4.2% in the complete era under attention which is not so inspiring.

Table 1: Sectorial Structure of FDI in Nigeria by percentage from 1980 to 2009

Year	Man	Agric	M&Q	B & C	T&B	T&C	Mis Serv
1980-84	38.3	2.6	14.1	7.9	29.2	1.4	6.5
1985-89	35.3	1.4	19.3	5.1	32.6	1.2	5.3
1990-94	43.7	2.3	22.9	5.7	8.4	1.7	15.4
1995-99	23.6	0.9	43.5	1.8	4.5	0.4	25.3
2000-04	27.4	0.7	34.7	2.5	7.6	1.1	26.0
2005-09	40.7	0.4	22.6	2.2	8.2	2.1	23.9
1980-09	34.8	1.4	26.2	4.2	15.1	1.3	17.1

Source: CBN Statistical Bulletin (2009)

Where:

Man: Manufacturing and processing

Agric: Agriculture, Forestry and fisheries

M&Q: Mining and Quarrying

B&C: Building and Construction

T&B: Trading and Business

T&C: Transport and Communication

Mis Serv: Miscellaneous Services.

Communications, Agriculture, transport, and building & construction continued to be the minimum outstanding hosts in the country. However, the thriving sector in drawing the attention of FDI financiers is the communication sector, particularly the mobile phone market. Accordingly, the fastest developing mobile phone market in the world is the Nigerian market. The rate of subscription has grown exponentially since 2001, when the mobile telecommunication operators were licensed and is not

inclined to dwindling. (CBN 2004) Rather, the leading mobile phone operator MTN (Nigeria) - having oversubscribed the original line has acquired another line. Consequently, Etisalat, Glo, Airtel and MTN, the four competitors have forced the rates down in a prize war and in the course promoted customer satisfaction. This of course calls for some glitches, arising from intermittent network overcrowding, largely owing to disproportionate advertisements by the network providers in an attempt to maintain brand loyalty among customers.

The other sectors of the economy are to be transformed by the result of this progressive growth in the mobile phone sector. It is conspicuous that FDI streams are focused in the major sectors; predominantly oil and gas, and these are not related to the local economy judging from our exploration of FDI influx into the country by sectors. This trend has some implications for the Nigerian economy namely that the movement of FDI to the extractive industry is not development enhancing since the oil sector is frequently a reserve sector with slight regressive and internal connections with other sectors. The spillover properties of FDI in other mining and oil exploration events are negligible as know-how engaged is capital instead of labor demanding.

3.3 Brief History of South African Economy

South Africa is a nation with residents of about 50 million with the majority living: Cape Town, Port Elizabeth, Durban and Johannesburg, resulting to making them the largest and toughest providers to the South African economy. The nation is globally recognized with high unemployment rate above 20%; and the lowest employment involvement rates (around 55%) even though it has a steady and objectively robust economy. (World Bank) This puts a limitation on the ability of the nation to realize

its growth potential, since it is presumed that the country requires an uninterrupted development rate of over 6% for a prolonged period in order to create jobs for all these people with some proposing it will take 20 years minimum. The economy has experienced key changes since the country's transition to democracy in 1994. This has encompassed: Joining the WTO and the consequential all-encompassing phase down of importation charges; Pledge to a comprehensive macro-economic strategy in the form of the Growth, Employment and Redistribution (GEAR) framework that is attributed to have given rise to the stabilization of strategic macroeconomic variables. The strategy procedures obligate a robust export progression, stable growing economy, and the pull of FDI into the country.

3.4 Sectorial Analysis of FDI Influx into South Africa

FDI has a long and complex history in South Africa and has been present since the establishment of the British colony in the 19th century. However in the early 1970s FDI into South Africa slowed considerably as investors were increasingly subject to political pressure in their home countries by the growing international campaign against the apartheid regime. Most exited the country between 1984 and 1988. Vickers, B. (2002). FDI into South Africa has been on an expansive development since 1994 according to official statistics. The year 2000 recorded inflows of R6bn. FDI in the sum of R1.7 billion poured in the course of the first quarter of 2001. The 2nd quarter of 2001 noted a substantial influx of R52 billion. Presented underneath are South Africa's inflows of FDI from 1993 to 2nd Quarter of 2001 and also accessible standard position fragmented by sector. (World Bank, 2003)

Table 2: Yearly FDI Influxes to South Africa from 1993 to Q2 2001(Rand millions)

1993	1994	1995	1996	1997	1998	1999	2000	Q1 2001	Q2 2001
33	1348	4502	3515	17587	3104	9184	6083	1726	52872

Table 3: Sectorial Analysis of FDI Stock, 31 December 1999(Rand millions)

Agri c	Minin g	Man u	Elec t	Cons t	Wholesal e	transpo rt	Fina n	Com m ser	Total
406	11409 5	7948 6	-	506	10596	8411	10499 2	138	31863 0

Source: South African Reserve Bank Quarterly Bulletin

Where:

Agric: Agriculture,

Man: Manufacturing,

Elect: Electricity,

Const: Construction,

Fina: Financial, and

Comm Ser: Community Services.

The standard data directly above are incomplete because they sum up all past FDI in specific segments therefore may not be a precise guide to latest advances. For example, South Africa's economy has a strong base in mining resulting in the largest stock falling within the mining sector accumulated for over a century. However, only a small portion has occurred in the mining sector over the last few years. It is noteworthy to point out that authorized flow indicators provided by the Reserve Bank fail to make available an itemization of FDI streams by sector, or nature of investment. TISA is at present affianced with the bank so as to expedite documentation of additional thorough record of FDI movement and standard figures.

Chapter 4

DATA, MODEL AND METHODOLOGY

4.1 Data

The data employed in this study is between the periods (1971-2013), 42 years of annual data. It is based on five variables which are gross domestic product per capita (GDP), level of foreign direct investment (FDI), level of investments (K), employment rate (L) and export plus import as a percentage GDP (OPEN). These variables are used to measure the level of FDI and how it affects the country's economic growth.

4.2 Model

In this study, I will adopt the frameworks introduced by Solow (1956), Mankiw et. al (1992), Fethi et. al (2013) and Egwaikhide Christian Imoudu (2012) to investigate the role of FDI as well as other relatively important variables on economic growth.

$$\text{LnGDP}_t = a_0 + a_1 \text{LnFDI}_t + a_2 \text{LnK}_t + a_3 \text{LnL}_t + a_4 \text{LnOPEN}_t + u_t$$

Apriority expectation is $a_1 > 0, a_2 > 0, a_3 > 0, a_4 > 0,$

Where GDP is per capita income, FDI is level of foreign direct investment, K is investment as a percentage of GDP, L is number of labour, OPEN is export plus import as a percentage GDP. Also, $a_0, a_1, a_2, a_3,$ and a_4 are estimated parameters, u_t is serially uncorrelated random disturbance term; and Ln denotes the natural logarithm.

4.3 Methodology

The concept of co-integration has played a vital role in Time series studies since the mid-1980s. This methodology points out three important steps such as the stationary point, the spurious regression and the Error-correction mechanism. Variables as time-Series are assumed to be stationary; however, if there is a non-stationary result (trend), a major problem called spurious results in regression will occur.

Several studies have put forward various methods to test for Cointegration when series are non-stationary. They include the Residual-based Engle Granger test (1991), the Maximum Likelihood based Johansen test (1988), and the Johansen and Juselius (1992) tests. I applied the last test to find out the number of co-integration relationship, the long-run effect and short run effect of FDI and the other relatively important factors on economic growth shown in the empirical model.

Chapter 5

DATA ANALYSIS AND RESULTS

5.1 Correlation Matrix

Table 5.1 illustrates correlation coefficients of the variables at the natural logarithm. The pairwise correlations between GDP and the variables are sensibly high. It is important to highlight that we anticipated a small correlation among the explanatory variables, as well as high correlation amid the dependent (GDPC, the ratio of GDP to population) and the explanatory variables. It is important to mention that labor and physical capital are not correlated with GDP at the reasonable score in the case of Nigeria. For the case of South Africa, Openness is not correlated with GDP at the reasonable score¹.

¹ One of the assumptions of the classical linear regression model is that no independent variable has a perfect linear relationship with any of the other independent variables (see Gujarati, 1999).

Table 4: Estimated Correlation Matrix of Variables

Nigeria					
	LGDP	LKGDP	LL	LFDI	LOPEN
LGDP	1.0000				
LKGDP	.20005	1.0000			
LL	.81878	.20481	1.0000		
LFDI	.18382	.22071	.30081	1.0000	
LOPEN	.71865	.56573	.12209	.29790	1.0000
South Africa					
	LGDP	LKGDP	LL	LFDI	LOPEN
LGDP	1.0000				
LKGDP	.50005	1.0000			
LL	.53878	.640624	1.0000		
LFDI	.45382	.22071	.11081	1.0000	
LOPEN	.29865	.27573	.16209	.17900	1.0000

5.2 Unit Root Test

According to Gujarati, (2009), the need for stationary of variable is key to a viable and robust regression results. The first task working with time series data set is the formal and informal test where the informal test is a visual inspection of the graphical representation to catch a glimpse of the series and the formal is the usual Augmented Dickey Fuller (ADF) test to say the order of integration of the series, so as not to fall into a spurious regression trap that is meaningless-the implication being that it has poor forecasting ability.

The corresponding critical values of the ADF test for 44 numbers of observations at the 5 percent significance levels are obtained from Mackinnon (1991)², which are reported by MFIT 4.1. It is worth noting that the intercept and trend terms are added to the ADF equations³. I chose the Schwarz Bayesian Criterion for optimum lags in Table 5. 2. Results of ADF tests reveal that all variables under inspection are non-stationary in levels but stationary in 1st differences but non-stationary in levels. This implies, the ADF test outcomes for unit roots endorse that all variables are integrated of order zero in 1st differences but integrated of order I (1) in levels.

Table 5: Unit Root Tests

Variables	Test Statistics and Critical Values				Integration levels
	Levels		1 st differences		
	ADF	C.V. (5%)	ADF	C.V. (5%)	
Nigeria					
LGDP	-1.1918 (3)	-2.9358	-4.3568(1)	-2.9358	I(1)
LFDI	-1.5580 (3)	-2.9358	-6.0707(1)	-2.9358	I(1)
LK	-1.3552 (3)	-2.9358	-5.2712 (2)	-2.9358	I(1)
LL	-1.1176 (0)	-2.9303	-4.1298(1)	-2.9358	I(I)
LOPEN	-1.8712 (0)	-2.9303	-4.5729(2)	-2.9358	I(1)
South Africa					
LGDP	-1.6873 (3)	-2.9358	-3.5655 (1)	-2.9358	I(1)
LFDI	-2.4669 (3)	-2.9358	-6.6513 (1)	-2.9358	I(1)
LK	-1.2324 (0)	-2.9303	-4.4728 (0)	-2.9303	I(1)
LL	-2.1422 (3)	-2.9358	-3.7030 (2)	-2.9358	I(I)
LOPEN	-2.6465 (2)	-2.9358	-4.3802 (2)	-2.9358	I(1)

² James G. MacKinnon, "Critical Values for Co-integration Tests," In RF Engle and CWJ Granger (eds.), *Long-run Economic Relationships: Readings in Co-integration* (Oxford: Oxford University Press, 1991), pp. 267–76.

5.3 Johansen Maximum Likelihood Test

Table 6: Nigeria: Johansen Maximum Likelihood Test

Co-integration Regression	H_0	H_1	λ_{\max}	λ_{\max} (T-P)	Critical Value	λ_{trace}	λ_{trace} (T-P)	Critical Value
Model	$r = 0$	$r = 1$	38.17	35.42	34.40	84.20	79.41	75.98
	$r \leq 1$	$r = 2$	24.28	27.68	28.27	46.31	52.05	53.08
	$r \leq 2$	$r = 3$	19.50	21.93	22.39	22.50	31.93	34.39
	$r \leq 3$	$r = 4$	3.36	12.93	15.87	3.41	17.88	20.39
	$r \leq 4$	$r = 5$	0.50	7.93	9.16	0.50	7.53	9.16

Table 7: South Africa: Johansen Maximum Likelihood Test

Co-integration Regression	H_0	H_1	λ_{\max}	λ_{\max} (T-P)	Critical Value	λ_{trace}	λ_{trace} (T-P)	Critical Value
Model	$r = 0$	$r = 1$	54.32	34.40	31.73	105.6	75.98	71.81
	$r \leq 1$	$r = 2$	23.90	28.27	25.80	51.33	53.48	49.95
	$r \leq 2$	$r = 3$	12.95	22.04	19.86	27.4	34.87	31.93
	$r \leq 3$	$r = 4$	11.07	15.87	13.81	14.47	20.18	17.88
	$r \leq 4$	$r = 5$	3.39	9.16	7.53	3.39	9.16	7.53

The Johansen co-integration procedure has also been employed for the models of the study given that all variables of interest in the study were integrated of same order (~1) after first differencing. Both (λ_{\max}) and (λ_{trace}) tests results show that co-integrating vectors exist in the proposed models which confirm a long-term equilibrium relationship, at least one between economic growth and FDI, Openness,

Physical capital and labor in both Nigeria and South Africa according to Johansen and Jesilus (1992) co-integration test.

Table 8: Nigeria: Johansen long-run and short-run estimates

Long-Run Regressor	Long-Run estimates	Short-Run Regressor	Short-Run estimates
C	14.59 (4.07)	C	13.41 (3.51)
T	-	ECT (-1)	-0.24 (3.93)
LKGDJNI	0.20 (1.72)	DLKGDJNI	0.22 (1.74)
LLNI	0.52 (2.21)	DLLNI	0.90 (1.83)
LFDJNI	0.11 (1.54)*	DLFDJNI	0.10 (1.44)*
LOPENNI	0.29 (2.11)	DLOPENNI	0.42 (1.73)
Rbar	0.63	Rbar	0.25
F-stat	16.7	F-stat	15.76
DW	1.86	DW	2.07
SC	0.11 (0.73)	SC	0.71 (0.39)
FF	0.21 (0.64)	FF	0.88 (0.33)
N	0.27(0.84)	N	2.71 (0.26)
H	1.48 (0.22)	H	0.18 (0.67)

In the case of Nigeria, in the long-run relationship, except Foreign Direct Investment, Physical capital, openness, and labor are statistically significant at the 10% level. Results also show that labor is the most significant variable and explain 0.5 percent

impact on economic growth when 1 percent increases happened in labor. In the short run Foreign Direct Investment is also found insignificant whereas Openness, labor and physical capital have positive impact. ECT's factor is significant at the one percent level negative. The degrees of the matching factors illustrate that 24% of previous period's volatility is adjusted a year. This means that, productivity changes to its equilibrium level moderately and the ECT offers additional proof that the variables in the equilibrium regression are co-integrated.

Table 9: South Africa: Johansen long-run and short-run estimates

Long-Run Regressor	Long-Run estimates	Short-Run Regressor	Short-Run estimates
C	27.06 (2.28)	C	2.24 (8.47)
T	-	ECT (-1)	-0.35 (9.13)
LKGDPNI	0.72 (3.89)	DLKGDPNI	0.12 (2.87)
LLNI	0.10 (2.12)	DLLNI	0.09 (2.07)
LFDINI	0.05 (2.33)	DLFDINI	0.03 (1.63)
LOPENNI	0.82 (3.48)	DLOPENNI	0.04 (1.20)
Rbar	0.60	Rbar	0.35
F-stat	15.17	F-stat	11.76
DW	1.68	DW	1.70
SC	1.15 (2.82)	SC	0.85 (0.35)
FF	1.17 (2.84)	FF	0.35(0.54)
N	1.24 (0.53)	N	0.28 (0.86)
H	1.52(0.28)	H	0.19 (0.65)

On the other hand for South Africa, FDI, Physical capital, openness, and labor are statistically significant at 10% level in the long-run relationship. Results also show that physical capital is the most significant variable and explain 0.72 percent impact on economic growth when 1 percent increases happened in physical capital. In the short run Openness is found insignificant whereas Foreign Direct Investment, labor and physical capital are statistically significant and have positive impact. Estimates also show that ECT's factor is significant at the one percent level and negative. The

degrees of the matching factors illustrate that 35% of previous period's volatility is adjusted after a year. This means that, productivity changes to its equilibrium level moderately and the ECT same proof as in the case of Nigeria.

Chapter 6

CONCLUSION, RECOMMENDATION, SUGGESTION REMARKS

6.1 Conclusion

I found out a crucial point from empirical evidence that FDI is not a significant driver for economic growth in both the short and long term of the Nigerian economy but openness, labor and physical capital is. On the South African economy we found that FDI alongside physical capital and labor does have a positive impact but openness does not. Comparatively these economies respond differently to FDI given that their environmental conditions are different.

6.2 Recommendation

FDI has been found to be insignificant to the growth of the economy in Nigeria because the bulk of FDI into the country is in the extractive industry and the equipment, machinery and expertise engaged is capital instead labor intensive. This is usually not growth enhancing because the petroleum segment is often a reserve segment with minute backward and inward links with other segments. In the light of this discovery the Nigerian government needs to encourage FDI into other sectors and improve their policies on openness that keeps trade barriers as low as practical and encourage reliance on quotas and non-tariff barriers above tariffs. Policies targeted at stabilizing foreign exchange volatility should be implemented to encourage investors. The government should promote a strong legal framework for property rights protection especially in the wake of terrorist activities like Boko

haram in the region. They should keep government regulations to bare necessities for an orderly market economy as well as improving the quality of labor input by building human capital through improvements in literacy, health and discipline. Furthermore a focus on capital formation achieved by a sacrifice in current consumption should be encouraged and large investments in new capital goods promoted.

On the other hand, in South Africa however, the legacy of apartheid has affected the policies on openness and is still very prevalent making it necessary for the government to direct more policies on openness that keep trade barriers as low as possible as well as help the citizens overcome apartheid in their minds. The government should look for more practical means to eradicate the disparities caused by the apartheid system even though education, jobs and business opportunities have improved since it was ousted. Human capital development is needed to bridge the gap that was created by the apartheid system, improvements in infrastructure across the whole country as well as development of physical capital. The authorities should continue to step up efforts by applicable policies that may possibly increasingly draw FDI into the country since findings prove positive influence of FDI on its economies not neglecting developments on labor and physical capital. Policies including tax holidays, infrastructural development, security issues and heavy investments in building human capital (a major lag in the country) should be prioritized.

6.3 Suggestions for Further Studies

In terms of further studies, I suggests an investigation into why FDI is not an important driver for growth on the Nigerian economy and why openness did not pass

the test on the South African economy. I also suggest a study on the impact of FDI in the petroleum sector on the economy. I also advocate an investigation into how FDI can influence the quality of labor for Nigeria and physical capital for South Africa.

6.4 Remarks

Economic growth is central to the development of any country because living standards measured by output per capita or consumption per households is primarily determined by the level of productivity and economic growth of nations. Hence Nigeria and South Africa must ride on the whole four wheels of economic growth namely; human resources, natural resources, capital formation and technology to encourage growth not just through FDI which contributes only a small ripple on the waves of total gross domestic product.

However, not neglecting FDI since it can also contribute significantly in the economic growth of a country if the right type is chosen based on proper assessment of the countries needs and potential, such as increases in the demand of the host countries currency which can lead to expansion of the foreign reserve by which imports are funded. It can also strengthen the foreign currency of a country given a constant supply of the currency making imports cheap. Other benefits of FDI include enhancement in the skills and remunerations of the labor force, technology and management skill transfer, increased tax revenue among many others. These benefits contribute to economic development of any country hence Nigeria and South Africa are better off to promote policies that encourage the flow of FDI as a tool for growth. And from the studies labor and physical capital both factors mentioned above are key drivers to growth in both of these countries.

REFERENCES

- Adelegan, J. O. (2000). Foreign direct investment and economic growth in Nigeria
A seemingly unrelated model. *African Review of Money Finance and
Banking*, 5-25.
- Aluko, S. A. (1961). Patterns of Foreign Investment in Nigeria'. *Daily Times*,26.
- Asiedu, E., & Lien, D. (2004). Capital controls and foreign direct investment. *World
development*, 32(3), 479-490.
- Asiedu, E. (2005). Foreign direct investment in Africa: the role of natural resources,
market size, government policy, institutions and political instability. *Market
Size, Government Policy, Institutions and Political Instability (April 2005)*.
- Ayadi, F. S. (2009). Foreign direct investment and economic growth in Nigeria.
In Proceedings of the 10th Annual Conference, University of Lagos, Nigeria.
- Ayanwale, A. B., & Bamire, S. A. (2001). The Influence of FDI on Firm Level
Productivity of Nigeria's Agro /Agro-Allied Sector. *Final Report presented
to the African Economic Research Consortium, Nairobi.*
- Ayanwale, A. B. (2007). FDI and economic Growth: Evidence from Nigeria.

- Barro, R. J., Mankiw, N. G., & Sala-i-Martin, X. (1992). *Capital mobility in neoclassical models of growth* (No. w4206). National Bureau of Economic Research.
- Balasubramanyam, V. N., Salisu, M., & Sapsford, D. (1996). Foreign direct investment and growth in EP and IS countries. *The economic journal*, 92-105.
- Basu, M. A., & Srinivasan, M. K. (2002). *Foreign direct investment in Africa: Some case studies* (No. 2-61). International Monetary Fund.
- Blonigen, B., & Wand, M. (2005). Inappropriate Pooling of Wealthy and Poor Countries in Empirical FDI Studies In: Moran, T. H., Graham, E. M., & Blomström, M. (2005). *Does foreign direct investment promote development?* Peterson Institute.
- Borensztein, E. J., DE Gregorio, E.T., & Lee, J. W. (1995). How Does Foreign Direct Investment Affect Economic Growth? *NBER Working Paper*, (5057).
- Brown, C. V. (1962). External economies and economic development. *The Nigerian Journal of Economic and Social Studies*, 4(1), 16-22.
- Buckley, P. J., Clegg, J., Wang, C., & Cross, A. R. (2002). FDI, regional differences and economic growth: panel data evidence from China. *Transnational corporations*, 11(1), 1-28.

- De Gregorio, J. (2005). The role of foreign direct investment and natural resources in economic development. In *Multinationals and Foreign Investment in Economic Development* (pp. 179-197). Palgrave Macmillan UK.
- De Mello Jr, L. R. (1997). Foreign direct investment in developing countries and growth: A selective survey. *The Journal of Development Studies*, 34(1), 1-34.
- Duada, R. O. (2007). The impact of FDI on Nigeria's Economic Growth: Trade Policy Matters. *Journal of Business and Policy Research*, 3, 11-26.
- Dunning, J. H. (1973). The determinants of international production. *Oxford economic papers*, 25(3), 289-336.
- Dunning, J. H. (1980). Toward an eclectic theory of international production: Some empirical tests. *Journal of international business studies*, 11(1), 9-31.
- Dunning, J. H. (1988). The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of international business studies*, 19(1), 1-31.
- Zakaree, S. S., & Egwaikhide, C. I. (2012). Impact of Social Crises on Economic Development: Theoretical Evidence from Nigeria. *The Social Sciences*, 7(1), 36-43.
- Gujarati, D. N. (2009). *Basic econometrics*. Tata McGraw-Hill Education.

Funke, N., & Nsouli, S. M. (2003). The New Partnership for Africa's Development (NEPAD): opportunities and challenges.

Hymer, S. (1976). *The international operations of national firms: A study of direct foreign investment* (Vol. 14, pp. 139-155). Cambridge, MA: MIT press

Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of economic dynamics and control*, 12(2), 231-254.

Ledyaeva, S., & Linden, M. (2006). Foreign direct investment and economic growth: Empirical evidence from Russian Regions.

Li, X., & Liu, X. (2005). Foreign direct investment and economic growth: an increasingly endogenous relationship. *World development*, 33(3), 393-407.

Lipsey, R. E., Feenstra, R. C., Hahn, C. H., & Hatsopoulos, G. N. (1999). The role of foreign direct investment in international capital flows. In *International capital flows* (pp. 307-362). University of Chicago Press.

Lipsey, R. E. (2001). *Foreign direct investors in three financial crises* (No. w8084). National Bureau of Economic Research.

Macaulay Egbo, D. (2011). Foreign Direct Investment and the Performance of the Nigerian Economy. In *1st International Technology, Education and Environment Conference* (p. 137).

Moolman, C. E., Roos, E. L., Le Roux, J. C., & Du Toit, C. B. (2006). Foreign direct investment: South Africa's elixir of life?

Moody and Murshid in Wolf, S. (2002). 2002 Annual Forum.

Obinna, O. E. (1983). Diversification of Nigeria's external finances through strategic foreign direct investment. In *Nigerian Economic Society Annual Conference Proceedings, Jos*.

Umoh, O. J., Jacob, A. O., & Chuku, C. A. (2012). Foreign direct investment and economic growth in Nigeria: An analysis of the endogenous effects. *Current Research Journal of Economic Theory*, 4(3), 53-66

Sadik, A. T., & Bolbol, A. A. (2001). Capital flows, FDI, and technology spillovers: evidence from Arab countries. *World Development*, 29(12), 2111-2125.

Sami Fethi, Salih Katircioğlu & Dilber Caglar (2013). The Role of the Financial Sector in the Turkish Cypriot Economy: Evidence from Bounds and Causality tests, *Turkish Studies*. 14:3, 540-563.

Solow, R. M. (1956). A contribution to the theory of economic growth. *The quarterly journal of economics*, 65-94.

Tang, S., Selvanathan, E. A., & Selvanathan, S. (2008). Foreign direct investment, domestic investment and economic growth in China: A time series analysis. *The World Economy*, 31(10), 1292-1309.

Vernon, R. (1966). International investment and international trade in the product cycle. *The quarterly journal of economics*, 190-207.

Vickers, B. (2002), An Overview of South African Investment Regime and Performance. *Journal of Economics*, 16.

World Bank Report: Peet, R. (2003). *Unholy trinity: the IMF, World Bank and WTO*. Zed Books.

World Bank Report: De Gregorio, J., & Guidotti, P. E. (1995). Financial development and economic growth. *World development*, 23(3), 433-448.