

**DETERMINANTS OF FOREIGN DIRECT  
INVESTMENT IN ECONOMIC COMMUNITY OF  
WEST AFRICAN STATES (ECOWAS)**

**IGBINEDION, Sunday Osahon**

**DEPARTMENT OF ECONOMICS  
DELTA STATE UNIVERSITY,  
ABRAKA.**

**DETERMINANTS OF FOREIGN DIRECT  
INVESTMENT IN ECONOMIC COMMUNITY OF  
WEST AFRICAN STATES (ECOWAS)**

**DETERMINANTS OF FOREIGN DIRECT  
INVESTMENT IN ECONOMIC COMMUNITY OF  
WEST AFRICAN STATES (ECOWAS)**

**BY**

**IGBINEDION, Osahon Sunday**

**PG/04/05/92104**

**B.Sc (Economics and Statistics, 1994); M.Sc (Economics, 2000)  
University of Benin.**

**A Thesis Submitted to the Postgraduate School in Partial  
Fulfillment of the Requirement for the Award of Doctor of  
Philosophy (Ph.D) Degree in Economics of the Delta State  
University, Abraka.**

**JULY, 2016.**

## DECLARATION

I declare that this is an original thesis carried out by me in the Department of Economics, Delta State University, Abraka, Nigeria.

Igbinedion, Sunday Osahon

Date - - - - -

Student

## **CERTIFICATION**

We the undersigned certify that this thesis was carried out by Igbinedion, Osahon Sunday in the Department of Economics, Delta State University, Abraka, in partial fulfillment of the requirements for the award of Doctor of Philosophy (Ph.D.) Degree in Economics.

-----  
**PROF. D.G. OMOTOR**  
**(Supervisor)**

-----  
**DATE**

-----  
**PROF. P. C. EGBON**  
**(Supervisor)**

-----  
**DATE**

-----  
**DR. B. O. ISHIORO**  
**(Head of Department)**

-----  
**DATE**

## **DEDICATION**

I dedicate this thesis to the memory of my late mother, Comfort Ekorhowiwho Igbinedion, for sacrificially laying the foundation of my academic life.

## ACKNOWLEDGEMENTS

To the Almighty God, I sincerely give my gratitude for His gift of life, knowledge, guidance and health without which this research would not have been completed. I wish to also express my sincere gratitude to my amiable supervisors, Professors D.G. Omotor and P.C. Egbon for their time and effort in guiding me with invaluable suggestions for improvement throughout the entire course of writing this thesis. Truly, the discussions with them were quite stimulating and constructive. While I count it a privilege to have drank from your wealth of experience, I also admire your strength and attention to details. I also want to thank Professors C.O. Orubu, B.U. Omajimite, and Drs.T.O. Awogbemi, N.O. Eriemo, I.A. Onoyere, M.D. Imobighe, C.T. Ezi, R.U. Ejedegba, R.A. Itiveh, B.O. Ishioro, Mrs. E. Olele, Mr. O. Maku and Mrs. C. Obi.

I also acknowledge the support of my Professors in the Department of Economics and Statistics, University of Benin: M.A Iyoha, M.I Obadan, C.E.E Okojie, H.E Oaikhenan, M.A Anyiwe, A.I. Monye Emina, O.T. Ekanem, from you all I have learnt invaluable lessons. I will not fail to acknowledge the encouragement from Dr. C.A.U. Ighodaro and especially my bossom friends and brothers, Dr. E. Ugiagbe and Dr. F.I. Ogbeide for believing in me and for being ever ready to render support whenever the need arose. May the good Lord richly bless you. Also not left out is my cousin, Mr. Sunny Agbontaen, my uncle, Mr. J. Ogieva and my father-in-law, Elder B.B. Zachary for your care, support and encouragement all through this journey.

My fondest regard goes to my amiable and understanding wife, bossom friend and sister, Mrs J.J. Igbinedion for believing strongly in me and forever willing to sacrifice in order to enable me achieve this goal, I say a big thank you. To my lovely children: Osayemeh, Joshua, Eloghosa, and Caleb, I love you all. Also to my father-in-the-lord, Rev. Mike Edegar, I appreciate your prayers and support all through this journey. Finally, to my never-to-be forgotten friend, Professor S.A. Igbatayo, who taught me the rudiments of research writing, I say I am forever grateful to you for sowing the seed of writing in me.

I pray that God grant you all, the best things in life.

Igbinedion, Osahon Sunday  
2016

## **ABSTRACT**

The study analyses the determinants of aggregate foreign direct investment (FDI) in the Economic Community of West African States (ECOWAS) using the framework of systems Generalized Method of Moments (GMM), traditional panel and panel granger causality procedure as estimation techniques. The data for the study were sourced from secondary sources such as the World Development Indicators of the World Bank, for 14 countries in the ECOWAS region for the period 1980 to 2013. The results indicate that aggregate FDI flow to the region are largely driven partly by economic fundamentals like markets size, trade openness and human capital, and non-economic fundamentals like agglomeration economies, regime shifts and legal origin effects. We also found that over-dependence on natural resource rent and poor institutional quality constitutes a drag on FDI flow to the region. Secondly, the panel data evidence on the nexus between economic growth and FDI indicates that the two variables mutually reinforce each other; while country-specific impact assessment between the duo tend to suggests that FDI inflow may not necessarily translate to economic growth in some of the countries. Lastly, FDI was found to complement (crowd-in) domestic investment in most of the ECOWAS countries. Accordingly, the study recommends that ECOWAS should make efforts to ensure that in the conception, formulation and implementation of FDI policies, only relevant economic and non-economic fundamentals are considered in the quest to attract the right kind and quantity of FDI aimed at achieving sustainable long-term economic growth in the region.

## TABLE OF CONTENTS

Cover Page	-	-	-	-	-	-	-	-	-	-	i
Fly Leaf	-	-	-	-	-	-	-	-	-	-	ii
Title Page	-	-	-	-	-	-	-	-	-	-	iii
Declaration	-	-	-	-	-	-	-	-	-	-	iv
Certification	-	-	-	-	-	-	-	-	-	-	v
Dedication	-	-	-	-	-	-	-	-	-	-	vi
Acknowledgment	-	-	-	-	-	-	-	-	-	-	vii
Abstract	-	-	-	-	-	-	-	-	-	-	viii

### CHAPTER ONE: INTRODUCTION

1.1	Background to the Study	-	-	-	-	-	-	-	-	1
1.2	Statement of the Problem	-	-	-	-	-	-	-	-	4
1.3	Research Questions	-	-	-	-	-	-	-	-	6
1.4	Objectives of the Study	-	-	-	-	-	-	-	-	6
1.5	Statement of Hypotheses	-	-	-	-	-	-	-	-	7
1.6	Justification of the Study	-	-	-	-	-	-	-	-	7
1.7	Scope of the Study	-	-	-	-	-	-	-	-	9
1.8	Limitation of the study	-	-	-	-	-	-	-	-	9
1.9	Operational Definition of Terms	-	-	-	-	-	-	-	-	10

### CHAPTER TWO: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1	Literature Review	-	-	-	-	-	-	-	-	14
2.1.1	Evolution and Mandate of ECOWAS	-	-	-	-	-	-	-	-	14
2.1.2	Potential Benefits of Economic Integration in West Africa	-	-	-	-	-	-	-	-	16
2.1.3	Challenges Confronting ECOWAS	-	-	-	-	-	-	-	-	17
2.1.4	Profile of FDI in Africa	-	-	-	-	-	-	-	-	19
2.1.5	Trend of FDI Inflows in West Africa	-	-	-	-	-	-	-	-	21
2.1.6	FDI Flow Per Capita in ECOWAS Countries	-	-	-	-	-	-	-	-	22
2.1.7	FDI Flow as a Percentage of GDP in ECOWAS Countries	-	-	-	-	-	-	-	-	24

2.1.8	Comparative Trend Analysis of FDI and Domestic Investment (ID)	-	-	-	-	-	-	-	25
2.1.9	Investment Climate of ECOWAS Countries	-	-	-	-	-	-	-	40
2.1.10	Governance in Selected ECOWAS Countries	-	-	-	-	-	-	-	40
2.1.11	Macroeconomic Performance in Selected ECOWAS Countries	-	-	-	-	-	-	-	45
2.1.12	Level of Infrastructure/ICT in Selected ECOWAS Countries	-	-	-	-	-	-	-	48
2.1.13	Meaning of FDI	-	-	-	-	-	-	-	51
2.1.14	FDI Theories	-	-	-	-	-	-	-	53
2.1.15	FDI - Economic Growth Theories	-	-	-	-	-	-	-	56
2.1.16	Theoretical Link between FDI and Domestic Investment (ID)	-	-	-	-	-	-	-	59
2.1.17	Potential Determinants of FDI	-	-	-	-	-	-	-	61
2.1.18	FDI in Sub – Saharan Africa: Stylized Facts	-	-	-	-	-	-	-	64
2.1.19	Empirical Review	-	-	-	-	-	-	-	65
2.1.19.1	Studies in Emerging market/ Developing Countries	-	-	-	-	-	-	-	66
2.1.19.2	Studies in Sub – Saharan Africa	-	-	-	-	-	-	-	73
2.1.19.3	Sectoral Determinants of FDI-	-	-	-	-	-	-	-	79
2.1.19.4	FDI – Domestic Investment Nexus	-	-	-	-	-	-	-	87
2.2	Theoretical Framework	-	-	-	-	-	-	-	92

### **CHAPTER THREE: RESEARCH METHOD**

3.1	Research Design	-	-	-	-	-	-	-	100
3.2	Population of the Study	-	-	-	-	-	-	-	102
3.3	Sample and Sampling Technique	-	-	-	-	-	-	-	102
3.4	Method of Data collection	-	-	-	-	-	-	-	103
3.5	Method of Data analysis	-	-	-	-	-	-	-	104
3.5.1	Justification for Estimation Technique	-	-	-	-	-	-	-	105
3.5.2	Model Specification	-	-	-	-	-	-	-	106

**CHAPTER FOUR: PRESENTATION, ANALYSIS OF DATA AND DISCUSSION OF FINDINGS**

4.1	Descriptive Statistics	-	-	-	-	-	-	-	112
4.2	Test for Stationarity and Panel Co-integration Test	-	-	-	-	-	-	-	117
4.3	Empirical Results	-	-	-	-	-	-	-	119
4.3.1	The Determinants of aggregate FDI	-	-	-	-	-	-	-	119
4.3.2	Presentation of Empirical Results on Foreign Direct Investment and Real GDP	-	-	-	-	-	-	-	127
4.3.3	Presentation of Results on Foreign Direct Investment and Domestic Investment	-	-	-	-	-	-	-	139
4.4	Evaluation of Working Hypotheses	-	-	-	-	-	-	-	145
4.4.1	Evaluation of Working Hypothesis One	-	-	-	-	-	-	-	145
4.4.2	Evaluation of Working Hypothesis Two	-	-	-	-	-	-	-	146
4.4.3	Evaluation of Working Hypothesis Three	-	-	-	-	-	-	-	146
4.4.4	Evaluation of Working Hypothesis Four	-	-	-	-	-	-	-	147
4.4.5	Evaluation of Working Hypothesis Five	-	-	-	-	-	-	-	147

**CHAPTER FIVE: SUMMARY OF FINDINGS, POLICY RECOMMENDATIONS AND CONCLUSION.**

5.1	Summary of Findings	-	-	-	-	-	-	-	148
5.2	Conclusion	-	-	-	-	-	-	-	150
5.3	Limitations of the Study and Suggestion for further Studies	-	-	-	-	-	-	-	152
5.4	Contribution to Knowledge	-	-	-	-	-	-	-	153
5.5	Recommendations	-	-	-	-	-	-	-	154
	References	-	-	-	-	-	-	-	158
	Appendix 1	-	-	-	-	-	-	-	180

Appendix 2A.	-	-	-	-	-	-	-	-	-	182
Appendix 2B	-	-	-	-	-	-	-	-	-	183
Appendix 3A	-	-	-	-	-	-	-	-	-	184
Appendix 3B	-	-	-	-	-	-	-	-	-	185
Appendix 4	-	-	-	-	-	-	-	-	-	186
Appendix 5	-	-	-	-	-	-	-	-	-	191

## LIST OF TABLES

Table 3:	Annual Average FDI inflows in Africa's sub-Region (% share, 1980-2013)
Table 4:	FDI flow per capita in ECOWAS Countries
Table 5:	FDI as a percentage of GDP (1980-2013)
Table 6	Variables expected signs and data sources
Table 7A:	Descriptive statistics of all variables
Table 7B:	Correlation statistics of all variables employed
Table 7C:	Stationarity Test
Table 7D:	Johansen – Fischer co- integration test results.
Table 7E:	Panel data estimation results
Table 7F:	Pair wise correlation results of FDI and RGDP
Table G:	Causality test for overall ECOWAS countries
Table H:	Test for Stationarity
Table I:	Quandt – Andrews structural break test result, 1980-2013
Table J:	Country-specific impact of FDI on RGDP
Table K:	Causality test
Table L:	Results from Granger causality test
Table 7M:	Country – specific impact of FDI on GFCF

## LIST OF FIGURES

- Fig.3.1: Annual Average of FDI inflows across Africa sub-region (%) share, 1980-2013
- Fig.4.1: FDI/flow per capita in ECOWAS countries
- Fig.5.1: FDI/flow per capita in ECOWAS countries
- Fig.5.2: Trend of FDI and ID in Benin
- Fig5.3: Trend of FDI and ID in Burkina Faso
- Fig5.4: Trend of FDI and ID in Cote d' Ivoire
- Fig5.5: Trend of FDI and ID in Gambia
- Fig5.6: Trend of FDI and ID in Ghana
- Fig5.7: Trend of FDI and ID in Guinea
- Fig5.8: Trend of FDI and ID in Guinea Bissau
- Fig5.9: Trend of FDI and ID in Liberia
- Fig5.10: Trend of FDI and ID in Mali
- Fig5.11: Trend of FDI and ID in Niger
- Fig5.12: Trend of FDI and ID in Nigeria
- Fig5.13: Trend of FDI and ID in Senegal
- Fig5.14: Trend of FDI and ID in Sierra Leone
- Fig5.15: Trend of FDI and ID in Togo
- Fig5.16: Government effectiveness (percentile)
- Fig5.17: Political Stability (percentile)
- Fig5.18: Rule of Law (percentile)
- Fig5.19: Control of Corruption (percentile)
- Fig5.20: Regulatory quality (percentile)
- Fig5.21: Inflation, consumer prices (annual,%)
- Fig5.22: Imports of goods and services (% of GDP)
- Fig5.23: Exports of goods and services (% of GDP)
- Fig5.24: External debt stocks (% of GNI)
- Fig5.25: Telephone lines (per 100 people)
- Fig5.26: Internet users (per 100 people)
- Fig5.27: Mobile cellular subscription (per 100 people)

## **ABBREVIATION/ ACRONYMS**

AMU	Arab Maghreb Union
BOPs	Balance of Payments
BRIC	Brazil, Russia, India and China
CEEC	Central and East European Countries
ECA	Economic Commission for Africa
ECOWAS	Economic Community of West African States
EMCCA	Economic and Monetary Community of Central Africa
FDI	Foreign direct investment
FTA	Free Trade Area
GAT	General Agreement on Trade
GDP	Gross domestic product
GMM	Generalized Moments Method
HIPC	Highly Indebted poor Countries
MDRI	Multilateral debt relief initiative
MENA	Middle East and North Africa
MNES	Multinational Enterprises
OECD	Organization for Economic co operations and Development
OLS	Ordinary Least Squares
PCSE	Panel Correct Standard Errors
SADC	Southern Africa Development Community
SSA	Sub- Saharan Africa
TI	Transparency International
TNCS	Transnational Corporations
UNCTAD	United Nations Conference on Trade and Development
WAEMU	West Africa Monetary Union
WDI	World Development Indicators

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

In economic literature, economic growth is largely a function of the quantity and quality of the capital base of a nation (Solow, 1956). And, the quantity of such required capital stock is influenced by the level of national savings. Unfortunately, the level of savings for countries in sub-Saharan Africa (SSA) is quite low, compared to other developing economies (Mwega, 1997; Serieux, 2009). For instance, while gross savings as a percentage of GDP for East Asia and MENA stood at 47% and 29% respectively in 2012, it was merely 19% in sub-Saharan Africa over the same period (World Bank, 2014). Specifically, the national savings situation in the Economic Community of West African States (ECOWAS) is not significantly different from what obtains in the whole of the Sub-Saharan region. ECOWAS was founded on May 28, 1975, following the signing of the Lagos treaty, as a sub-regional group to facilitate economic integration of the sub-region. It comprises fifteen countries. Its gross savings as a percentage of GDP stood at 18.71% in 2012. Thus, foreign direct investment (FDI) has evolved as another viable source of capital to help bridge the gap between domestically mobilized savings and the required level of investment (Todaro and Smith, 2003).

In spite of this developmental function played by FDI, its primary role in the development process of emerging economies is still highly debated. According to the proponents of FDI as driver of growth (see for example, Li and Liu, 2005; Ozturk, 2007), it helps to fill the gaps in savings, domestic revenue and foreign exchange of developing countries. FDI provides managerial, entrepreneurial and transfer of technological skills to domestic economies. FDI increases export and promotes the integration of every nation's economy into the global economy. Some other proponents are of the view that not only does

FDI increase the productivity level of factors of production, it equally enhances the efficient use of resources, thereby raising the income level of such an economy (OECD, 2002). The opponents of FDI as growth champions (see, Konings, 2001; Herzer, et al., 2008) on the other hand, argued that the benefits derivable from the inflow of FDI are insignificant compared to the negative effects. According to this group, the “cost” of FDI includes stunting the growth of infant industries, negation of political sovereignty and worsening of balance of payments position (BOP) owing to excessive importation of capital goods by foreign investors and profits repatriation. Arising from the foregoing, it is argued that most developing nations should be wary of the perceived benefits of FDI.

Contemporary studies on developing countries show that FDI inflow has the potential to stimulate domestic investment, trade and competitiveness, employment and the general economic environment of the recipient countries (Apergis et al, 2006; Ndikumana and Verick, 2007). Based on the evidence from such recent findings, and considering the fact that the world has evolved into a global village, most emerging and developing economies have spent huge resources and time designing policies aimed at encouraging the inflow of FDI, as it is believed that such carefully designed policies could go a long way in attracting the right quantum and quality of FDI into their economies. Major policies adopted by most SSA countries include: liberalizing controls on foreign exchange and pricing, establishing industrial free-trade zones and general reforms of investment regulations, intensified privatization of public enterprises, as well as the control of inflationary episodes by use of appropriate monetary policy tools to improve macroeconomic environment of the real sector of the economy. In spite of these attractive policy frame-works prevailing in the African continent, the quantum of FDI flow to the continent is still relatively small when compared to other developing regions of the world (see Table 1 in Appendix 1). For the periods, 1990, 2005 and 2013, FDI inflows were 8%, 10% and 7%, respectively, compared to Latin America

and the Caribbean region which recorded 26%, 29% and 38% in the same period. Asia's aggregate share in World's FDI inflow stood remarkably at 65%, 67% and 53% over the same period (UNCTAD, 2012; 2014).

A cursory look at FDI receipt by African countries shows that the regional distribution (share) of FDI is critically skewed in favour of countries in North Africa (see Table 2 in Appendix 1). Indeed, throughout the 1980s up till 2010, when the region started witnessing economic and political instability (Egypt, Libya and Tunisia), Northern Africa was the largest destination of FDIs in Africa. As Table 2 depicts, the general picture of the distribution of FDI across the different regions in Africa was dominated by North Africa whose performance was higher than the continent's average for three decades. Specifically, between 2005 and 2009, the average FDI inflow into Northern Africa region was three times more than the average FDI inflow into the African continent as a whole. In all, in terms of regional distribution, much of FDI in Africa went to North Africa, followed by Central Africa, Western Africa and Eastern Africa, except in the late 2000s when Northern African countries began to witness declining economic fortunes that can in part be attributed to instability in the political environment.

What the foregoing regional distribution of FDI in Africa reveals is that FDI inflow into the continent has not been too favourable to West African countries, relatively speaking. This skewed pattern remains palpable despite policy initiatives in the region and the attractive macroeconomic environment for such inflows. It, thus, becomes imperative to find possible ways to change the existing trend in ECOWAS countries, as well as establish frameworks to attract FDI into this sub-region of Africa in a bid to reap the perceived benefits of foreign direct investments (FDI).

## **1.2 Statement of the Problem**

The issue of foreign direct investment (FDI) has been a pressing one for developing economies in general and ECOWAS nations in particular. This is so because FDI has evolved as a veritable source of financing gap occasioned by saving-investment divergences and fostering economic growth among ECOWAS nations. In a bid to realizing this, several incentives have been put in place, and these include granting of tax holidays and subsidies, reduction in the rate of taxes, exemptions from import duties and accelerated depreciation allowances, among others. In spite of this litany of incentives, FDI flows into sub-Saharan Africa are still at low levels. This paltry quantum coupled with declining trends of FDI to the region, possibly suggest that the flows of FDI are non-automatically driven by incentives measures. In addition, it is still not clear why multi-national firms have preferred other regions of the continent; some of whose growth rates and policy reforms may not be as competitive as the West African region. Other FDI determinants such as political risks and institutional factors are recently spotted as being detrimental to FDI flows to an economy. The extent to which these variables have influenced FDI has not been adequately addressed in empirical studies for ECOWAS countries.

In analyzing the drivers of FDI in ECOWAS countries, various studies have been conducted, but a majority of these studies are country-specific, and such country-specific analyses may not adequately capture the determinants of FDI in ECOWAS countries. This is further aggravated by the realization that a majority of such empirical studies on the determinants of FDI have been based on economies outside sub-Saharan Africa such as Asia and Latin America. These other developing regions hardly share common socio-economic and cultural features with that of ECOWAS region. Thus, it would be misleading and erroneous to replicate their policy recommendations for the African region and particularly

the West African sub-region with a completely different socio-economic arrangement. This necessitated the need to conduct a more thorough and detailed empirical investigation with well-defined variables and a set of new data to clearly underscore the peculiar drivers of FDI into ECOWAS countries, and the level to which such FDI contributes to growth.

Furthermore, there have also been advances in the empirical literature and techniques of estimating the determinants of FDI in recent times. The mixed findings from such studies which applied these new techniques still remain inconclusive while the controversies which trailed such studies are yet unresolved. These conflicts have dire implications on the conception, planning and execution of investment policy strategies in SSA. To the best of the researcher's knowledge, no known study has attempted to investigate the determinants of FDI using income-effects and legal origin effects; some others merely explained the causality between FDI and domestic investment in SSA without recourse to examining explicitly factors which may account for effects of structural breaks in their analyses. Results from such studies may be biased (Westerlund and Edgerton, 2008). Arising from the foregoing, exploring the nature of these relationships could improve policy making and informed strategy that could stimulate higher economic performance trajectory amongst ECOWAS countries. In addition, one of the major channels through which the impacts of FDI could exert on economic activities is through domestic investment (Ndikumana and Verick, 2007). Another lap of these channels is the issue of whether FDI complements or substitutes domestic investment within the ECOWAS sub-region. If the latter situation holds (i.e. if FDI substitutes domestic investment) or does not meaningfully enhance gross fixed capital formation, then there would be the need to question the actual benefits of FDI to the ECOWAS sub-region. In the face of these unresolved issues, it is necessary to examine the germane factors that could help attract more aggregate FDI into the ECOWAS region, promote greater economic growth by crowding in domestic investment of the region.

### **1.3 Research Question**

The following research questions served as a guide to the study;

- i. What are the germane factors determining FDI location in the ECOWAS sub-region?
- ii. Does the inflow of FDI meaningfully impact on the economic growth of the sub-region?
- iii. Does the inflow of FDI bridge the gap between desired investment and domestically mobilized savings in the sub-region?
- iv. Does policy reform positively influence the inflow of FDI into the ECOWAS sub-region?
- v. Does the quality of institution help to promote the inflow of FDI into ECOWAS sub-region?

### **1.4 Objectives of the Study**

The broad objective of this study is to examine the determinants of FDI in the ECOWAS region. The specific objectives are to:

- i) ascertain the determinants of aggregate FDI in the ECOWAS sub-region;
- ii) explore the empirical relationship between FDI and GDP growth in the ECOWAS sub-region; and
- iii) determine whether FDI complements domestic investment in the ECOWAS sub-region.
- iv) ascertain the impact of policy reforms in promoting the inflow of FDI in the ECOWAS sub- region.
- v) Determine the relevance of institutional quality in promoting FDI inflow in the ECOWAS sub- region.

## 1.5 Research Hypotheses

The following are the hypotheses that would be tested in this study:

*H<sub>0</sub>*: There is no significant relationship between aggregate FDI flow into ECOWAS countries and domestic/macroeconomic factors

*H<sub>0</sub>*: There is no significant relationship between FDI and real GDP in ECOWAS countries

*H<sub>0</sub>*: There is no significant (negative) relationship between FDI inflow and domestic investment in the ECOWAS sub-region

*H<sub>0</sub>*: There is no significant relationship between FDI inflow and policy reforms in the ECOWAS sub-region

*H<sub>0</sub>*: There is no significant relationship between FDI inflow and institutional quality in the ECOWAS sub-region

## 1.6 Justification of the Study

Over the past two decades, FDI has evolved as one of the most important sources of financing growth within sub-Saharan Africa owing to the insufficient level of domestic income, savings, investment and capital formation. Thus, FDI has evolved overtime to become a major channel of augmenting the shortage of domestic capital. However, in the light of the divergent opinions of extant literature regarding the germane drivers of FDI, most documented evidences are related to emerging regions like Latin America and Asia with dissimilar socio-economic and cultural features with sub-Saharan Africa in general and ECOWAS countries in particular. Even the earlier studies conducted on the drivers of FDI into Africa have been conducted in Southern Africa, MENA countries, or country-specific.

Hence, it would be somewhat misleading and erroneous inappropriate recommending their policy prescriptions for the ECOWAS region with a completely different socio-economic arrangement. Thus, an empirical study of this sort becomes not only needful but imperative.

Also, the inclusion of more recent data, which enables us to find out the extent to which determinants of FDI identified in earlier studies are still relevant, makes this study very informative. In addition, one major limitation of many of those other studies that were previously carried out on the determinants of FDI is that they are often conducted over short periods and this may reduce the power of some unit root and co-integration tests. Thus, they do not consider the problem of structural breaks due to changing economic conditions (reforms), economic crisis, etc. Another major challenge with those other studies is that they completely ignore the proximity between the different countries receiving FDI (that is, the agglomeration effects). In this increasingly globalized world, economic relations between countries are growing stronger and can influence the attractiveness of FDI. Interestingly, these identified limitations are resolved and given due consideration in this present study.

Furthermore, several studies have been carried out to find out the impact of FDI inflows on domestic investment but only few studies have explored this relationship within the ECOWAS region. Both empirical and theoretical literature on the effect of FDI inflow on domestic investment has, at best, yielded inconclusive results. Hence, the need for further empirical study using recently developed econometric tools, like the dynamic panel procedures, that help to deal with the problem of endogeneity, since the traditional panel methods tend to overestimate the panel parameter coefficients. Analyzing of the effect of FDI on domestic investment using data of specific nations in ECOWAS region may shed light on policy flexibility and the desirability of balancing the number of goals faced. On the whole, the findings of this study would improve the understanding of factors that determine FDI

inflows amongst government planners and policy makers which, in turn, would guide in the choice policy and promote the implementation of relevant measures aimed at attracting strategic FDIs into the ECOWAS region for sustainable economic growth trajectory.

### **1.7 Scope of the Study**

The major focus of this research investigation is to employ panel data covering a period of thirty four years (1980-2013) for fourteen ECOWAS countries. These countries are Ghana, Nigeria, Senegal, Burkina Faso, Guinea, Togo, Liberia, Mali, Niger, Cote d'Ivoire, Gambia, Sierra-Leone, Benin and Guinea Bissau. This research work is different from previous studies in scope and possesses the advantage of using a larger dataset that covers a longer period of time, thus increasing the degree of freedom which, in turn, enhances the credibility and robustness of the results.

### **1.8 Limitation of the study**

A major limitation encountered in carrying out this research work was the data we employed for our empirical analysis. The data were essentially secondary data, which are not primary product of research; therefore, results will be dependent on the quality of the data. As rightly remarked by Denscombe (2010), secondary data sources may provide one with vast amount of information, but quantity is not synonymous with appropriateness.

In addition, due to data unavailability, fourteen (14) out of fifteen (15) countries which currently make up the ECOWAS bloc were accounted for in this study. As such, Cape Verde, was left out of this study. That being so, the use of high frequency data would have been preferred for analysis but are generally unavailable, thus forcing the need for annual time series data for this study. Besides, secondary data tend to expose analysis of this type to a variety of possible errors and bias. Interestingly, much as it may be able difficult to remove

or overcome some of the errors, however the knowledge of their existence may help in drawing informed conclusions and establish some level of confidence in the judgment that results.

Timing is another challenge. The Ph.D programme is structured in a manner that candidates have limited time to delve into many issues that may warrant attention.

## 1.9 Operational Definition of Terms

The concept used thus far in this research and the meanings attached to their usage are set out hereunder:

- (i) **Foreign Direct Investment (FDI):** FDI refers to an “investment that is made to acquire a lasting interest in an enterprise (whether incorporated or unincorporated) operating in an economy other than that of the investor” (IMF, 1977). In this study however, we express the endogenous FDI as a percentage of GDP for two main reasons. As noted by Kamaly (2003), the first is to control the size differences between countries and the second is to avoid the possibility of having a non-stationary or explosive dependent variable in the regression.
- (ii) **Openness to Trade:** Multinational corporations often seek to export their products to other markets with a view to further boost their manufacturing or sales. Hence, a host country’s openness to trade will facilitate this export-oriented FDI. Consequently, with greater openness to trade, host countries should receive greater degree of FDI. Following Gries et.al (2009) and Yanikkaya (2003), trade openness is measured by export and import divided by GDP.
- (iii) **Exchange Rate:** Exchange rate is acknowledged in literature as one of the drivers of FDI. Investors are usually more concerned with exchange rate risk as it relates to

profits repatriation. Thus, investors normally look out for those economies characterized by strong currencies to invest in. On the other hand, an economy characterized by weak currency tends to deter foreign investors. The nominal exchange rate of the United States (USA) dollar against the domestic currency is employed as a measure of exchange rate risk.

- (iv) **Inflation rate:** Inflation rate as measured by consumer price index (CPI) is utilized in many studies as a measure of economic instability. High rate of inflation may suggest to potential foreign investors that there are inadequacies in the potential host country region (Schneider and Frey, 1985). Inflation will therefore lead to FDI flight.
- (v) **Infrastructure:** The level of infrastructural development of a country or region is a pointer to the cost and difficulty of doing business in such a country or region. For instance, the better the road network in a country, the lower the costs of transportation and the easier the access to markets and, thus, the greater the desire to invest in that country. We captured infrastructure by telephone lines.
- (vi) **Market size:** Market size, measured as real GDP, is regarded as one of the conventional drivers of FDI flows. The market size hypothesis posits that a larger market encourages the optimal utilization of resources and enables host countries to take advantage of existing economies of scale. Conceptually, market size should have a more significant relation with FDI flow.
- (vii) **Natural resources:** Natural resources availability has been identified in empirical literature as a major driver of FDI to host region/country. In countries that are abundantly blessed with natural resources but lack the requisite capital or technological know-how needed to exploit and/or sell to the international market, FDI takes place to help to facilitate their exploitation. Foreign enterprises get involved in

vertical FDI in the host country with the aim of producing raw materials or/and inputs for their own local production needs back at home.

- (viii) **Human Capital:** All other things being equal, greater labour availability should attract FDI, notably, export-oriented FDI. In the case of sub-Saharan Africa, abundance of unskilled workers should result in labour-seeking multi-nationals investing in these countries. In this study, human capital is proxied by the total labour force in each of the ECOWAS Countries.
- (ix) **Institutions:** Institutional quality is often acknowledged as a driver of FDI, especially in developing economies like those in sub-Saharan region. Unfortunately, it is somewhat difficult to accurately measure institutional factors; hence empirical results in this regard are inconclusive. For instance, while Wheeler and Mody (1992) used regulatory framework and bureaucratic hurdles as proxies for institutional factors, Wei (2000) utilized corruption index for this study. The fact that the two papers used different measures of institutional quality partly explains the difference in their findings. In this study, we follow Wheeler and Mody (1992) by employing a country's ranking in CPIA business environment as a proxy for institutional quality. This is also partly informed by the non-availability of data for some other variables of institutional quality from 1980.
- (x) **Agglomeration economies:** These are benefits arising from locating close to other foreign investors due to positive externalities. This arises from the fact that new investors may have less knowledge about the host country and its environment, and thus they will view the investment decisions taken by other investors as an indicator of good investment conditions. Following the approaches used in most of the

literature (e.g. Cheng and Kwan, 2000), we test agglomeration effect using the one period lagged FDI stock.

- (xi) **Gross fixed capital formation (%GDP):** Gross fixed capital formation is employed as a measure for domestic investment. In this context, it comprises improvements in land, machinery, equipment plant purchases. Also included are the roads, construction of railways, schools, commercial and industrial buildings.
- (xii) **Crowding-in effects:** Crowding-in effects may occur when the inflow of FDI encourages private domestic investments by imitating the activities of FDI, creating employment opportunities, and improving the quality of domestic products through competition.
- (xiii) **Crowding-out effects:** Crowding-out effects may occur when such FDI inflows cause domestic firms to either exit production or, at best, cause reduction in their productivity in the long-run owing to competition.
- (xiv) **An autoregressive process (AR):** An autoregressive process operates under the premise that previous values of FDI have effects on current value of FDI. More specifically, an autoregressive process depends on a average sum of its previous values and a stochastic disturbance term

## **CHAPTER TWO**

### **LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

Like many other developing regions in Africa, sub-Saharan Africa (SSA) is characterized by high poverty levels, low domestic savings, while income remains precariously low and is principally used to finance consumption expenditure. These factors, coupled with the unpredictability of foreign aid/grants, the low share of sub-Saharan Africa in World trade and high volatility of short-term capital flows, continue to intensify the need to attract different forms of foreign capital. To this end, the fifteen countries in the ECOWAS bloc have undertaken several significant steps aimed at attracting the right quantity and quality of FDI with a view to enhancing the pace of economic growth and development and ultimately create a common market or monetary union.

Despite these efforts, FDI inflows to the sub-region have continued to lag behind those of other sub-regions in the African continent. This development raises the question as to whether those adopted FDI-specific regulatory frameworks by these countries have been effective. This section therefore briefly provides historical background of ECOWAS, the potential benefits of economic integration, as well as the problems confronting the organization. It also appraises FDI profile in Africa and ECOWAS sub-region as well. In addition, it presents a comparative trend analysis of FDI and domestic investment for the various countries captured in this study. We conclude the section by examining the peculiar investment conditions amongst the selected countries used in this study.

## **2.1 Literature Review**

### **2.1.1 Evolution and Mandate of ECOWAS**

Prior to the emergence of Pan-African movement in the 1950s and 1960s, some Africa leaders had envisaged that after independence, regional co-operation would be needed

to maximize the enormous natural resource endowments in the continent. This perception was given a lift by the recommendation of the UN Economic Commission for Africa (ECA) that functional economic co-operation among African countries would help in the continent's drive towards achieving industrial development. Specifically, ECA was of the view that if the rationalization of import substitution policies and more were to be realized, then measures like liberalization of international trade and the adoption of a common tariff for member countries were quite fundamental. It was against this background that the Economic Community of West African States (ECOWAS) was formed as a sub-regional economic bloc in the treaty of Lagos of May 28, 1975.

ECOWAS was mandated by its treaty to:

- i. Abolish custom duties and other charges of equivalent effects on imports and exports between member states ;
- ii. Abolish among members quantitative and administrative restrictions on trade.
- iii. Implement a uniform commercial policy and tariff structure for non-member countries;
- iv. Eradicate obstacles hindering the free flow of services, movement of persons and capital among ECOWAS nations;
- v. Adopt a uniform agricultural policy and promote common projects among ECOWAS states especially in the areas of marketing and research;
- vi. Establish a uniform policy with respect to transport, communication and other infrastructural facilities;
- vii. Harmonize ECOWAS members' domestic policies in the areas of money, industry and the economy, so as to minimize differences in their levels of development; and

- viii. Institute a common fund aimed at enhancing co-operation, development and providing compensation where necessary.
- ix. Following the theoretical framework for regional economic integration, the implementation of objectives (i) and (ii) implies a Common Market, while those of (v) and (vii) would mean the establishment of an Economic Union.

However, an evaluation of the achievement of ECOWAS vis-à-vis its stated goals show that the ECOWAS bloc is far from being regarded as a common market in that free movement of labour remains a major hurdle among member states. Nevertheless, ECOWAS as a major sub-regional economic body has come a long way. This is so because majority of trade within ECOWAS bloc is virtually free of tariff, just as the reduction of custom duties, the free movements of goods, and the issuance of ECOWAS passport/travelling documents have also become operational. In 1980, 1986 and 1989, respectively, the three provisions of the protocol came into force. However, two of such major ECOWAS events were the decision of the Summit of 1980 to establish a Free Trade Area (FTA) for raw agricultural products and the signing of the protocol on the Non-Aggression and Mutual Defense Assistance of 1981. Within this same period, a common traveller's cheque was introduced into circulation with a view to promoting intra-regional trade and facilitating the realization of a single monetary zone. Laudable as these bold steps towards achieving meaningful regional economic integration maybe, lack of possibility for increased trade within the ECOWAS bloc is often identified as a constraint on ECOWAS success.

### **2.1.2 Potential Benefits of Economic Integration in West Africa**

Following Viner (1950) theoretical exposition, the extent to which an economic integration such as ECOWAS is beneficial can be perceived in terms of the relative magnitude of benefits that its members could enjoy due to trade creation and the losses it could also incur arising from trade diversion. According to him, the exact incidence of

benefits or loss to anticipate depends partly on the form of integration involved as well as the trading positions of participating member countries before becoming members. Trade creation occurs when a member country within the union can easily acquire products at lower costs following the removal or lowering of tariffs. Such extra funds realized from purchasing relatively cheap products can be utilized for purchasing more goods and services. Trade diversion, on the other hand, arises when low costs goods previously imported from nations not within the union are substituted by a higher cost import from a country within the Union.

From the supply perspective, each ECOWAS country stands to enjoy comparative advantage by way of better allocation and management of available regional resources among members. There is no fundamental difference whether the country has a small or a large territorial space. Such increased efficiency within the ECOWAS bloc would enhance production for export to countries outside the union. The consumers within the ECOWAS bloc will, on their part, not only enjoy lower prices (due to allocation efficiency), but more brands of consumables as well. All these will in turn enhance the general welfare conditions of the citizens within the union. It should be stated however that, the consumer will inevitably lose some benefits by not buying from the cheapest supplier outside the union, as regionalism will invariably direct their consumption to the seemingly cheapest producer within the ECOWAS bloc.

### **2.1.3 Challenges Confronting ECOWAS**

Much as ECOWAS' main objective remains that of facilitating economic integration of the sub-region, however for the past 30 years, the organization has been pre-occupied with the task of resolving social and political problems in many of its member nations such as Niger, Liberia, Sierra Leone and Guinea Bissau. On the political front, there is the lack of political determination among the leaders to take the necessary steps to move the

organization forward due to the apprehension that the sub-regional body may jeopardize their individual national sovereignty. Thus, the record of the implementation of the numerous Community Acts and Decisions is not very encouraging because many member states do not show the necessary political will to follow through to implement the protocols they have signed.

Closely related to this lack of political will is the lack of commitment to make financial contributions as agreed upon by member states. And ECOWAS programmes cannot be successfully implemented unless the institutions are given the necessary financial resources to discharge their functions. The financial contributions to the budgets of the community are an important obligation and a duty for each member state to fulfill. As observed by Nwoke (2005) arrears of contributions to the budget of the ECOWAS Executive Secretariat amount to about 35 million units of account. And despite sanctions agreed upon by the Heads of States and Governments (i.e. the Community highest governing authority), several countries still have substantial sums outstanding in their contributions, a sad state of affairs which certainly undermines the region's integrative efforts.

Another problem facing ECOWAS is the co-existence of two competing integration schemes ECOWAS and UEMOA (i.e. a regional economic and monetary union which shares the same currency). The danger in this co-existence is that rivalry can undermine the opportunities and potential benefits of a Pan-West African cooperation and integration project. UEMOA not only duplicates a lot of ECOWAS roles but is more advanced, having a common currency (CFA), a monetary union (WAEMU), a common external tariff, and a common set of business laws.

Also, external dependence has evolved as another factor seriously affecting the cohesion of ECOWAS. There has been no appreciable reduction in the dependence of some

West African countries with strategic socio-political alliance with France, especially the Francophone States. Their continued dependence on France is largely due to the fact these Francophone nations get reasonable financial, military and budgetary supports and other technical aid from Paris. Besides, not all ECOWAS countries ratify every protocol and convention; some of them only sign documents without implementation, and this has hampered the attainment of broad-based economic integration, and hence continues to affect the realization of stated objectives of a strong economic trade-bloc.

Apart from the problem of external dependence, problems created by political and social turbulence have taken on a regional dimension and the Community must continue to address itself to this issue. As a result of war and increasing spate of terrorism, coping with such large number of refugees and displaced persons for the past three and half decades has obviously stretched the meagre resources of both governments and many ordinary citizens of a number of ECOWAS member states. Yet, the maintenance of security, peace and stability is imperative for attaining sub-regional cooperation and integration.

ECOWAS also faces the existence of thriving informal trade in the sub-region. As noted by Obi (2000), there is a highly organized parallel trade in West Africa today involving networks of traders using land, sea and air, a situation that has made some people to remark that market integration may already be taking place in the region, through informal channels capable of by-passing inter-country trade barriers, and ultimately weakening the development of regional industry.

#### **2.1.4 Profile of FDI in Africa**

Since the past two and half decades, FDI has evolved as the most essential component of private capital flows to developing (and transition) economies (UNCTAD, 2010). In recognition of this fact, many governments of African nations have promptly taken steps

aimed at liberalizing their FDI strategies and initiated a litany of policy reforms aimed at attracting FDI. Consequently, Africa has been experiencing an appreciable rise in FDI flows, though the increase has been more of an absolute increase rather than a relative one (Asiedu, 2002). Put differently, though the quantum of FDI flows to Africa has been on the increase however its share of developing countries FDI flows has been declining.

Meanwhile, UNCTAD (2008), for example, ascribed the decline in Africa's share of global FDI to poor performance of the manufacturing sector, as indicators of real economic sectors continue to under-perform due to structural and institutional challenges. As a result, Africa remains the region with the lowest share of global FDI flows. As can be observed from Table 2 in Appendix 1, Africa's share of FDI flows to developing regions has waned over the years. Although a little improvement was recorded in the decade of the new millennium, Africa's percentage share in FDI flows to developing regions declined from about 19% in the 1970s to 11% in the 1980s and 8% in the 2000s. In 2011 alone, Africa's share was barely 6% of developing countries. In contrast, Asia and Oceania countries share of FDI flows to developing nations rose appreciably from 33% in the 1970s to about 61% during the 2000 decade.

Though, on the average, Africa's percentage share of FDI flows to developing nations may have plummeted considerably since the 1970s, however some African nations have successfully increased their relative shares of FDI flows to their economies. Basu and Srinivasan (2002) provided examples of such African countries that recorded appreciable success in attracting reasonable quantum of FDI. Their analyses revealed that their successes were partly due to the determination of such countries to institute and promote political and macroeconomic stability and implement relevant structural reforms vital for the realization of increased FDI inflow into the region.

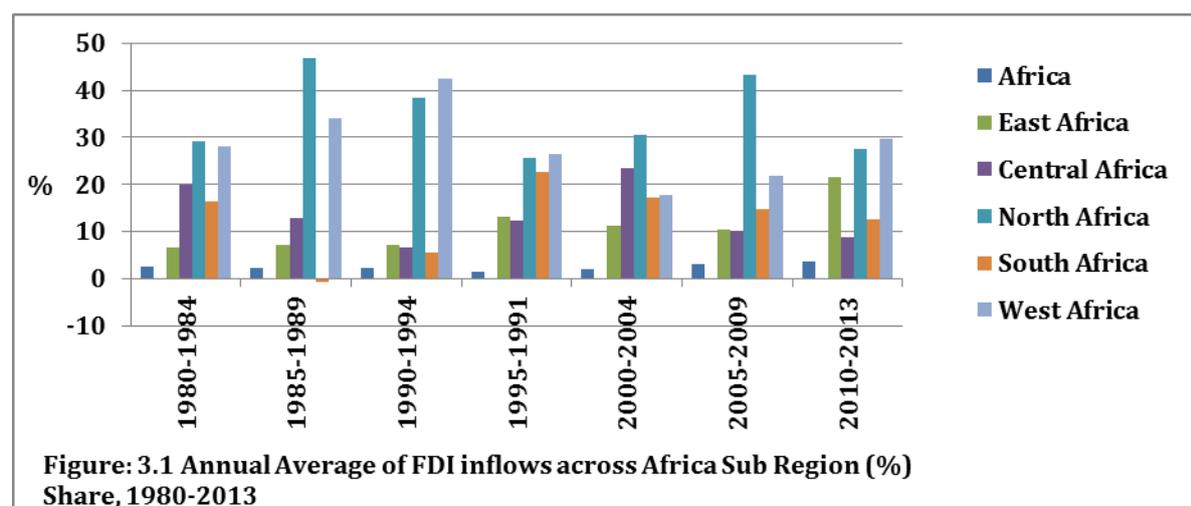
### 2.1.5 Trend of FDI inflows in West Africa

Over the years, FDI flows to Africa vary markedly across sub-regions. In general, FDI inflow to West Africa is low in comparison with other developing regions, and recent trend indicates that FDI flow to West Africa has been declining in contrast to some other sub-regions, like North Africa (UNCTAD, 2008). The general picture is depicted in Table 3. For instance, the annual average of FDI flow to West Africa in percentage for the period 1980-84, 85-89, 2000-04 and 2005-09 were 28.1, 34.1, 17.8 and 21.8 respectively, compared to North Africa with annual average of 29.2, 30.4 and 43.2 respectively (see Figure 3.1).

**Table 3: Annual Average FDI inflows in Africa's Sub Region (% Share, 1980-2013)**

Regions	1980-1984	1985-1989	1990-1994	1995-1991	2000-2004	2005-2009	2010-2013
East Africa	6.6	7.0	7.1	13.0	11.3	10.3	21.6
Central Africa	19.8	12.9	6.5	12.3	23.5	10.2	8.7
North Africa	29.2	46.7	38.5	25.7	30.4	43.2	27.6
South Africa	16.4	-0.8	5.4	22.6	17.1	14.7	12.5
West Africa	28.1	34.1	42.5	26.3	17.8	21.8	29.6
Africa (Overall)	2.6	2.2	2.1	1.5	1.9	3.1	3.5

Source: UNCTAD, FDI/TNC database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics))



Source: Author, but underlying data obtained from World Development Indicators

A look at Figure 3.1 reveals that FDI flow to West Africa was about half of what went to North Africa for the period 2005-09, while in 2000-04, it was far below what was recorded in Central Africa. However, from 2010, when the Northern region started to witness economic and political instability in Egypt, Libya and Tunisia, FDI inflow into the North Africa region has declined considerably (Kudaisi, 2014).

### 2.1.6 FDI flow Per capita in ECOWAS Countries

In a bid to further reveal the trend of FDI flow to the ECOWAS region, we examine the structure of FDI flow per capita. The nature of this trend is shown in Table 4 and Figure 4.1

**Table 4: FDI flow per capita in ECOWAS Countries**

Countries	1980	1985	1990	1995	2000	2005	2010	2013
Benin	1.1	0.0	12.4	1.3	8.6	6.5	18.6	30.9
Burkina Faso	0.0	-0.1	0.0	0.9	1.9	2.5	2.3	22.1
Cote D'Ivoire	11.5	2.9	3.9	14.9	14.6	12.2	17.9	18.3
Gambia	0.0	-1.4	1.0	14.1	35.8	31.3	22.0	13.5
Ghana	1.5	0.5	2.9	6.4	6.1	9.0	104.2	124.5
Guinea	0.2	0.2	1.9	0.1	1.1	10.9	9.3	2.1
Guinea Bissau	0.0	1.1	106.4	0.0	0.8	5.6	20.8	8.8
Liberia	38.0	7.3	0.8	2.4	7.3	25.3	113.7	247.1
Mali	0.3	0.4	3.5	12.3	7.5	18.8	29.0	26.8
Niger	8.4	-1.3	10.5	1.5	0.7	2.3	59.1	35.4
Nigeria	-10.0	5.8	7.6	11.7	10.7	35.7	38.2	32.3
Senegal	2.5	-2.9	9.8	4.0	6.4	3.9	20.5	21.1
Sierra Leone	5.9	-8.6	7.9	1.8	9.4	16.2	41.4	95.0
Togo	15.8	4.9	6.1	7.5	8.4	13.9	13.6	12.3

Source: UNCTAD (WIR) 2014

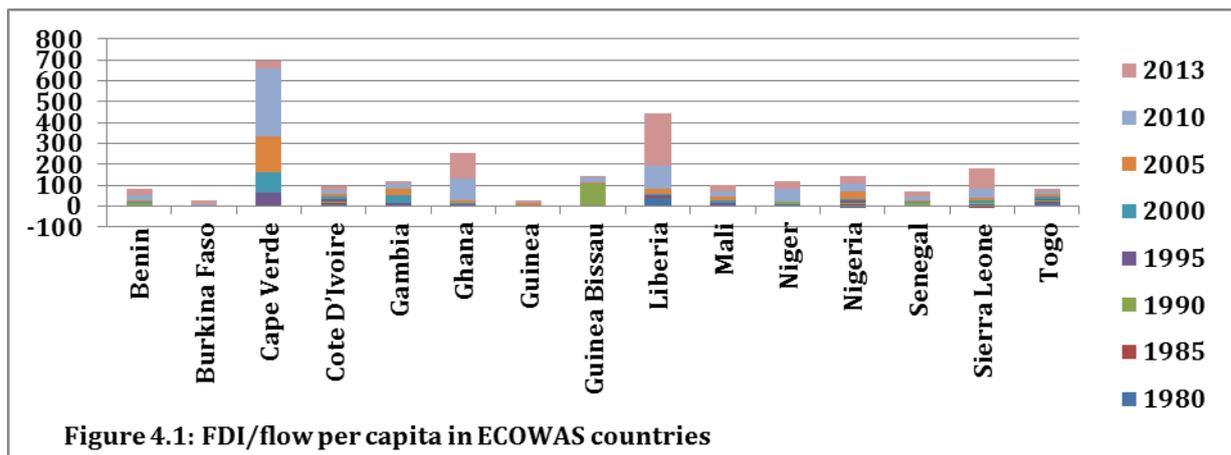


Figure 4.1: FDI/flow per capita in ECOWAS countries

*Source: Author, but underlying data obtained from World Development Indicators*

From the Table, Liberia had the highest FDI per capita of \$113.7 while Burkina Faso had the lowest of \$2.3 in 2010. In 1980 for instance, Nigeria had the lowest FDI per capita of negative \$-10.0 while Liberia recorded the highest of \$38.0 in that same year. As at 1990 when many African countries started adopting strategies aimed at attracting more FDI inflow into their economies, Guinea Bissau recorded an impressive FDI per capita of \$106.9 while inflow into Burkina Faso was nil. By mid-1990s however, Cote d' Ivoire recorded the highest level of FDI per capita of \$14.9, while the lowest performers were Guinea Bissau (\$0), Guinea (\$0.1) and Burkina Faso (\$0.9), on the average, Ghana and Liberia recorded better performances, while the least performers within the period under consideration were Guinea and Burkina Faso. Essentially, per capita income is usually considered as one of the major macroeconomic indicators of economic welfare. In this regard, the major question is: does the per capita FDI inflow to these countries that had the highest necessarily translate to higher growth or those with the lowest FDI inflow per capita translate to lower growth compared to other countries in the region? This brings to question the perceived benefits of FDI inflow in the areas of bridging the gaps in savings, foreign exchange and local currency of developing nations as a whole, and ECOWAS region in particular.

Thus, this study helps to bring to the fore the desired effect of FDI flow to sub-Saharan African region at large. Also, there is the on-going contention in the literature that the ultimate effect of FDI inflow on the domestic economy is largely a function of the macroeconomic environment, the manner of such FDI is distributed into the various sectors as well as the institutional framework in place in such economies. Unfortunately, the macroeconomic environment and the institutional framework in most ECOWAS countries are weak, a development that holds grave consequences for the effectiveness of FDI inflow into the region.

### 2.1.7 FDI flow as a percentage of GDP in ECOWAS Countries

Essentially, despite the increasing inflow of FDI to sub-Saharan Africa in general and ECOWAS region in particular, the flow of FDI as a percentage of GDP provides a heterogenic trend across the countries in the ECOWAS region. With the exception of countries like Liberia and to some extent, Ghana, other countries in the ECOWAS region have, on the average, performed poorly using the ratio of FDI to gross domestic product (GDP) – see Table 5 and Figure 5.1.

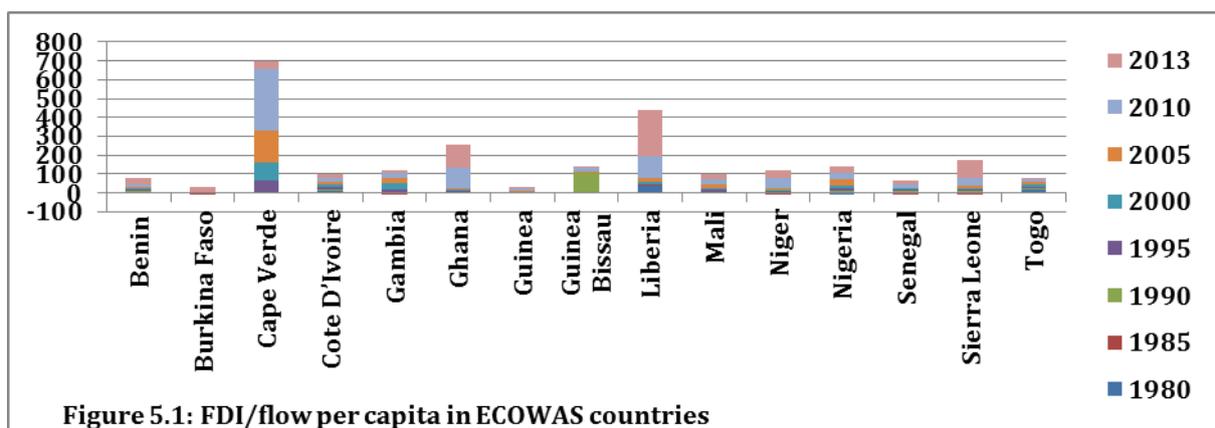


Figure 5.1: FDI/flow per capita in ECOWAS countries

Source: Author, but underlying data obtained from World Development Indicators

**Table 5: FDI as a percentage of GDP (1980-2013)**

<b>Countries</b>	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2013</b>
Benin	0.30	0.00	3.18	0.61	2.53	-0.20	0.81	3.85
Burkina Faso	0.00	-0.09	0.01	0.41	0.89	0.95	0.42	3.23
Cote D'Ivoire	0.93	0.41	0.44	1.92	2.25	2.04	1.44	1.19
Ghana	0.35	0.12	0.25	1.65	3.33	1.35	7.86	6.70
Guinea	0.43	0.44	0.67	0.02	0.33	3.57	2.14	2.20
Guinea Bissau	1.65	1.00	0.83	0.02	0.19	1.48	3.10	1.51
Liberia	8.41	-1.90	58.59	3.41	3.93	15.28	34.99	35.89
Mali	0.13	0.22	0.24	4.52	3.40	3.02	5.33	3.75
Niger	1.95	-0.65	1.65	0.38	0.47	1.46	13.92	8.52
Nigeria	-1.15	1.68	1.91	3.75	2.46	4.44	1.64	1.07
Senegal	0.41	-0.53	0.99	0.65	1.34	1.93	2.06	2.02
Sierra Leone	-1.69	-3.61	4.99	0.84	6.13	5.57	9.25	3.48
Gambia	0.12	0.22	4.45	0.98	1.45	8.60	3.93	2.80
Togo	3.76	2.13	1.12	1.99	3.24	4.54	3.94	1.94

*Source: UNCTAD (WIR) 2014*

From Table 5, Liberia's FDI as a percentage of GDP rose from about 8.41 in 1980 to about 58.59 in 1990 before declining to 35.89 in 2013. Similarly, FDI arose from about 0.35 in 1980 to about 7.86 in 2010, before declining marginally to about 6.70 in 2013 in Ghana. Also from the Table, the least performers in terms of FDI as a percentage of the GDP were Senegal and Cote d'Ivoire with peaks at 2.06 and 2.25 in 2010 and 2000, respectively. Other countries like Nigeria and Gambia recorded a moderate performance in terms of FDI/GDP ratio. For instance, the FDI/GDP ratio in Nigeria rose from -1.15 in 1980 to about 4.44 in 2005 before declining significantly to about 1.07 in 2013. In a similar vein, Gambia's FDI/GDP ratio stood at 0.12 in 1980 but climbed to about 8.60 in 2005, before declining to about 2.80 in 2013.

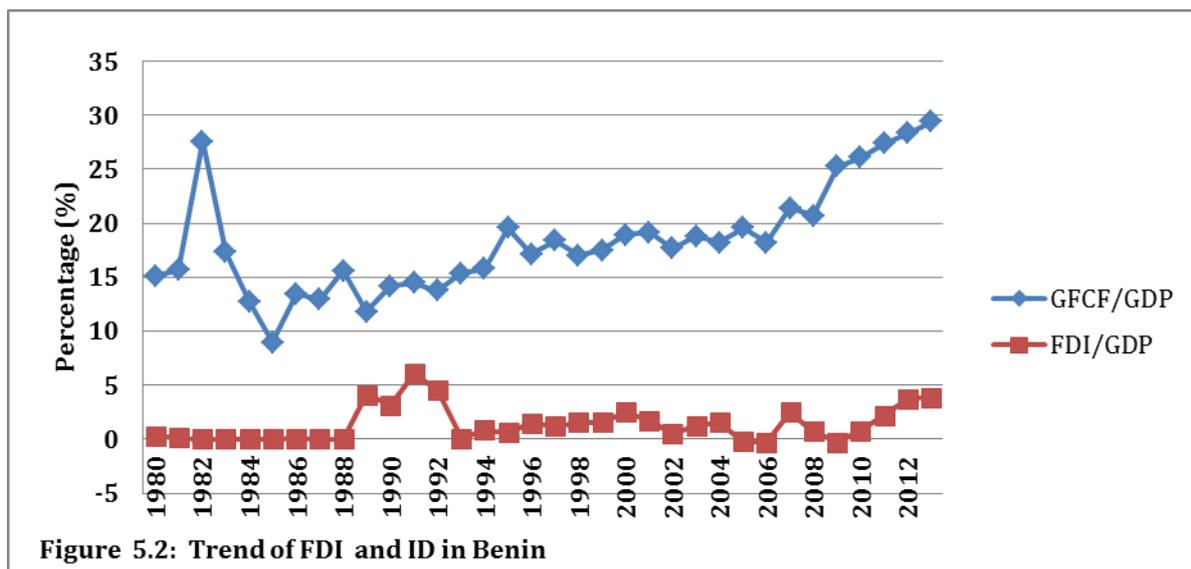
### **2.1.8 Comparative Trend Analysis of FDI and Domestic Investment (ID)**

This section contains a descriptive analysis of FDI and domestic investments in each of the sampled ECOWAS countries. The aim is to conduct a comparative static of both

variables overtime for these countries. Findings from the observation of the trend analysis will reveal the unique characteristics of each of these countries, and thus intensifies the need for structural and institutional reforms that could stimulate a higher influx of foreign investment into sub-Saharan Africa.

➤ **Comparative Trend Analysis of FDI and (ID) in Benin**

From Figure 5.2, it could be seen that FDI as percentage of GDP in Benin was 0.31%, in 1980, rose to about 3.18% in 1990 but declined to about 2.53% in 2000. It however became negative in 2005 (-0.20%) before rising moderately to about 0.81% in 2010 and finally peaking at 3.8% in 2013. The foregoing picture tends to portray the magnitude of fluctuations in the flow of FDI as a percentage of GDP in Benin republic.



Source: Author, but underlying data obtained from World Development Indicators

The Figure 5.2 also reveals that domestic investment was 15.16% in 1980. It declined significantly to about 8.94% in 1985, and rose appreciably to about 19.60% a decade after (that is, in 1995). It however fell marginally to about 18.93% in the year 2000. Thereafter, it rose steadily to about 19.59%, 26.08% and 29.43% in 2005, 2010 and 2013, respectively.

➤ **Comparative Trend Analysis of FDI and ID in Burkina Faso**

In 1980, Burkina Faso’s FDI as a percentage of GDP stood at zero percentage, while in 1985 it fell further to about -0.09%. However, from 1990, it rose steadily from 0.01% to 0.41% in 1995, 0.89% in the year 2000. It increased to about 0.95% in 2005. By 2010 FDI as a percentage of the GDP in Burkina Faso had fallen to about 0.42%, but rose appreciably to 3.23% in 2013, the highest point it ever attained in the 26 years under consideration. This is evident in Figure 5.3.

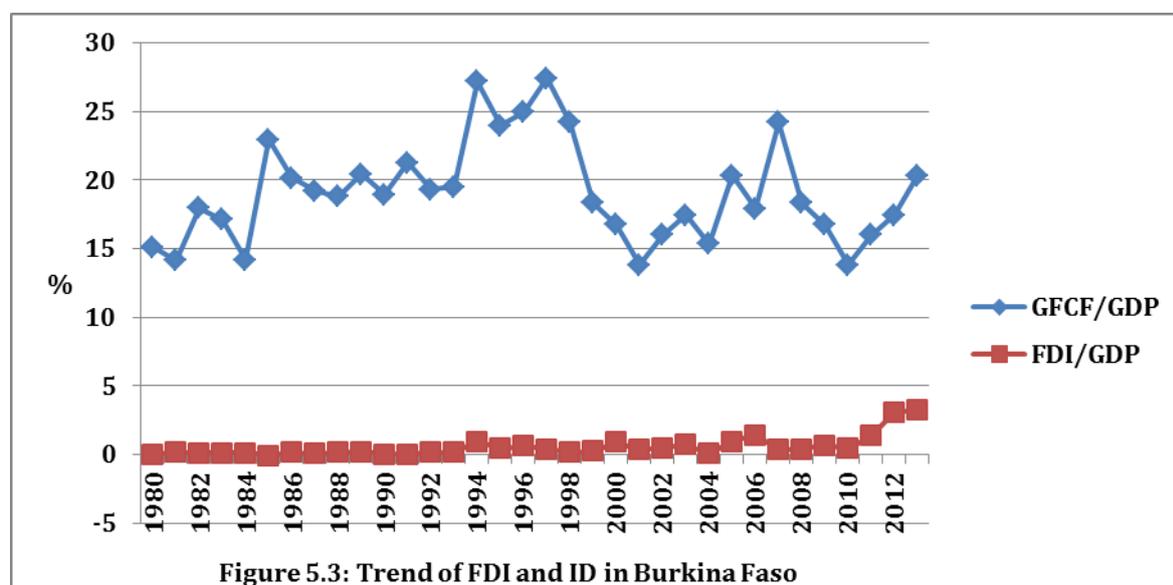


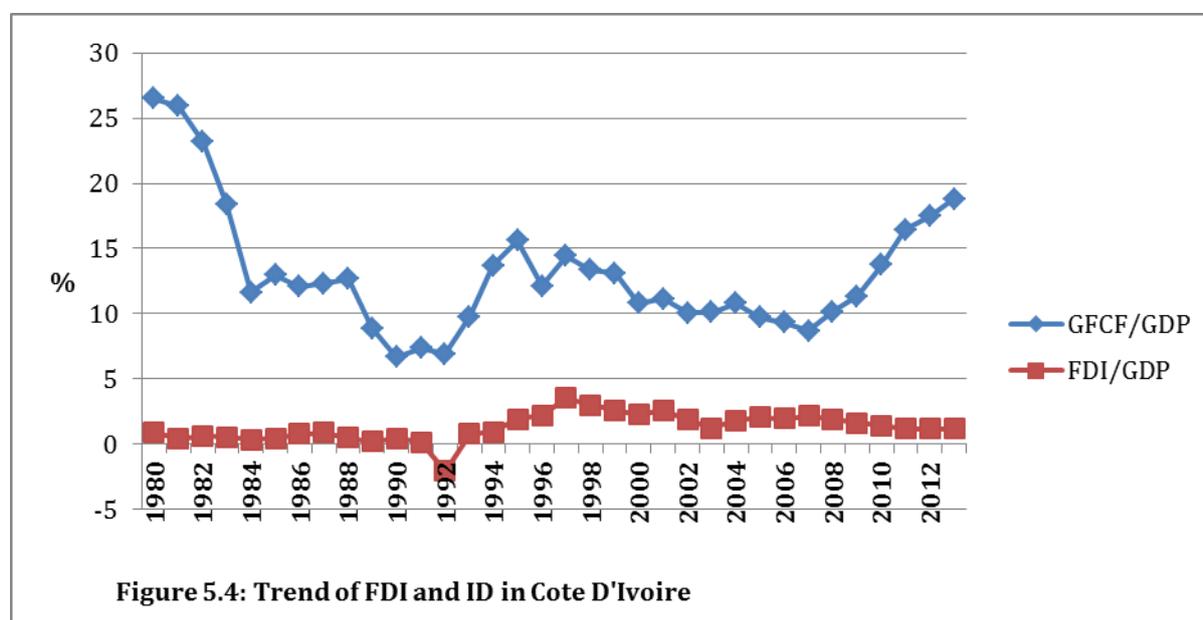
Figure 5.3: Trend of FDI and ID in Burkina Faso

Source: Author, but underlying data obtained from World Development Indicators

Domestic investment as a percentage of GDP was 15.11% in 1980 but rose to about 22.90% representing about 52% increase within the 5 year interval. However, by 1990, it stood at 18.91% but increased to about 23.93%, before declining to about 16.75% in 2000, representing about 30% decline. Again, in 2005, domestic investment as a percentage of GDP was 20.32%, but fell to about 13.78% in 2010, before rising to about 20.32% in 2013, a level it was in 2005.

➤ **Comparative Trend Analysis of FDI and ID in Cote D'Ivoire**

In 1980, the inflow of FDI as a percentage of GDP in Cote D'Ivoire was less than one percent (that is, 0.93%) as shown in Figure 5.4. It however fell to about half of 1980 value in 1985 and 1990 (0.45%). By 1995 however, it rose to about 1.92% and further to about 2.25% by the year 2000, a percentage increase of about 17.2%. In 2005, FDI as a percentage of GDP stood at 2.04% but declined to about 1.44% before rising to 1.94% in 2013.



**Figure 5.4: Trend of FDI and ID in Cote D'Ivoire**

*Source: Author, but underlying data obtained from World Development Indicators*

Also from Figure 5.4, domestic investment as a percentage of GDP was 26.7% in 1980, but declined to about 12.95% and 6.6% in 1985 and 1990 respectively, a percentage decrease of about 51.2% and 48.3% respectively. From a value of about 15.6% in 1995, domestic investment as a percentage of GDP in Cote D'Ivoire fell to about 10.79% and 9.74% in 2000 and 2005 respectively. It however rose to about 13.77% and climbed further to about 18.80% in 2013, a percentage increase of about 41.4% and 36.5% respectively.

➤ **Comparative Trend Analysis of FDI and ID in Gambia**

In Gambia, FDI as a percentage of GDP was 0.12% in 1980 but fell significantly to about -0.22% by 1985. Furthermore, in 1990, FDI as a percentage of GDP stood at 4.45% but declined remarkably to about 0.98% by 1995 before rising to about 1.45% and 8.60% in 2000 and 2005 respectively. It however declined to about 3.92% and 2.80% by 2010 and 2013, respectively (see Figure 5.5).

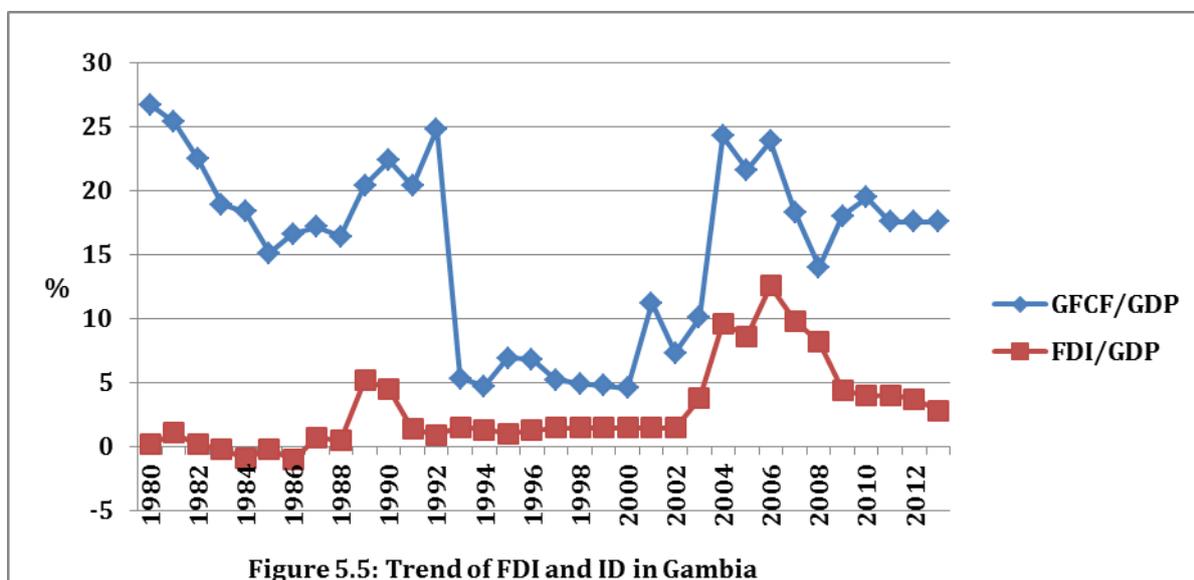


Figure 5.5: Trend of FDI and ID in Gambia

Source: Author, but underlying data obtained from World Development Indicators

Domestic investment as a percentage of GDP was 26.7% in 1980 but later fell to 15.09% in 1985, it later increased to 22.34% in 1990, fell to 6.90% in 1995, which is almost one-quarter of the 1980 level, just within 16 years. It declined further to about 4.56% in 2000 and as at 2005, it was 21.57%, but declined moderately to about 19.42% and 17.54% in 2010 and 2013 respectively, representing about 9.96% and 9.68% for those two intervals.

➤ **Comparative Trend Analysis of FDI and ID in Ghana**

The percentage of FDI inflow in GDP stood at 0.35% in 1980, but fell to about 0.12% in 1985 before climbing marginally to about 0.25% in 1990. What becomes evident from this first decade of our study as regard FDI inflow as a percentage of GDP in Ghana is that, its value was clearly less than 1%. However, by 1995 the value had risen to about 1.65% and further to about 3.33% in 2000 before declining to about 1.35% in 2005. From figure 5.6, FDI as a percentage of GDP rose to about 7.86% by 2010, a percentage increase of about 48.2%, before declining by about 14.8% to 6.7% in 2013.

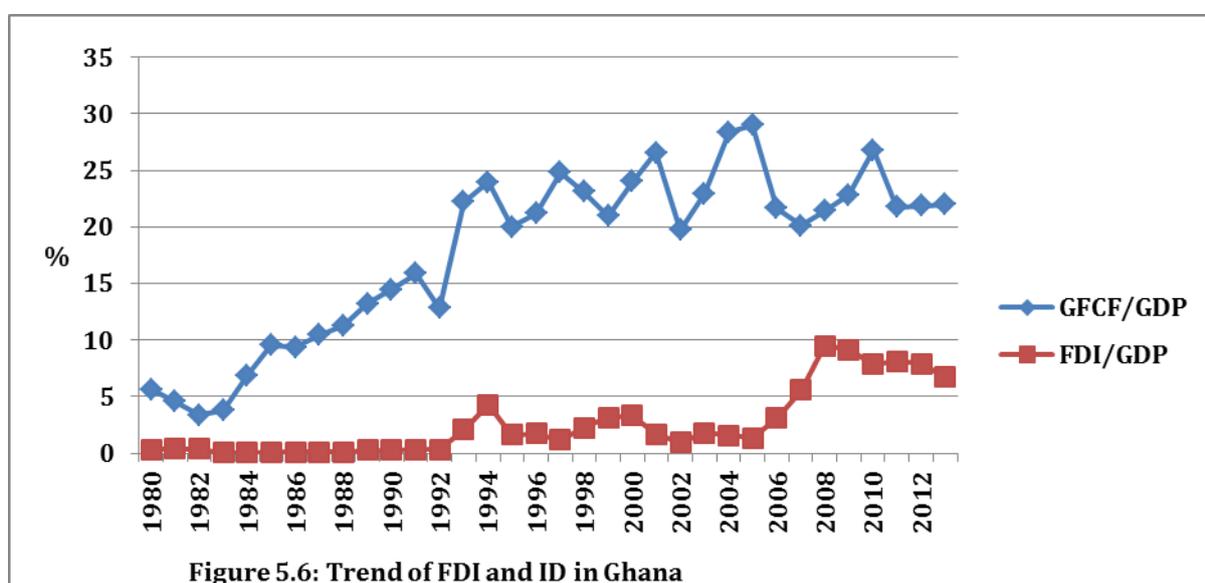


Figure 5.6: Trend of FDI and ID in Ghana

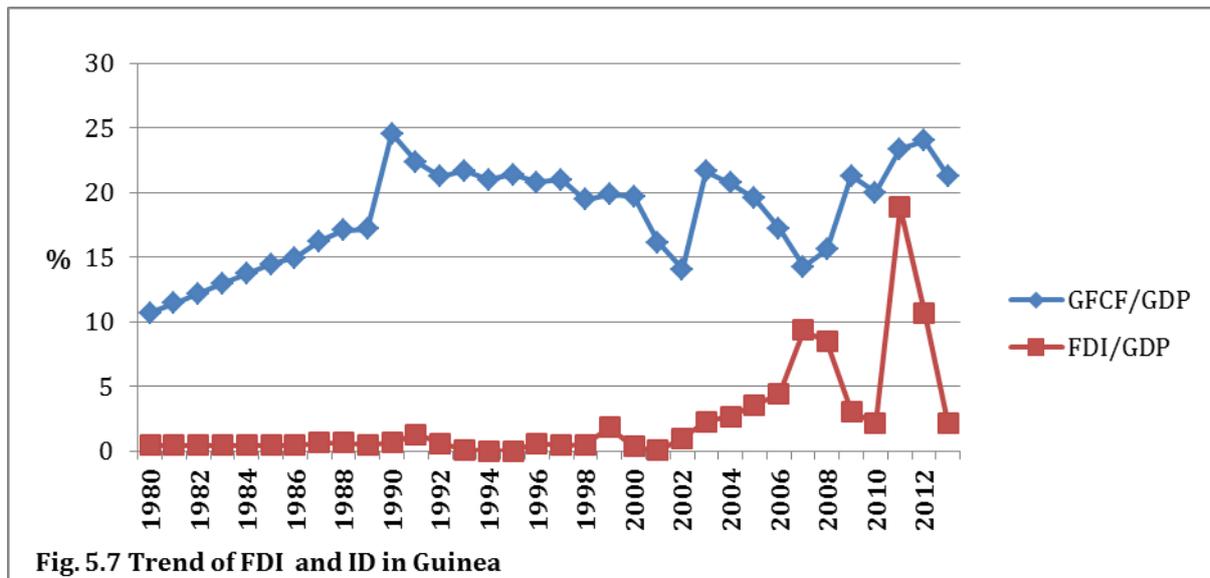
Source: Author, but underlying data obtained from World Development Indicators

In Ghana, domestic investment as a percentage of GDP appears to have been relatively consistent. For instance, from a position of 5.62% in 1980, it rose to about 9.57%, 14.44%, 20.2%, 24% and 29% in 1985, 1990, 1995, 2000 and 2005 respectively, representing a percentage increase of 70.3%, 50.9%, 38.6%, 19.9% and 20.8%. From a peak of 29% in 2005, it however fell to about 26.81% and 22% in 2010 and 2013 respectively.

### ➤ Comparative Trend Analysis of FDI and ID in Guinea

For the first 3 decades of our study, Guinea’s FDI inflow as a percentage of GDP was clearly less than 1 percent. For instance, from Figure 5.7, the average FDI as a percentage of

GDP for the periods, 1980 and 1985, was the same (0.44%). It rose to about 0.67% in 1990, but fell to about 0.02% in 1995, before climbing to half of its 1990 value. However, from its peak value of 3.57% in 2005, it fell to about 2.14% in 2010 but rose marginally to about 2.20 in 2013.



Source: Author, but underlying data obtained from World Development Indicators

From Figure 5.7, the trend of domestic investment as a percentage of GDP was relatively smaller when compared to that of FDI as a percentage of GDP within the period under consideration. From a value of about 10.68% in 1980, it climbed to about 14.47%, and 24.53% in 1985 and 1990 respectively. These represent percentage increase of 35.5% and 69.5% for those periods. However, from 1995 to 2005, domestic investment as a percentage of GDP declined from 21.39% in 1995 to 19.70% in 2000, and 19.53% in 2005, representing a decrease of about 7.9% and 0.86% respectively. By 2010 however, domestic investment as a percentage of GDP in Guinea stood at 20.01% but rose marginally to about 21.26% in 2013, representing a percentage increase of about 6.2%.

➤ **Comparative Trend Analysis of FDI and ID in Guinea Bissau**

For the period under study, Guinea Bissau’s FDI as a percentage of GDP fluctuated between 0.02% and 3.10%. In 1980, FDI as a percentage of GDP for Guinea Bissau was 1.65% but declined to 1% in 1985, 0.83% in 1990 and 0.02% in 1995. By 2000, FDI as a percentage of GDP was still less than 1% (that is, 0.19%), but rose to about 1.48% in 2005, before peaking at 3.10% in 2010, but declined to about half of its 2010 value by 2013 (1.51%) as observed in Figure 5.8.

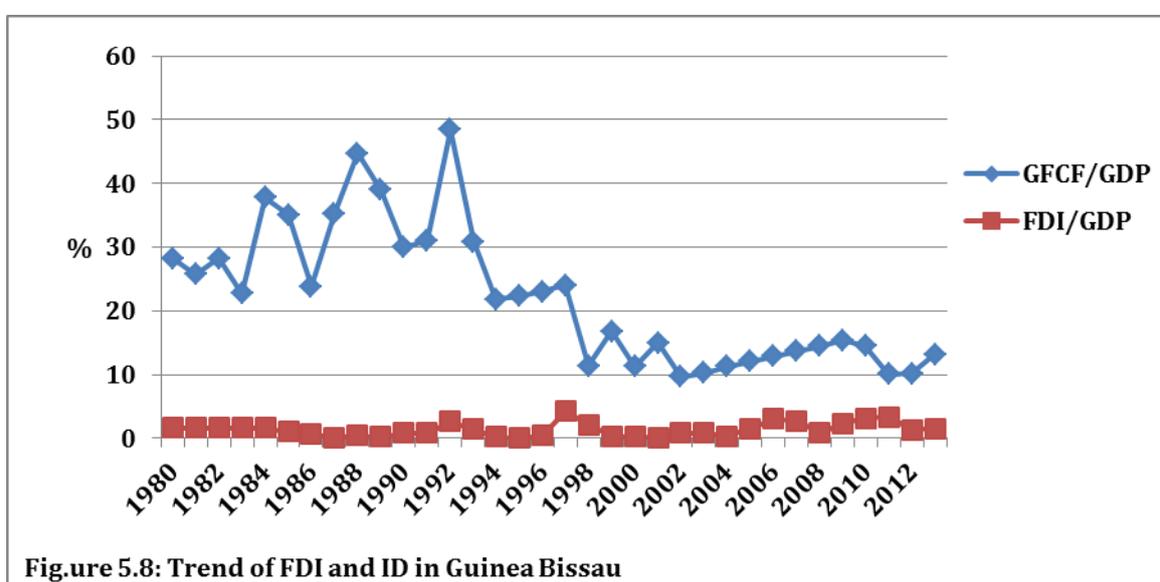


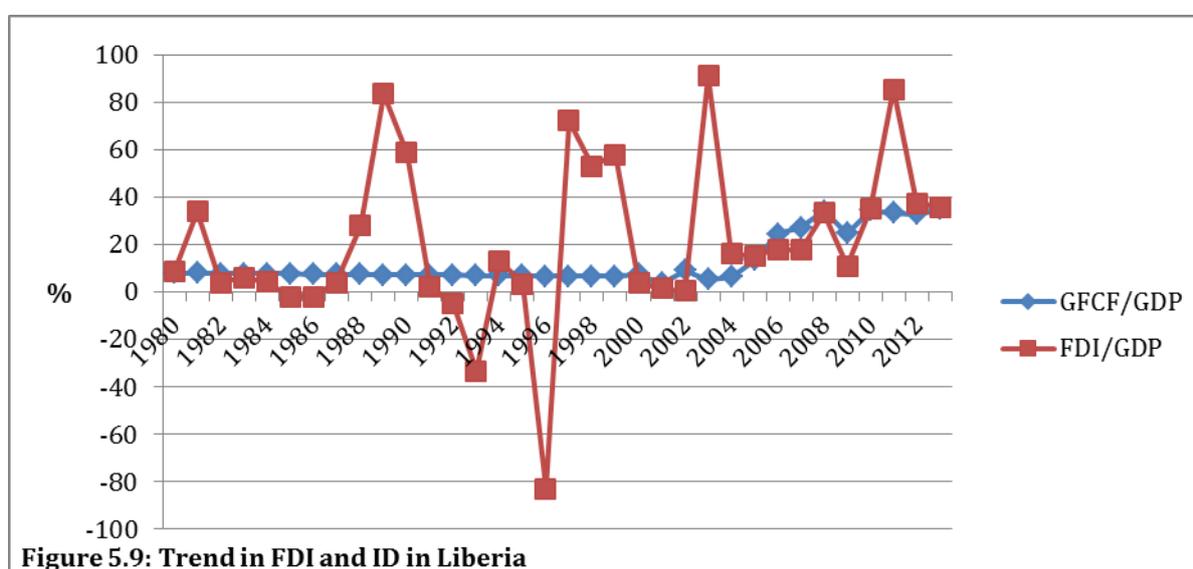
Figure 5.8: Trend of FDI and ID in Guinea Bissau

Source: Author, but underlying data obtained from World Development Indicators

Domestic investment as a percentage of GDP was 28.18% in 1980, but climbed to about 35.10% in 1985, a percentage increase of about 24.6%. It however declined to about 29.93% in 1990, 22.30% in 1995 and 11.30% by the year 2000. Also from a value of about 12.04%, domestic investment as a percentage of GDP rose to about 14.52% in 2010 (an increase of about 20.6%) before declining to about 13.16% by the end of 2013.

➤ **Comparative Trend Analysis of FDI and ID in Liberia**

In 1980, the inflow of FDI as a percentage of GDP in Liberia stood at 8.41% but dropped drastically to -1.90% in 1985. By 1990 however, it rose significantly to a peak of about 58.60% before declining again to about 3.41% in 1995, a percentage decline of about 94.2% (see Figure 5.9). From the Figure, FDI as a percentage of GDP rose markedly from about 3.93% in 2000, to 15.28%, 34.99% and 35.89% for the years 2005, 2010 and 2013 respectively. The growth rate for Liberia was 15.2% in 2000, 28.8% in 2005, 12.9% in 2010 and 2.6% in 2013.



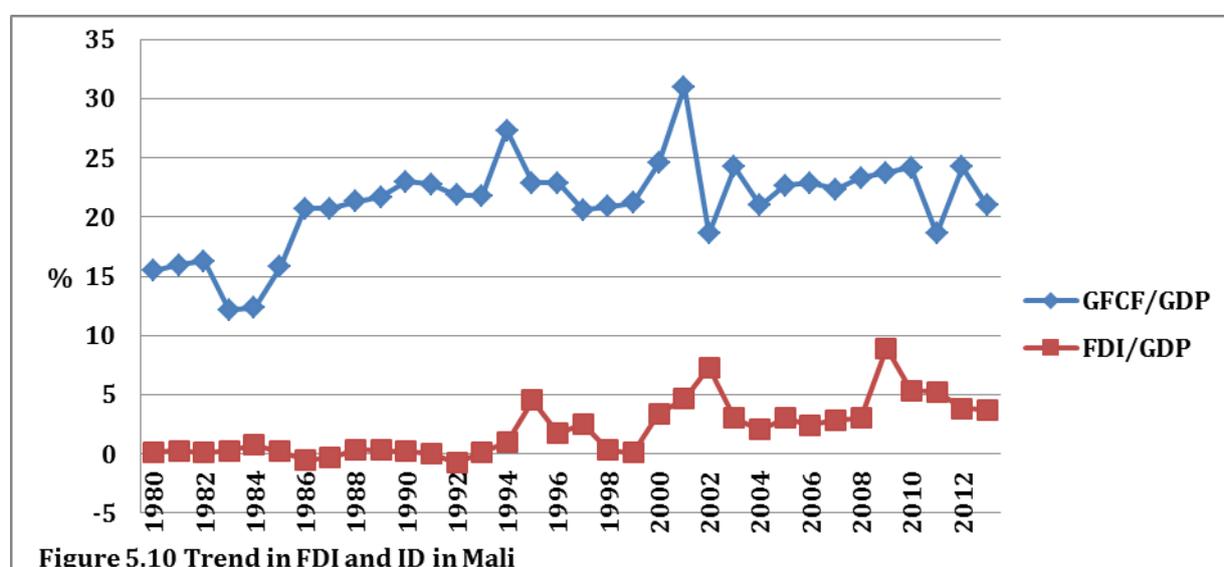
**Figure 5.9: Trend in FDI and ID in Liberia**

*Source: Author, but underlying data obtained from World Development Indicators*

Domestic investment as a percentage of GDP for Liberia, which stood at 7.94% in 1980, declined marginally to about 7.57% in 1985, 7.14% in 1990 and 6.82% in 1995, a decrease of about 14.1% between 1980 and 1995. However, from the year 2000, domestic investment as a percentage of GDP in Liberia maintained an upward swing, rising from 7.50% in 2000, to about 13.30% in 2005, 34.50% in 2010 and 34.90% in 2013. Thus, between 2000 and 2013, domestic investment as a percentage of GDP increased by about 36.5%.

➤ **Comparative Trend Analysis of FDI and ID in Mali**

As was the case with Cote D'Ivoire, FDI as a percentage of GDP in Mali was less than 1 % for the first decade of our study. In 1980, for instance FDI as a percentage of GDP was 0.13% but rose marginally to about 0.22% and 0.24% in the years 1985 and 1990 respectively (see Figure 5.10). By 1995 however, FDI as a percentage of GDP stood at 4.52% before declining to about 3.40% in 2000 and 3.02% in 2005, a percent decrease of about 24.8% and 11.2% respectively. By 2010 however, it peaked at 5.33% but declined to about 3.75% by 2013, a percentage decrease of about 29.6%.

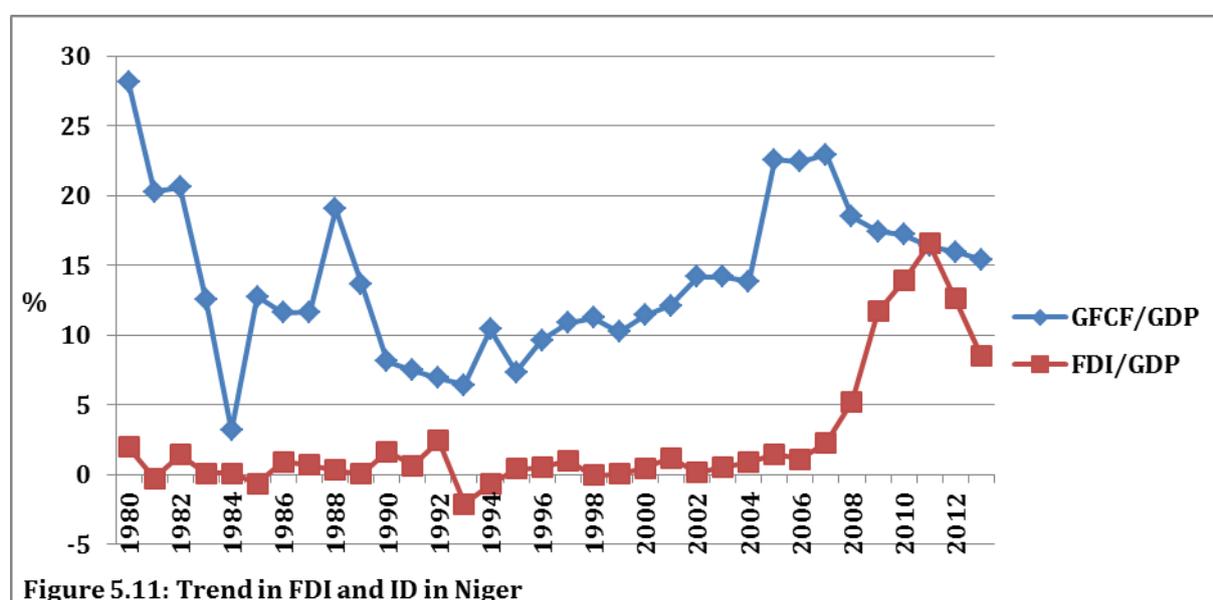


Source: Author, but underlying data obtained from World Development Indicators

Compared to FDI as a percentage of GDP, domestic investment as a percentage of GDP in Mali for the period under study has been less volatile as evident in Figure 5.10. From the Figure, domestic investment as a percentage of GDP rose from 15.47% in 1980 to about 15.77% and 22.97% in 1985 and 1990, respectively. It rose from its value of 22.97% to about 24.56% in 2000 before declining to about 22.65% in 2005, a percentage decrease of about 7.8%. Again, by 2010, it stood at 24.17% before declining by about 13.2% to 20.99% in 2013.

➤ **Comparative Trend Analysis of FDI and ID in Niger**

From Figure 5.11, FDI as a percentage of GDP in Niger fluctuated widely between -0.65% and 13.92% within the 34 years of our study. Thus, from a value of 1.96% in 1980, it declined markedly to about -0.65% in 1985, but increased to about 1.65% in 1990, before again declining to about 0.38% in 1995 and 0.47% in 2000. Between 2000 and 2010 however, FDI as a percentage of GDP climbed appreciably from 0.47% to about 13.92% (representing a percentage increase of about 28.7%) before declining to about 8.52% by the end of 2013.



*Source: Author, but underlying data obtained from World Development Indicators*

With respect to domestic investment as a percentage of GDP however, the economy of Niger appears to have fared well, relatively speaking. Domestic investment as a percentage of GDP which stood at 28.11% in 1980 declined to about 12.75% in 1985, 8.10% in 1990 and 7.32% in 1995, a percentage decrease of about 54.6%, 36.8% and 9.6% respectively. It however rose by about 97.6% from 2000 to 2005 before declining to about 17.19% by the close of 2013.

➤ **Comparative Trend Analysis of FDI and ID in Nigeria**

In 1980, FDI as a percentage of GDP in Nigeria stood at about -1.15%, but climbed to about 1.68%, 1.91% and 3.78% in 1985, 1990 and 1995 respectively before dropping to about 2.46% at the turn of the millennium (See Figure 5.12). By 2005 however, FDI as a percentage of GDP had almost doubled what it was in 2000 (4.4%), though declined thereafter to about 1.4% and 1.07% in 2010 and 2013, respectively.

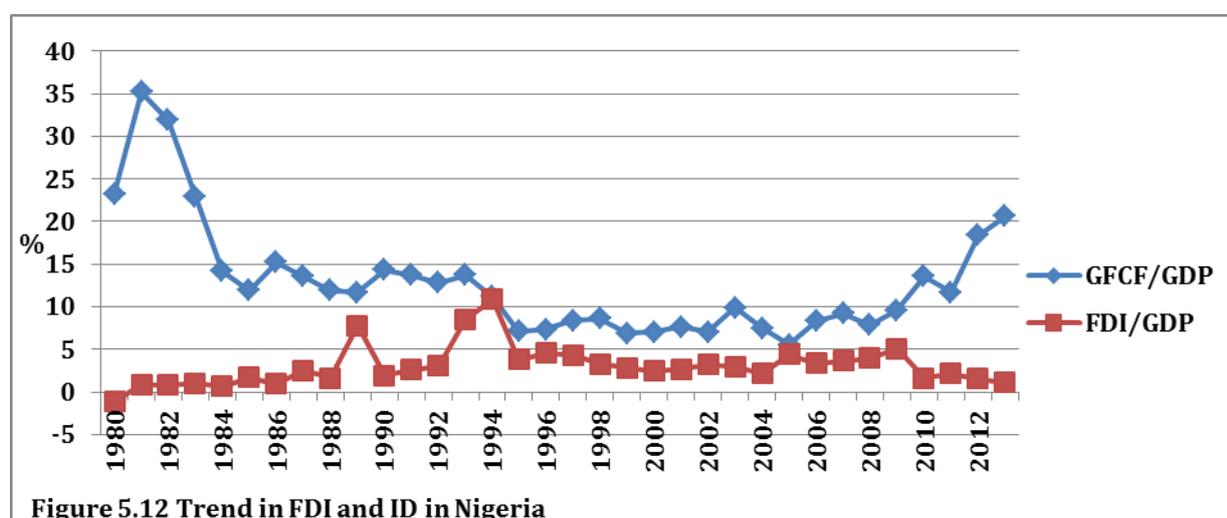


Figure 5.12 Trend in FDI and ID in Nigeria

Source: Author, but underlying data obtained from World Development Indicators

Domestic investment as a percentage of GDP was 23.30% in 1980 but dropped to about half of its value in 1985 at 11.90%. It rose to 14.30% in 1990 but declined to about 7.10%, 7.00% and 5.50% in the years 1995, 2000 and 2005 respectively. Between 1990 and 2005, the percentage decrease in domestic investment as a percentage of GDP was about 61.5%. As at 2010 however, its value was 13.60% but rose appreciably to about 20.60% in 2013, representing about 51.5% rise within that four-year period.

➤ **Comparative Trend Analysis of FDI and ID in Senegal**

In 1980, the percentage of FDI inflow in Senegal was about 0.41%, it fell to -0.53% in 1985 and increased to about 0.99% by 1990, before declining to about 0.65% at the end of

1995. Furthermore, between 2000 and 2010, FDI as a percentage of GDP in Senegal stood at 1.34 but rose to 1.93% in 2005, 2.06% in 2010, before finally declining to about 2.02% by 2013. The rate of growth of FDI as a percentage of GDP between 2000 and 2010 was 53.7%, while the decline from 2010 to 2013 was about 1.94% (see Figure 5.13)

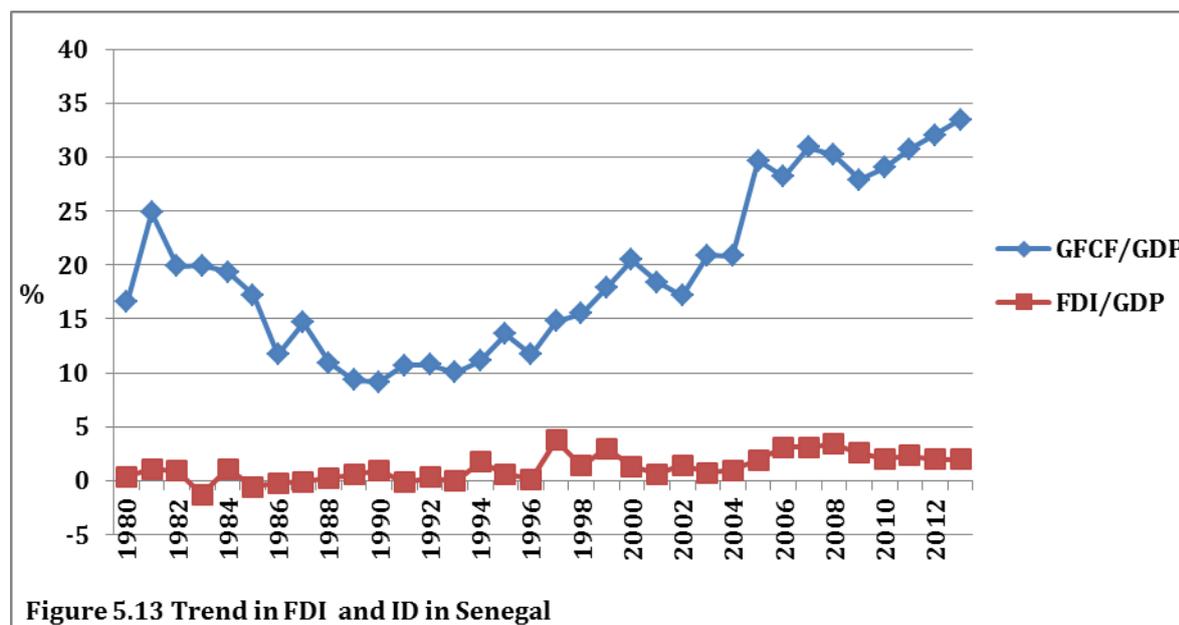


Figure 5.13 Trend in FDI and ID in Senegal

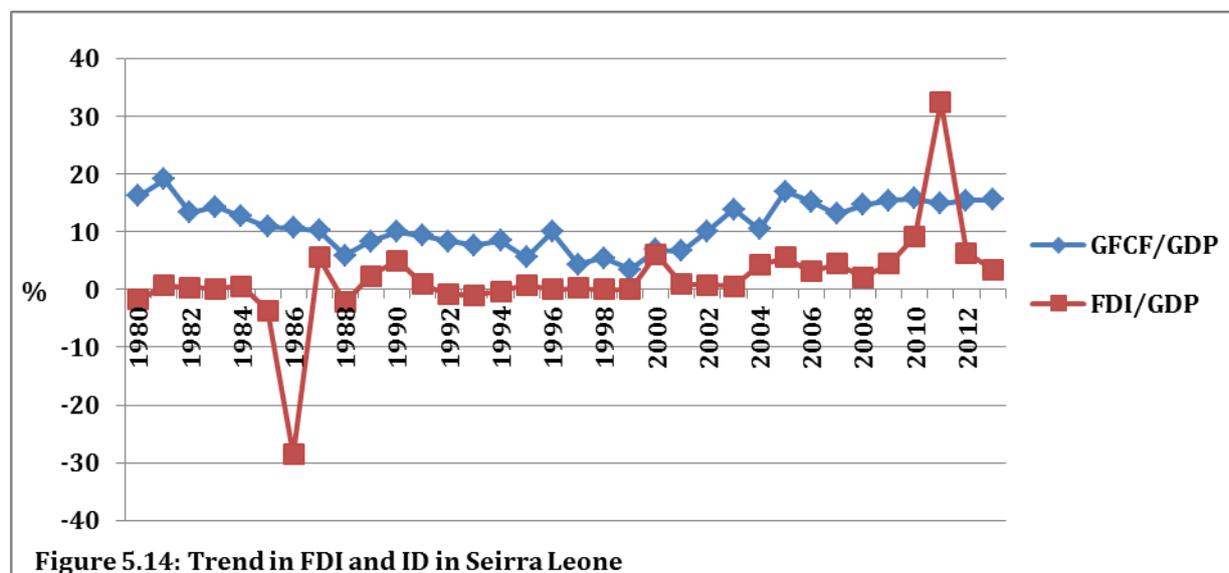
Source: Author, but underlying data obtained from World Development Indicators

Conversely, the fluctuations in Senegal’s domestic investment within the period under study were mild when compared to that of FDI as a percentage of GDP within the same time frame. From Figure 5.13, domestic investment as a percentage of GDP stood at about 16.59 in 1980, but rose to about 17.19% in 1985 (representing a percentage rise of about 3.6%) before declining to about 9.14% at the end of 1990. By 1995, domestic investment as a percentage of GDP stood at 13.62%, but rose to 20.46% in 2000, 29.64% in 2005 before declining slightly to about 29%, but thereafter rose again to about 33.46%.

➤ **Comparative Trend Analysis of FDI and ID in Sierra-Leone**

In Sierra Leone, FDI as a percentage of GDP for 1980 and 1985 were negative, totaling -1.70 and -3.61, respectively. By 1990 however, it increased substantially to about

4.99% but declined significantly to about 0.84% by 1995, a percentage drop of about 83.2% for the space of 5 years. Again at a value of 6.13% in 2000, FDI as a percentage of GDP fell to 5.57%, but rose to a peak of 9.24% in 2010, before finally declining to about 3.48% by the end of 2013 (see Figure 5.14).



*Source: Author, but underlying data obtained from World Development Indicators*

Domestic investment as a percentage of GDP was 16.21% in 1980, 10.92% in 1985, 10.03% in 1990 and 5.60% by 1995. The decline in percentage for 1985 was about 32.6% while those of 1990 and 1995 stood at 8.2% and 44.1% respectively. By 2000, domestic investment as a percentage of GDP stood at 6.88% but increased significantly to about 16.98 in 2005, but declined again to 15.76% in 2010 and further to 15.54% by the close of 2013. From Figure 5.14, it is evident that from 2005 downwards, domestic investment as a percentage GDP experienced a downward trend.

### ➤ **Comparative Trend Analysis of FDI and ID in Togo**

Within the first decade (1980-1990) in Togo, FDI as a percentage of GDP declined steadily from 3.76% in 1980, 2.43% in 1985, down to 1.12% in 1990. The percentage drop was 43.4% in 1985 and 47.4% in 1990. Conversely, from 1995 to 2005, FDI as a percentage

of GDP more than doubled its 1995 value (see Figure 5.15). From 1.99% in 1995, it rose to about 3.24% in 2000 and 4.54% by 2005, representing a percentage increase of 62.8% in 2000 and 40.1% in 2005. Its value of about 3.93% in 2010, however fell from about 50.6% to about 1.94 at the close of 2013.

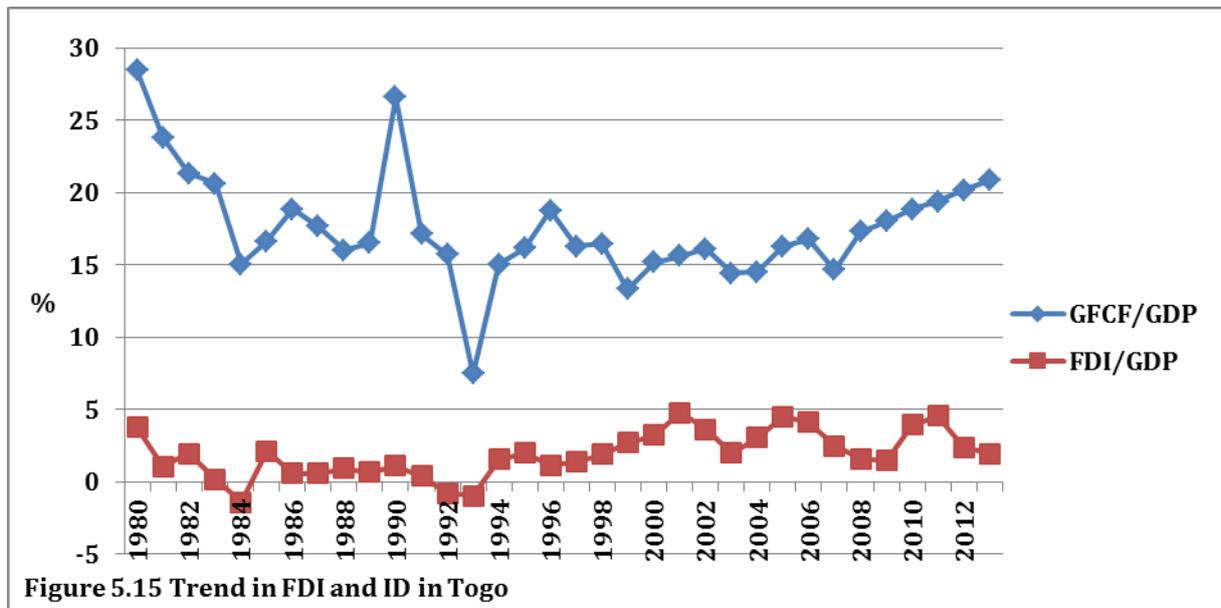


Figure 5.15 Trend in FDI and ID in Togo

Source: Author, but underlying data obtained from World Development Indicators

Domestic investment as a percentage of GDP was 28.45% in 1980; it declined to 16.63% in 1985, but rose again to about 26.57% in 1990, before declining to 16.13% and 15.18% respectively, in 1995 and 2000. However, from 2005 onward, domestic investment as a percentage of GDP in Togo rose steadily from 16.29% in 2005, 18.85% in 2010 and finally 20.86% in 2013. The growth rate was 7.3% in 2005, 15.7% in 2010 and 10.7% by the close of 2013. On the whole, two discernible trends can be observed from our comparative trend analysis of FDI and ID from the ECOWAS region thus far. First, FDI is seen to be fluctuating in all the countries considered in this study. Besides, on the average, domestic investment in all the countries in our sample tend to be larger than foreign direct investment in all the countries studied. Also, from the trend analysis it could be deduced that, on the average, these economies performed better since the turn of the new millennium than the years before then,

and that FDI inflow appears to be higher in Ghana, Liberia and Sierra Leone than in other countries considered.

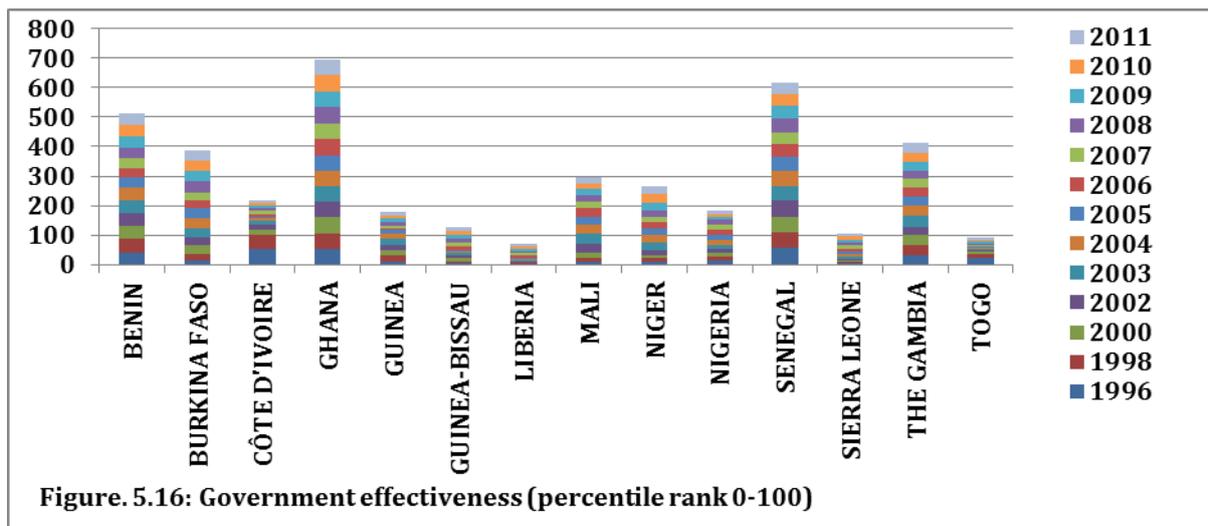
### **2.1.9 Investment Climate of ECOWAS Countries**

In this sub-section, we proceed to provide some background information regarding the business and investment climate in ECOWAS nations within the scope this research investigation. By business and investment climate for a given country or set of countries, we mean the combination of location-specific factors that help to determine the incentives for firms to invest and operate (World Bank, 2005). Accordingly, we employ three metrics that determine business and investment opportunities in the region: governance, macroeconomic variables, and the level of infrastructure/ICT.

### **2.1.10 Governance in Selected ECOWAS Countries**

Essentially, the Worldwide Governance Indicators (WGI) consists of 6 composite indicators of broad dimensions of governance. In this sub-section, we intend to briefly discuss with trend analysis five of such indicators.

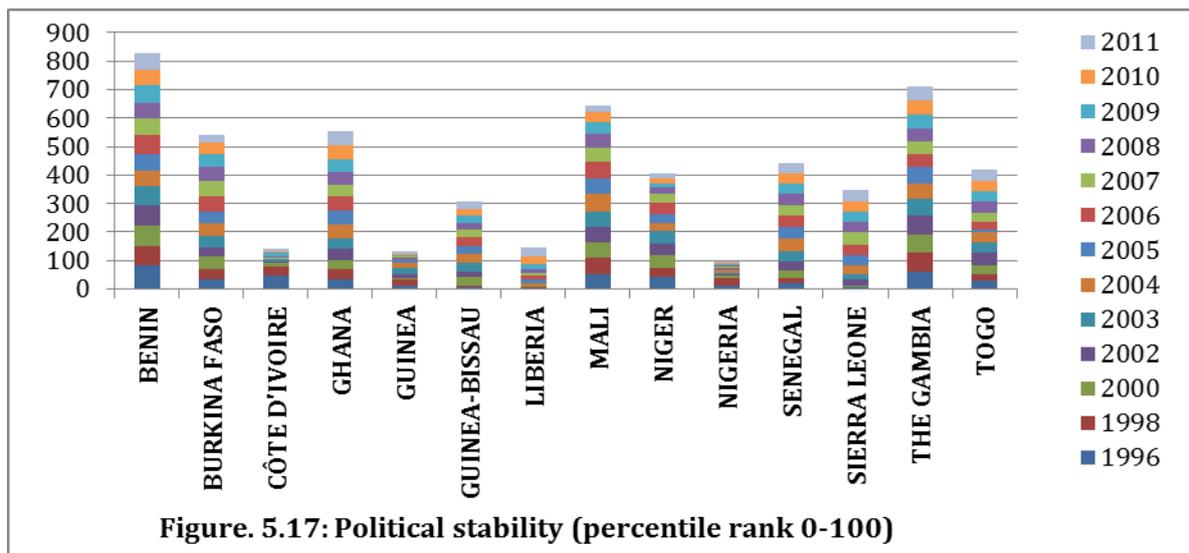
**Government effectiveness** as one of the indicators of investment climate reflects, among others, the way and manner policies are formulated and implemented as well as the sincerity of the government to effectively sustain such policies. As shown in Figure 5.16, Liberia and Sierra Leone have the same trend of lowest percentile rank among the fourteen countries under consideration. On the other hand, Senegal and Ghana recorded better performance with respect to this indicator.



Source: Author, but data obtained from Worldwide Governance Indicators (WGI).

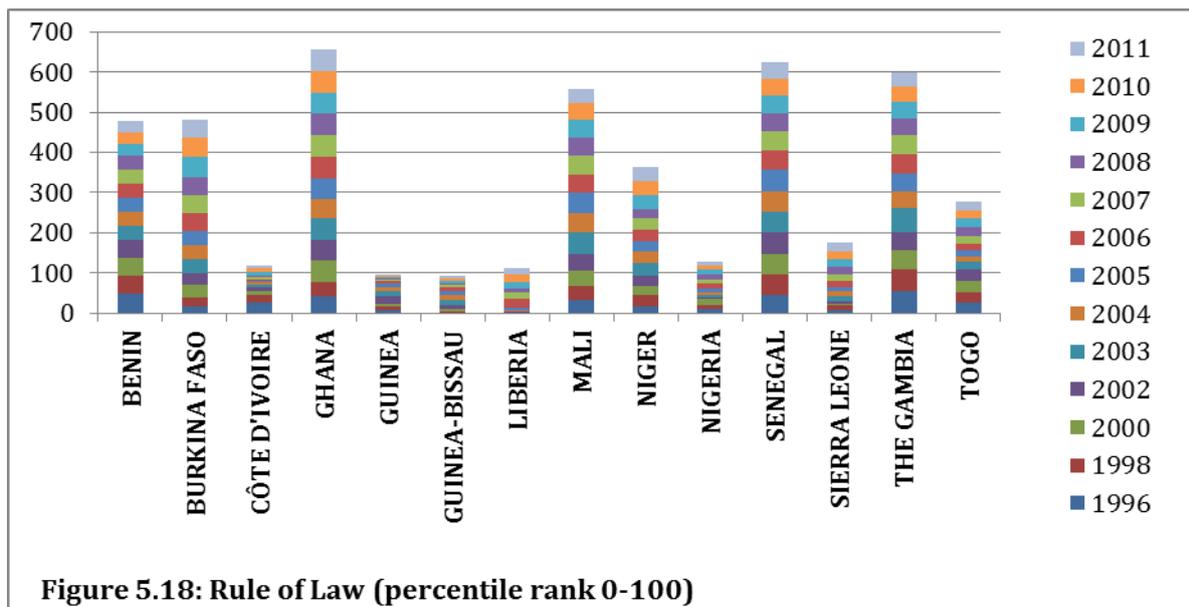
In all, the average government effectiveness rank is as low as 30 which is a pointer to the poor level of government performance for the ECOWAS region and this invariably has its effect on the various macroeconomic indicators of the region and FDI inflows in particular.

**Absence of Violence and Political Stability** as governance indicator describes the tendency of the government to be removed from power via illegal means. From Figure 5.16, it is evident that Benin Republic and the Gambia had the most stable political environment for the period under review in the ECOWAS region. The figure also revealed that Nigeria and Guinea had the most unstable political environment in the ECOWAS region. Considering the percentile rank of 0-100, Liberia and Cote D'Ivoire political stability ranks were as low as one. In all, the political environment of most of these selected ECOWAS countries as shown in the figure was unstable and this holds serious implication for growth and development of the region as a whole.



Source: Author, but data obtained from Worldwide Governance Indicators (WGI).

**Rule of Law** describes the level of confidence that investors have in the existing laws and their willingness to obey such societal laws, including, the police and the courts, among others. A look at the trend of the percentile ranks of the rule of law indices of ECOWAS countries in Figure 5.18 revealed that Senegal, Ghana and the Gambia ranked the highest while Guinea and Guinea Bissau ranked among the least performers in this regard. On the whole, as shown in the figure below, the region's rule of law ranking appears to be at its low ebb, a development that has serious implications for regional security and, by extension, the growth and development of the region.



Source: Author, but data obtained from Worldwide Governance Indicators (WGI).

**Control of Corruption** simply describes the extent to which those in authority use public fund to their personal benefit as against public benefit. Corruption is often described as the bane of most African economies. As shown in Figure 5.19, the control of corruption ranking of these ECOWAS countries indicates that Nigeria and Guinea ranked the lowest in terms of control of corruption while Burkina Faso and Ghana ranked the highest base on the trend shown. For the control of corruption rank between 0-100, Nigeria was ranked as low as 1 in 2002 and Liberia ranked as low as 2 in 1996 and 1998. Burkina Faso and Cote d'Ivoire ranked 64 and 63, respectively in 1996, while Ghana ranked 62 in 2011. According to Transparency International (TI, 2014), the two most corrupt countries within the ECOWAS region in 2014 were Nigeria and Guinea Bissau, which ranked 136<sup>th</sup> and 161<sup>st</sup> out of the 175 countries covered by the Agency's survey. In general, what Figure 5.19 portends is that control of corruption in the region is not encouraging and this invariably has serious implications for transparency and accountability that are often regarded as indicators of good governance.

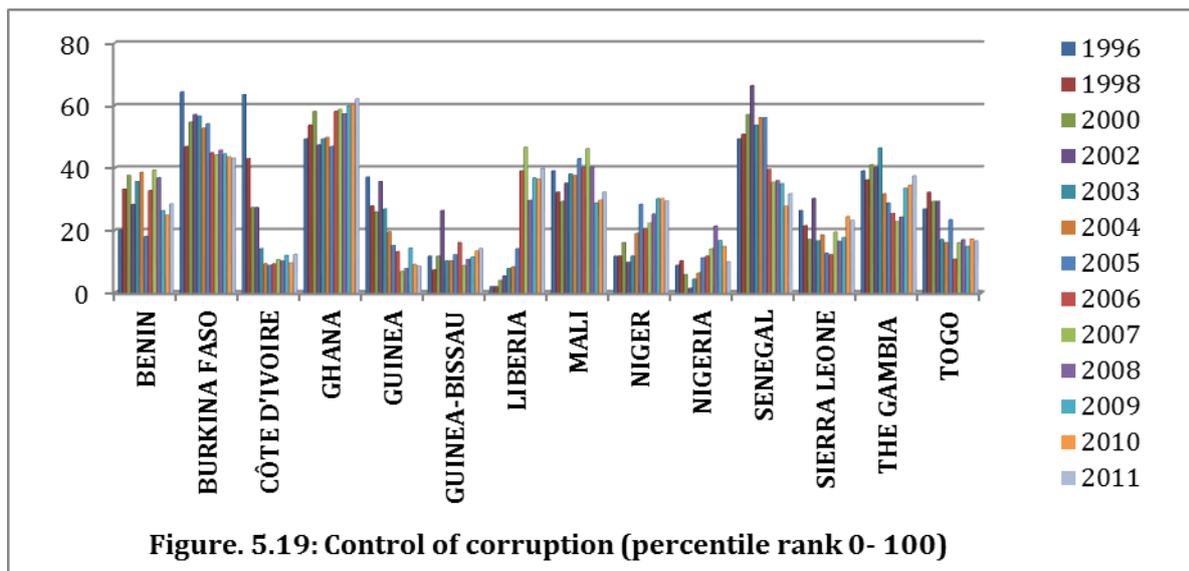
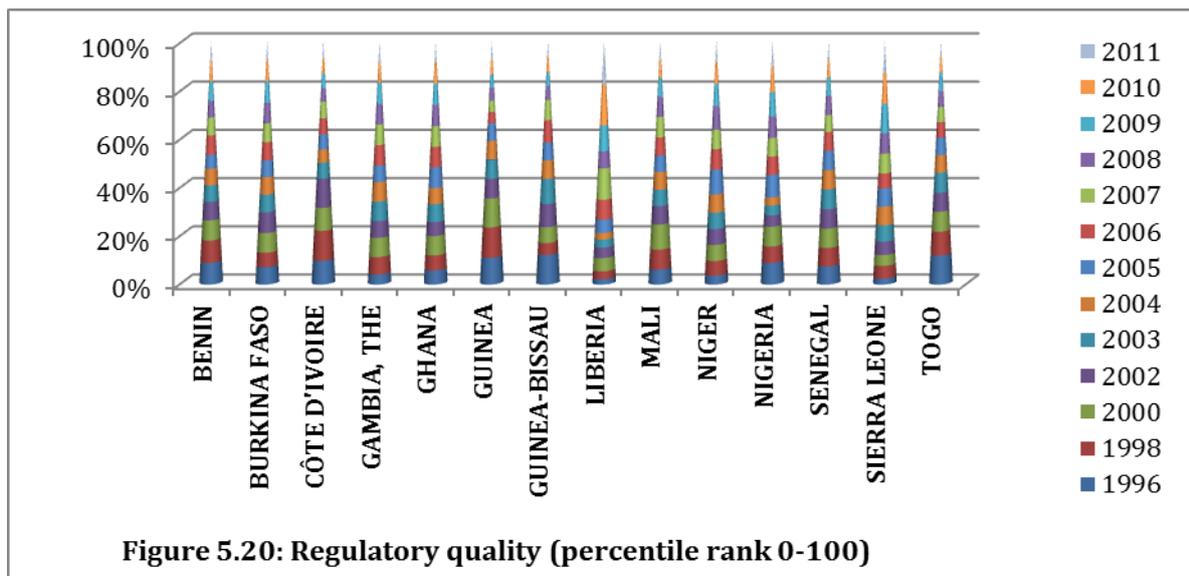


Figure. 5.19: Control of corruption (percentile rank 0- 100)

Source: Author, but data obtained from Worldwide Governance Indicators (WGI).

**Regulatory Quality**, as one of the six dimensions of governance, describes the willingness of the government to initiate and execute viable policies and regulation that would encourage the development of the private sector. In this regard, and as shown in figure 5.20, Liberia and Guinea Bissau have the same trend of lowest percentile rank of regulatory quality for the selected ECOWAS countries under consideration. On the other hand, Ghana and Senegal had the highest trend of regulatory quality ranking. The trend reveals that Ghana had an average rank of 47 respectively as shown in Figure5.20. On the whole, the average regulatory quality rank is as low as 21, a pointer to the poor formulation and implementation of policies meant to promote private sector participation in the economic development of the region.

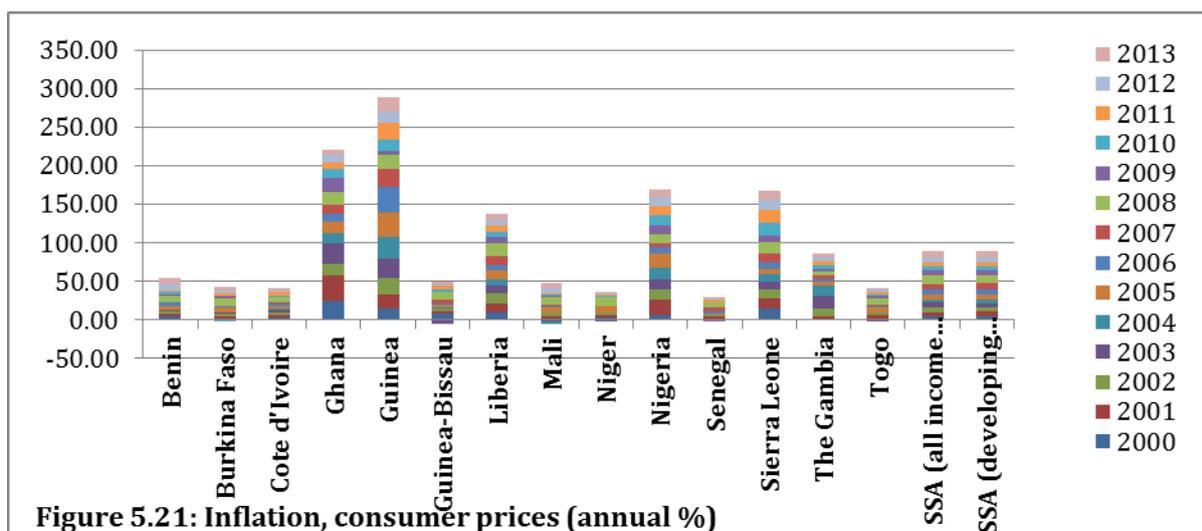


Source: Author, but data obtained from Worldwide Governance Indicators (WGI).

### 2.1.11 Macroeconomic Performance in Selected ECOWAS Countries

As regards macroeconomic indicators, we focus on four key macroeconomic variables – inflation, imports, exports and external debts – as permitted by data availability.

**Inflation Rate:** Figure 5.21 reveal the inflationary trend in the region within the period under review. The figure shows that most of the nations recorded double digit inflationary rate, a development that has serious implications for aggregate demand.



Source: Author, but underlying data obtained from World Development Indicators

From the Figure, Guinea, Sierra Leone and Nigeria had the highest rate of inflation while Senegal, Guinea Bissau and Togo had relatively low rate of inflation. Guinea had as high as 34 percent inflation rate in 2006 while Ghana had as high as 32 percent in 2001. Guinea Bissau and Liberia had as low as -3.50 and -3.10 percent rate of inflation in 2003 and 2004, respectively.

**Import** as a percentage of GDP, is also a measure of import openness, and is shown in Figure 5.22. From the Figure, Liberia’s import as a percentage of GDP is at highest trend based on the trend for the period under focus. As at 2008, Liberia’s import as a percentage of GDP was as high as 144 percent but declined to about 86 percent by the year 2013.

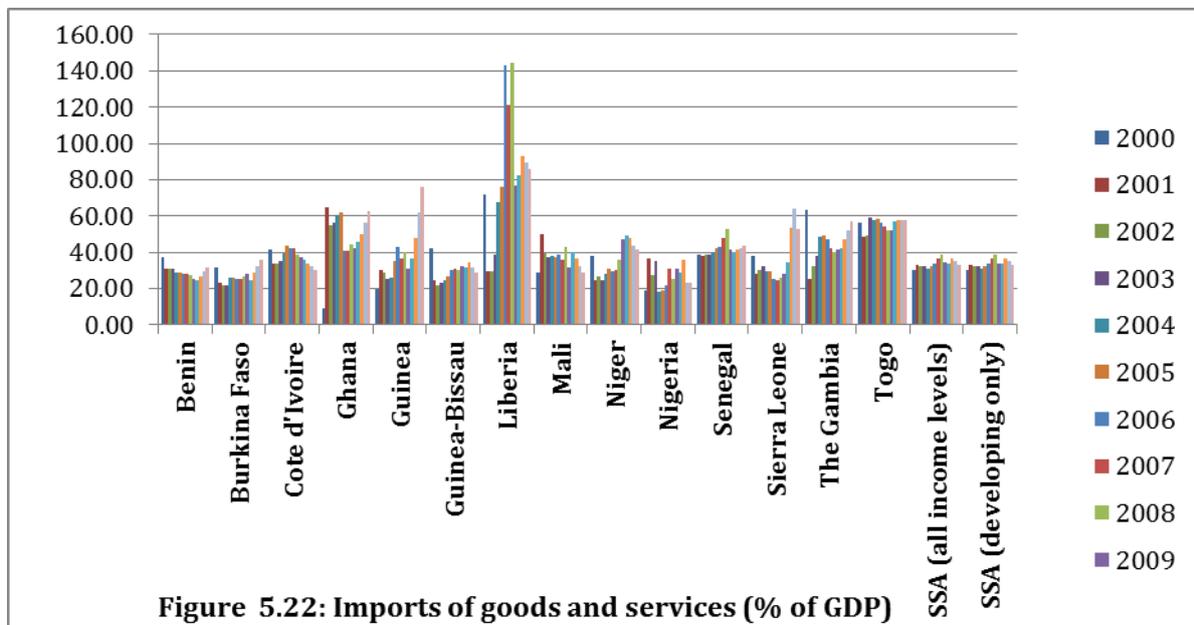
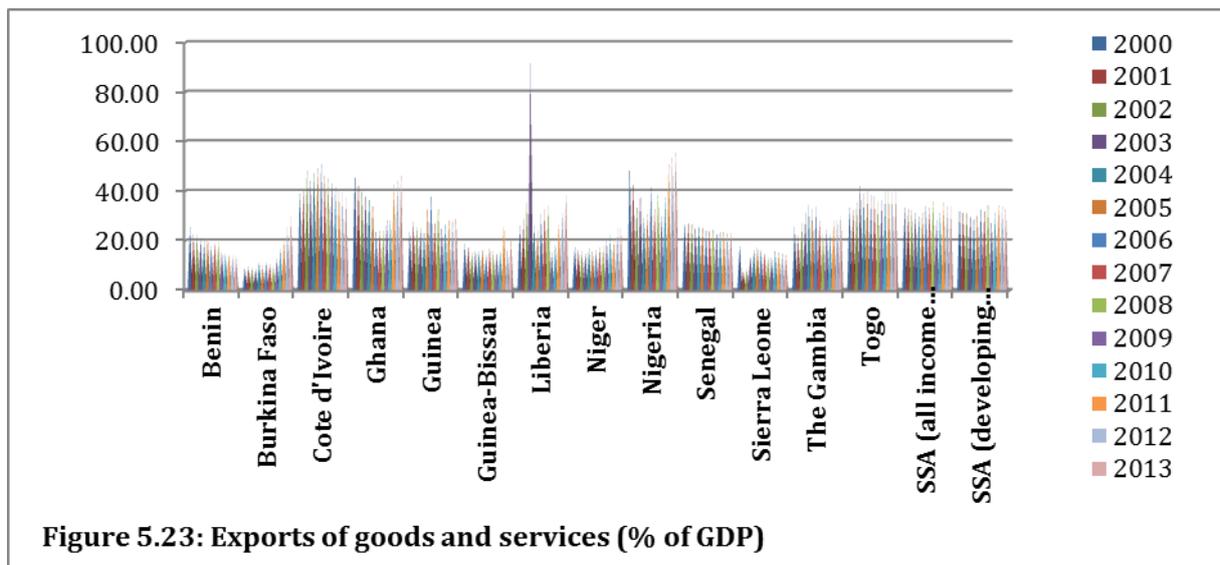


Figure 5.22: Imports of goods and services (% of GDP)

Source: Author, but underlying data obtained from World Development Indicators

Guinea, Gambia and Ghana, based on the trend, are next to Liberia in terms of import as a percentage of GDP. Nigeria and Ghana had the lowest percentage of import in GDP. As at 2000, Nigeria’s import openness was 19 percent, it later fell to 18 percent in 2004. Ghana’s import openness ranges from 9 percent to 60 percent in the same period. On the average, considering the level of output in the region, this level of import to GDP is somewhat on the high side.

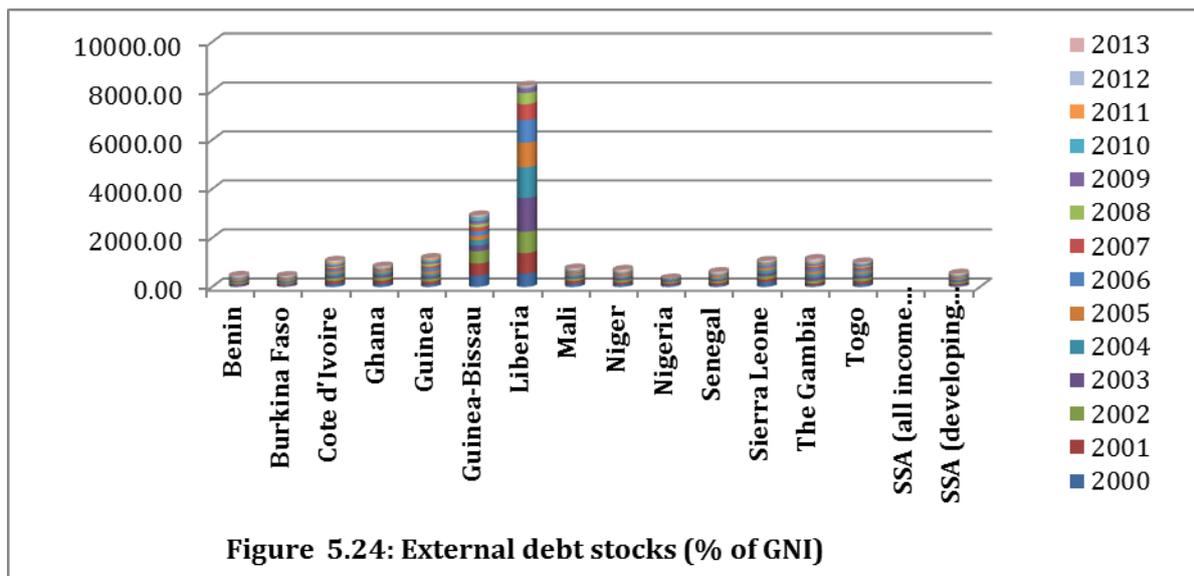
**Export** as a percentage of GDP, which is a reflection of the degree of openness, is shown in Figure 5.23 for the ECOWAS region. Export openness in Nigeria, for instance, was 51% in 2000 but declined to about 30% in 2009, before peaking at 57% in 2013. It ranged between 30% and 57% for the period under review. Meanwhile, Sierra Leone had export ranging from 7% to 18% for the period under review, a reflection of its minimal propensity to export.



*Source: Author, but underlying data obtained from World Development Indicators*

As shown in the Figure, Nigeria had the highest trend of degree of openness for the period under focus. Overall, export as a percentage of GDP in the region is fluctuating in virtually all the countries within the region as shown in Figure 5.23, though minimal.

**External debt** stocks as a percentage of gross national income for the selected ECOWAS counties are shown in Figure 5.24. The figure revealed that for the countries concerned, debt burden declined throughout the period. This was not always the case before then. The sharp drop since the early 2005 was mainly due to the debt reduction initiatives of HIPC/MDRI. For instance, between 2000 and 2002, the debt burden exceeded 100 percent of gross national income (GNI) in 8 of the 14 countries under review. By 2010 however, only Guinea Bissau had its debt burden in excess of 100 percent of its GNI.

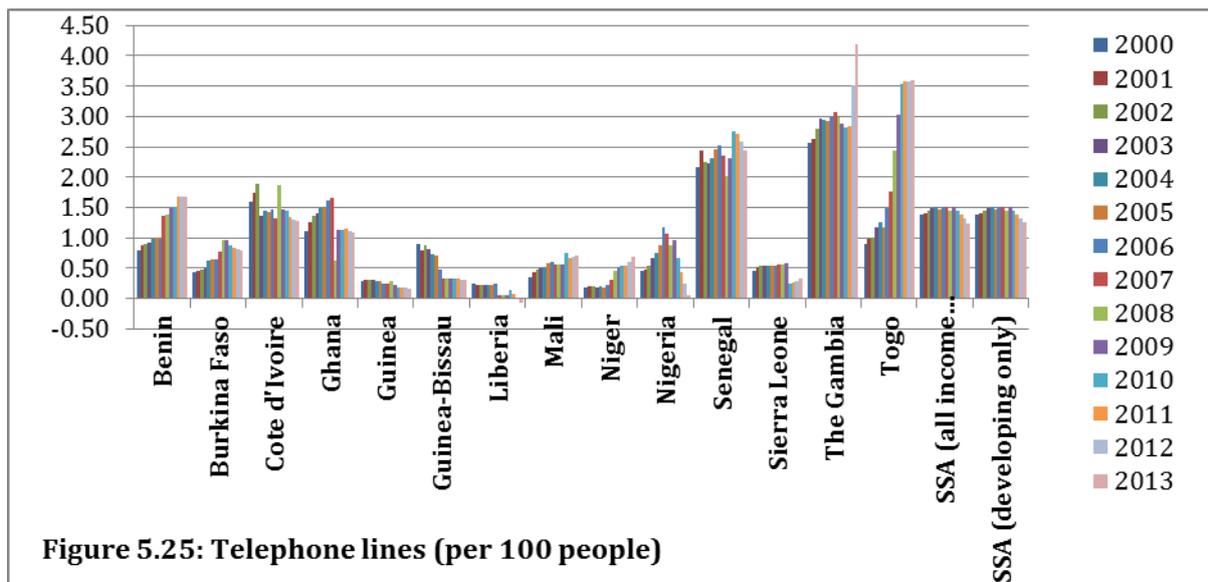


*Source: Author, but underlying data obtained from World Development Indicators*

A close look at the Table and Figure indicates that Liberia and Guinea Bissau had the highest debt burden of 1380% (2003) and 501% (2002) respectively while Nigeria and Guinea had the least debt burden of 2% and 15% respectively. As mentioned earlier, the dramatic decline in debt levels beginning from the early 2000s was mainly due to the debt relief granted to the Highly Indebted Poor Countries (HIPC), through the Multilateral Debt Relief Initiative (MDRI).

### **2.1.12 Level of Infrastructure/ICT in Selected ECOWAS Countries**

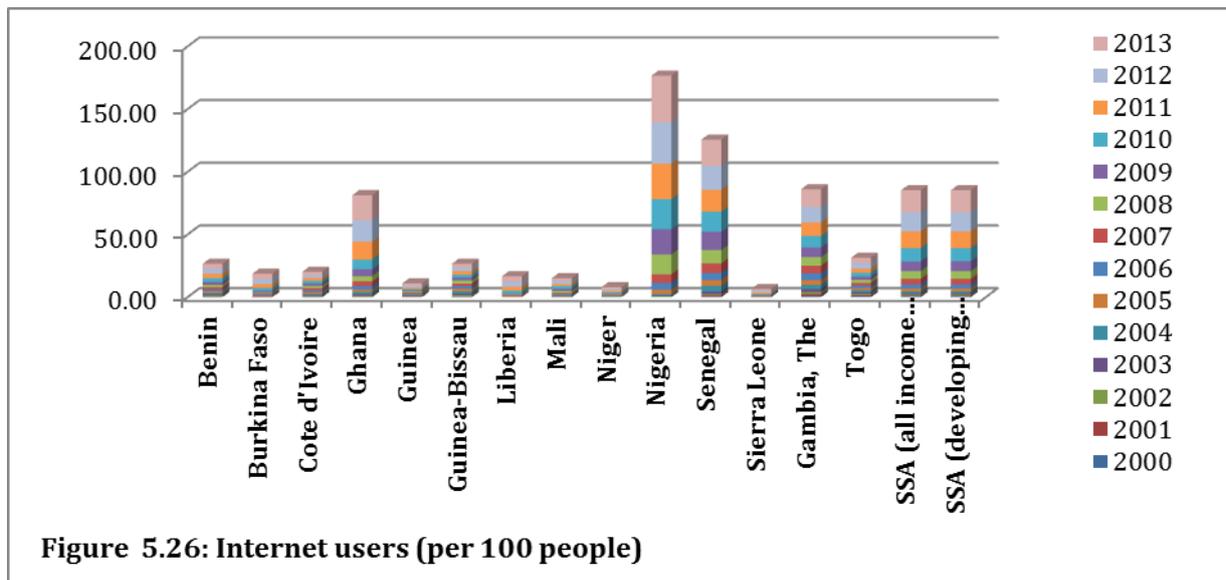
**Telephone** lines per 100 people are as shown in Figure 5.25. The figure partly portrays the level of infrastructure for the region in the period under review. From the foregoing information, Gambia and Togo appeared to have the highest number of telephone lines per 100 persons of their respective population, while Liberia and Nigeria had the lowest number of telephone lines per every 100 persons of their population.



Source: Author, but underlying data obtained from World Development Indicators

On the average, what the general trend tends to portray is that in every 100 persons in the region, the number of telephone lines are few, a development that has serious implication for infrastructural growth and development. Indeed, infrastructural decay has severe constraints on the growth and development of the sub region.

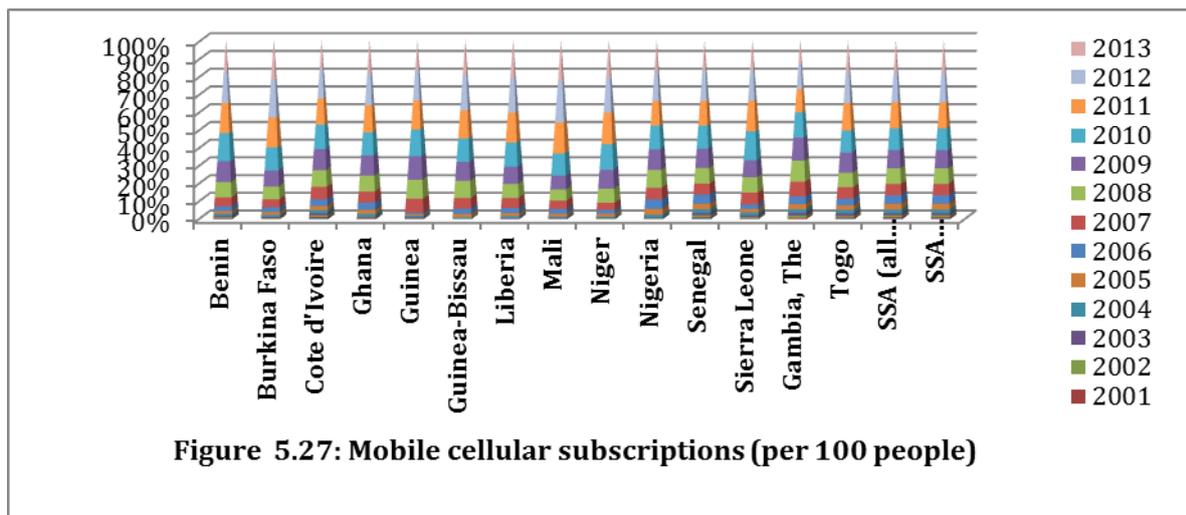
**Internet Users** per 100 people, which is an indication of the level of ICT cum infrastructural development in the region, are shown in Figure 5.26. The figure reveals that the ECOWAS region is lagging far behind in terms of ICT compliance in the 21<sup>st</sup> century. For instance, while Nigeria had the highest of 37 per 100 persons in 2013, Niger had the lowest figure of about 1.5 per 100 persons for the same year 2013. Liberia ranged between 0.02 in 2000 and 4.59 in 2013, while Nigeria was between 0.06 to 37.32 people per 100.



Source: Author, but underlying data obtained from World Development Indicators

Sierra Leone as shown above ranged between 0.40 to 1.70 while Guinea was between 0.10 to 1.68 in the same period. On the other hand, Senegal was between 0.40 to 20.91 while Ghana was between 0.15 to 20.11. In general, internet users per 100, which is a reflection of the level of ICT/infrastructure in the region, is suggestive of ICT infrastructural decay still being experienced within the region.

**Mobile Cellular** subscriptions per 100 people for the ECOWAS region are as shown in Figure 5.27. This indicator, like the previous two just considered, shows the level of infrastructure within the region for the period under review. From the figure, Niger and Sierra Leone appeared to have the lowest subscribers per 100 people, while Ghana and Cote D'Ivoire had the highest subscribers per 100 persons of their respective population.



*Source: Author, but underlying data obtained from World Development Indicators*

In general, the trends tend to indicate that for the period under review, the number of mobile cellular subscribers had risen considerably across all countries studied. Indeed, by 2013, all the countries in our sample, with the exception of Guinea, Niger and Sierra Leone, had over 60 percent of their populations having access to mobile cellular phones. Despite this feat attained thus far, the large number of persons in the region without mobile phone still has serious implications for infrastructural growth and development of the region.

### **2.1.13 Meaning of FDI**

Broadly speaking, FDI refers to capital inflows from abroad that are invested in the production capacity of an economy. FDI have several advantages over other types of financial measures. First, they are usually non-volatile and have been shown to be dependable during financial crisis when compared to other types of private capital flows like portfolio and equity. Second, they are non-debt creating since they are often tied to projects. Thus, the returns on such FDI depends on the yields from such projects that they have helped to finance. According to Salvatore (2006), FDI are those forms of investments that an investor makes in capital goods and inventories and where he retains substantial control over their use and management. Such investments, according to Thirwall (1994), involve not only transfer of funds (including the re-investment of profits) but also the

technology, management and marketing expertise that accompany such inflows. Such investments help to enhance the production capabilities of the receiving country.

Concentrating on the international aspect of foreign direct investment, Makola (2003) sees FDI as international interest in which an investor resident in one country chooses to have long term interest in a business firm in another country. It describes a situation where a foreign country creates a subsidiary to provide goods and services. Thus, a firm undertakes FDI in a foreign market if it possesses an ownership advantage over the local competitors. Highlighting the aspect of the foreign benefits of FDI flows, Golub (2009) defines FDI as “a form of international economic integration that brings gains to both parties according to the principle of comparative advantage”. FDI thus involves intra-firm trade and transactions in intangible assets such as knowledge and reputation. In a similar vein, Urata and Kawai (2000) pointed out that FDI provides the host country with the opportunity to actively partake in several networks. Through such internationally established networks host nations are partly able to increase their volume of exports and are also able to import materials that are of high quality which would improve productivity in the host countries. FDI is all the more attractive than borrowing abroad since profits cannot be repatriated in the case of business failure.

The most encompassing definition of FDI is that proposed by the United Nations Conference on Trade and Development (UNCTAD). According to UNCTAD (2006), FDI is an investment that is made to obtain a lasting interest in an entity that is outside the foreign investor’s economy. Several variants of FDI are discernible in the literature: wholly-owned enterprise, joint ventures, and special contract arrangements such as licenses, franchises, management contracts, consultancy, turnkey contracts, sub-contracting, quality control and standard services, etc. FDI can be measured by financial investment flows and/or stocks. The coverage of the two measures differs, because FDI flows and stock conventionally relate to

ownership of 10 percent or more of the shares or voting right in an organization. According to UNCTAD (2006), FDI comprises three main components: Equity Capital, Re-invested Earnings and Intra-Company Loans. Equity capital describes that type of FDI in which a foreign investor buys shares in an existing firm in economy different from that of the investor. Such purchase of shares confers ownership on foreign investor. Re-invested earnings, are earnings that are not distributed to the investors, while, intra-company loans are essentially debt flows that take form of short and long term loans by the foreign parent entity to its subsidiaries.

Arising from the foregoing, it can be deduced that FDI provides much-needed resources from foreign sources which the country could not provide domestically. This conforms to the views of Ahmad (1990) that foreign investment helps to bridge the saving-investment gap occasioned by inadequate domestic savings. In a related perception, Blomstrom and Kokko (1998), FDI involves the transfer of investable funds to other economies by companies and even individuals. In addition to tangible assets, FDI also involves the transfer of such intangible assets like technology, business management and even trademarks..

#### **2.1.14 FDI Theories**

Over the years, various theories of FDI have evolved in FDI literature. These theories can be classified into two categories: micro- and macro-economic approaches. The micro economic theories try to examine those characteristics that are peculiar to the firm and which in the end tend to have a bearing on the firm's decision-making processes. An example of such theories is the market imperfection theory. Macroeconomic theories, on the other hand, attempt to analyze those characteristics that explain peculiar to different countries and which

help to influence FDI flows both within and across economies. Examples of such macroeconomic theories are the product cycle and internationalization theories.

Hymer (1976) first developed the market imperfection theories. The theories attempt to explain the behavior of enterprises in a non-perfect but competitive environment, such as, oligopolistic or monopolistic environment. According to him, if multinational enterprises (MNEs) are able to favourably compete with domestic enterprises which are supposed to possess more knowledge of the domestic market and the prevailing environment then, it is simply because MNEs possess some obvious superiority, say, in the area of product differentiation; internal or external economies of scale, including those arising from vertical integration and government participation by way of curtailing importations of similar goods. With the foregoing advantages, MNEs would prefer to supply the foreign market by way of direct investments instead of through direct exports.

Buckley and Casson (1976) internalization theory further extended the market imperfection approach of Hymer (1976). They specified different forms of market imperfections such as time lags, and transaction costs for internalization, and itemized a number of markets where such imperfections may be found. According to them, it is the internalization of markets across the national boundaries that explain the very existence of international production (Faeth, 2009).

Vernon (1966) developed the product life-cycle hypothesis. This theory is basically applicable to manufactured goods which, originally, can be produced by firms abroad, given their advances or comparative advantages in the areas of skilled labour, income and taste. Thus, at the initial stage of the product cycle, external demands for the product are satisfied from the home country. However, as production becomes standardized and foreign demand rises, it becomes increasingly more advantageous to initiate foreign production. So,

production translates from being intensive in research and development and skilled labour, to being intensive in unskilled labour, its production location moves from the advanced economy to the developing one (Moosa, 2002).

According to Kojima (1982) and Kojima and Ozawa (1984), FDI can be classified into two: macroeconomic FDI and Microeconomic FDI. Macroeconomic FDI is that type of FDI that are usually governed by the law of comparative cost advantage. Essentially, small firms embark on such FDI when they want to move their production from countries characterized by high wages to one where they can enjoy low wages. Conversely, microeconomic FDI is usually associated with large companies whose aim is to maximize advantages derivable from the factor and product markets. As regards market, such large firms are able to exploit the advantage of the fact that producers in such markets are few, so they can hike their prices knowing fully well that their products are sufficiently unique by way of product differentiation and other forms of product branding.

Essentially, Kojima classified motives of FDI into four groups;

- (i) To exploit natural resources;
- (ii) To exploit cheap labour cost present in the host economy;
- (iii) To evade non-tariff and tariff barriers; and
- (iv) To exploit their technological know-how and superior knowledge.

Dunning (1981) brought together internalization and traditional trade economics to create the eclectic paradigm of FDI. The nucleus of the eclectic paradigm is that there are three sets of motives that could attract MNEs to invest overseas: namely, ownership (“O”), locational (“L”) and internalization (“I”) advantages (OLI).

The “OWNERSHIP” advantages focuses on reasons why some firms go abroad owing to their firm’s specific advantages which permits them to significantly minimize the cost of producing the product in a overseas . Such firm’s specific advantages can take the form of a firm’s goodwill (Markusen, 1995), and such goodwill can be transferred within MNEs at minimal cost.

The LOCATIONAL advantages, on the other hand, are a function of a numerous crucial variables that can be attracted by the comparative advantage prevailing on the host country (Gastanaga, et.al, 1998). An example of such location advantage is when there is abundance, especially when the production FDI is labour intensive in nature.

The internalization (“I”) describes the mode of entry of the FDI. Where the FDI has a superior mode of entry compared to technology or licensing thereby enhancing the productivity abroad. See Table 3 in Appendix 1 for an overview of the main FDI theories beginning from 1960 to 1994.

### **2.1.15 FDI – Economic Growth Nexus**

There is an avalanche of empirical literature on the impacts of foreign investment on economic growth, though with conflicting results. Waheed (2004) points that most of the studies reveal that foreign capital positively impact on economic growth. FDI increases national wealth through global production and income. In the same vein, Sjöholm (1999) observe that by providing support in the area of technology to their subsidiaries overseas and non-subsidiaries alike, Transactional Corporations (TNCs) can facilitate the production of a variety of new intermediate products, a development that could go a long way in raising the quality of products produced and, by extension help introduce a variety of human capital.

In analyzing the FDI-economic growth relationship, Buckley et al (2002) posit that FDI inflows could play a vital role in explaining growth trajectory of those countries receiving such inflows. FDI provides essential ingredients that are necessary for economic growth. By providing new production process, managerial skills, technical know-how and new forms of capital goods, FDI promotes economic growth of the less developed countries (LDCs). FDI provides the much-needed resources to developing nations such as capital, managerial and entrepreneurial skills, technology, as well as better access to markets. These are essential for the industrialization and creation of job opportunities to facilitate the development of such developing economies.

Though most of the literature avers that FDI significantly influences growth, there remains the debate of the issue of "capital flight". This involves short-term outflows of domestic capital for speculative purposes, or with outflows resulting from economic or political uncertainties in the home country. Capital flight can negatively affect interest rates, exchange rates and a country's foreign exchange reserves among others. In analyzing the concept, Brecher and Diaz-Alejandro (1977) give evidence that in the face of severe trade misalignment occasioned by excess tariffs; foreign capital inflows can retard the economic growth by generating excess profits in such a nation. In the same vein, Carkovic and Levine (2002) also concluded in their empirical study on FDI and growth nexus, that the exogenous aspect of FDI may not significantly impact on the growth performance of a nation on the long-run. Extending the debate further, Quazi (2004) suggests that foreign investment and international aid tend to facilitate such outflows and hinder the rate of economic growth. That implied that the foreign earnings brought about by FDI helps to promote the outflow of domestic capital to foreign countries considering the fact that foreign capital makes up for it within the domestic country's economy.

This debate remains controversial because there are empirical studies such as that of Mondal (2003) which identifies that one of the benefits of FDI is the reduction of capital flight. In the same vein, Agosin and Mayer (2000) argued that FDI helps to further spur the inflow of other forms of foreign complementing domestic finance thereby suggesting to potential investors about the favourable investment opportunities available in such an economy. On his part, Jansen (1995) posited that foreign capital inflows could bring about a rise in domestic credit availability. In expanding the FDI-economic growth nexus debate, Noorbakhsh et al (2001) explain that FDI helps to increase market access of the developed world, increases local market competition while creating modern job opportunities at the same time, thus contributing to economic growth in host economies.

The empirical studies of Asterious (2009), Burnside and Dollar (2000), and Karris (2006) have reported positive relationship between economic growth and foreign aid; although Bhandari, et al (2007) found contrary results. Taking the positive perspective, Ericsson and Irandoust (2005) found in all the countries in their sample study, FDI positively impacted on economic growth. Hence, they conclude that foreign direct investment supplements domestic savings. Furthermore, the studies of Isaksson (2001) and Kasuga (2007) show that such domestic saving' positively influences investment and, by extension, the growth of the economy. In another study, Hansen and Rand (2006) pointed that FDI leads to increase in GDP. The study confirms those of Blomstrom et al (1996) and De Mello (1997). In some related studies, it is argued that because FDI helps to provide the much-needed technology, foreign exchange and capital, it invariably enhances competition and access to foreign market and ultimately impact on the growth performance of the receiving countries (Romer, 1993; Caves 1996; World Bank, 1999; Chowdhury and Mavrotas, 2006; Crespo and Fontura,2007; Houdou and Moussa, 2010).

The fact that FDI has led to economic growth in various economies has stimulated various countries to pursue policies that are targeted towards the stimulation of foreign direct investment. Even countries in the developed world still strive to obtain a large chunk of FDI. This can be seen by the bilateral agreements that nations in Asia, North America and South America have with nations of the developed world such as the United States of America, Britain, Germany, France, and others.

With Africa lagging behind in terms of development, there is an pressing desire for nations to design economic policies to attract FDI to the continent. However, it will be counter-productive to overlook the issues of political upheavals, genocides, high level of corruption, and unhealthy bureaucratic processes which are commonly seen in Sub-Saharan Africa. This means that even if foreign direct investment inflows are increased, with these anomalies, the desired growth rate will still not be achieved. This calls for drastic political as well as economic measures.

#### **2.1.16 Theoretical Link between FDI and Domestic Investment (ID)**

In the literature, the effect of FDI on investment has been theoretically hypothesized to depend, *inter alia*, on the country concerned, the kind of FDI that the country receives, its domestic policy as well as the strength of the domestic enterprises (Kumar and Pradhan, 2002; Agosin and Mayer, 2000; Titarenko, 2006). Besides, it has been argued that, foreign investments which introduce new goods and services into the local economy are more likely to impact favourably on the formation of capital than foreign investments introduced in those sectors where local investors already exist in large numbers. In the former case, the FDI is likely to impact positively on capital formation considering the fact that local producers may not have the requisite technological know-how needed to effectively undertake such activities and, therefore, foreign investors' activities may not crowd out those of domestic investors (Agosin and Mayer, 2000). Thus, if FDI flows into sectors of an economy, where competing

domestic firms already exist, foreign investment may crowd out domestic investment opportunities that were hitherto available to local investors before the inflow of such foreign investments (Sun, 2002; Apergis et al, 2006). In both cases, the effect of such FDI inflows on capital formation may be less than the FDI inflow itself. This gives rise to the proposition that the manner of FDI distribution across sectors in an economy can be a potent factor that influences capital formation process. Corroborating the foregoing assertion, Arndt et al., (2007), avers that in situations where the current distribution of FDI inflows by sectors is significantly different from the way it was previously, then the effect of FDI on capital formation will be positive and significant; but when the current distribution of FDI inflows by sectors is same as previous sectoral distributions, its impact on capital formation will be quite minimal. On the other hand, the relationship between domestic investment and FDI may become complementary especially when such FDI inflow goes into those undeveloped sectors of the economy lacking in technological know-how.

In most developing economies, attempts by domestic entrepreneurs to expand their activities in such new underdeveloped sectors of the economy are quite costly, especially in high technology sectors where the financial and technological requirements go far beyond domestic capabilities.

It is also worth mentioning that, the displacement of the domestic firms may still occur even where local firms already have similar technological know-how that the Multinational Enterprises (MNEs) bring into the economy. This can happen given the enormous technological advantage of MNEs, and can even cause domestic firms bankruptcy, rather than induce domestic firms to invest (Desai et al., 2005). This situation may even become highly distortive if the MNEs involved deliberately resort to the use of inhibitive practices aimed at stifling the business of domestic entrepreneurs or to stunt their growth.

Furthermore, there is the contention in the literature that, the emergence of several mergers and acquisitions in an economy might not necessarily translate to increases in the physical capital of a host nation. This may be so because, in some cases, such acquisitions of domestic firms may be synonymous to a portfolio investment, with foreign investors being indifferent to the operations of the local firms concerned. In such situations, the expected positive influence of FDI on domestic investment cannot be guaranteed.

### **2.1.17 Potential Determinants of FDI**

Given the increasing rate of globalization in the contemporary world and harmonization of strategies by MNEs, it is argued that locational determinants of FDI in host countries are more crucial factors determining FDI. According to UNCTAD (2001), although traditional factors driving FDI may still be relevant, they are diminishing in the era of globalization. Rather, locations of FDI are seen to be predominantly premised on how well recipient nations are able to provide complementary skills, institutions, suppliers and infrastructure. Some of these potential determinants include the economic growth rate, government policy measures, infrastructure, market size etc.

**Market size:** The size of the local market is a crucial driver of FDI. Market size is commonly proxied by GDP per capita income. Thus, an economy characterized by a large market size should attract greater FDI. Market size is vital for FDI considering the fact that it potentially provides for greater profitability of domestic firms through exports to foreign markets, while also allowing for availability of diverse resources, thus making the sourcing of local resources more realistic (Pfefferman and Madarassey, 1992). According to Root and Ahmed (1979) however, when a firm is primarily inclined towards satisfying external demands for its products irrespective of the size of markets, then the size of the local market will not be a significant driver of FDI.

**The Economy's Growth Prospects:** The market size, along with the prospect of growth tends to positively attract FDI flows. Thus, economies with high and sustainable rates of growth are likely to attract more FDI than those countries that are somewhat volatile. Morrissey and Rai (1995) argue that foreign investors usually give serious considerations to the size of the local market, as well as its growth prospects of recipient economies in their investment decisions to relocate production base in the host economy.

**Government Policy Measures:** This is also regarded as an important driver of FDI inflows, especially in a developing economy. Government policies can take different forms such as subsidies, tariffs, taxes, and privatization strategy. By way of illustration, a rise in tariffs or taxes in the recipient country may ultimately increase the cost of investment, thereby eliminating the profit margin. On the other hand, Cheng and Kwan (2000), posit that subsidizing FDI inflows may help foreign firms to reduce their costs of production, increase the desire to create patents, as well as the willingness to locate their production facilities in economy offering incentives. This will ultimately raise the economic benefits of FDI relative to exporting.

**Infrastructural Facilities:** The availability of quality infrastructure, especially roads, telecommunication services, electricity and water, is a major determinant of FDI. According to Berhanu (1999) lack of efficient infrastructure may translate to higher transaction cost especially for those already in business as well as a form of barrier to entry for new FDI expansion, simply because efficient infrastructure tend to suggest greater access to potential market and natural resources. All these in turn, have implications for the profit margin of foreign firms and in pulling in the right quantity and quality of FDI.

**Availability of skilled labour and labour cost:** Another crucial supply condition that is often taken into consideration in promoting export-oriented and labour-intensive FDI is the

availability and cost of labour. In other words, countries that are richly endowed with skilled labour tend to attract greater FDI, especially in those sectors where skilled labour are greatly needed. Several empirical studies in extant FDI literature lend credence to the positive effect of low labour cost on FDI flows (See, Wheeler and Mody (1992), Loree and Guisinger (1995))

**Natural Resources:** Historically, and particularly for African countries, natural resources have evolved in FDI literature as a major driver of FDI. In this regard Berhanu (1999) observed that nations that have adequate deposit of minerals stand the chance of attracting foreign investors especially natural resources FDI. This is mostly true in the case of natural resource-endowed developing countries like Nigeria.

**Agglomeration Effects:** Lately, agglomeration effects have come to be recognized as a critical determinant of FDI. In this regard, Venables (1996) posits that “agglomeration economies arises from the clustering of firms and other industries, partly due to the availability of cheap but skilled labour force in a given locality. As expected, agglomeration (clustering) effects are found to be highly significant by Wheeler and Mody (1992) in a study of capital expenditures by U.S. manufacturing MNEs covering 42 developed and developing countries.

**Other Sundry Determinants of FDI:** In addition to the potential drivers of FDI highlighted above, a number of other variables have been identified in empirical literature as host country drivers of inward FDI. Some of such variables are: inflation, urbanization, governance, degree of openness, stable macro and sectoral policies etc (see Asiedu, 2003; Berhanu and Kibre, 2003; UNCTAD, 1998).

### **2.1.18 FDI in Sub-Saharan Africa: Stylized Facts**

With particular reference to sub-Saharan Africa, a major stylized fact of foreign direct investment is explicitly shown by Basu and Srinivasan (2002). The study shows that one of the major motives of flow of FDI to most African countries, especially SSA, involves the exploitation of natural resources. This is the Resource-Seeking argument of FDI. In this category, we have Botswana (diamond) Nigeria (crude oil) and Ghana (gold). Another motive, especially for market-seeking investment is to be attracted to markets that are large in size or with high growth potentials. A fact that need not be underestimated is the Efficiency-Seeking Investment. This type of investment seeks to take advantage of those sectors characterized by low cost of labour and the quality and efficiency of infrastructure prevailing in such sectors.

In analyzing stylized facts of FDI inflow into sub-Saharan Africa (SSA), UNCTAD (2004) reports that in the SSA, FDI is largely located in a few selected countries for several reasons. The reasons range from the poor infrastructural facilities, shortage of foreign exchange, endemic corruption, unstable macroeconomic policy environment and the generally poor image of the region. The four traditionally biggest beneficiaries of FDI in the SSA are Angola, Nigeria, Egypt and South Africa. In terms of allocation, UNCTAD (2003) reports that the rise in FDI flows to the region in the 1987 - 1990 and 1995 -1998 periods, 33 percent went to four major oil-producing nations of: Nigeria, Angola, the Democratic Republic of Congo, and Equatorial Guinea.. In 2002, for instance, four countries, namely, Nigeria, South Africa, Angola, and Egypt together recorded about 61.9% of FDI flow to the region. In his analysis, Ikiara (2003) pointed that Africa's share of US FDI stock in the primary sector has declined progressively over the years. Mowatt and Zulu (1999) report that a possible reason for this trend is the view investors hold about the economic conditions prevailing across the SSA region. They argued that, for instance, South African investors are

favourably disposed to the prevailing economic policy framework in Namibia, Mozambique and Botswana, and that of Zimbabwe is poorly rated. On the contrary, Zimbabwe is rated greatly in transport infrastructure compared to Mozambique. CREFSA-DFI (2000) explains that the reason for this is the relative ease with which investors' access quality information prevailing in the region compared to what obtains in other regions. Analyzing the sectoral allocation of FDI in Sub-Saharan Africa, Mills and Oppenheimer (2002) show that FDI continuous to flow into the minerals, timbers, coffee and oil sectors of countries in the SSA.

It is also a stylized fact that the series of strategies put in place by countries in sub-Saharan Africa to attract the required quantum of FDI have not yielded commensurate result. To complicate issues, Morriset (2000) and Asiedu and Esfahani (2001) explain that the type of the FDI that exists in SSA is majorly skewed in favour of the extractive industries.

#### **2.1.19 Empirical Review**

Several empirical studies have been carried out in FDI literature with a view to identifying the drivers of inward FDI. The variables that were employed as determinants in those studies vary from country to country and study to study. A review of those studies tend to suggest that it is near impossible to obtain one list of determinants of FDI, considering the fact that some of such variables have either lost or gained importance overtime (UNCTAD, 1998). Nevertheless, the review in this sub-section comprises empirical studies carried out on the drivers of inward FDI to developing economies, and more particularly on Africa and sub-Saharan Africa. Batra et al (2003) posit that the drivers of inward FDI to Africa are remarkably different from those that drive FDI to other regions of the world. Asiedu (2004) corroborates this assertion by emphasizing that lessons from those countries in Latin America and East Asia are not applicable to those countries in Africa.

### **2.1.19.1 Studies in Emerging Economies/Developing Countries**

Bevan and Estrin (2004) carried out a study on the drivers of inward FDI into 18 market economies and 11 transition ones from 1994 to 2000, using panel dataset of bilateral flows of FDI. Their results identified the important determinants to include gravity factors, market size, unit labour costs and proximity. The authors may have obtained somewhat robust results arising from their application of panel data estimation technique, but panel data models are prone to the familiar Nickel (1981) bias of estimated coefficients. This deficiency was not corrected for in this study, a development that may make the parameter estimate to be inefficient particularly with respect to the predictive power of the model.

In another study, Torsten (2004) investigated the factors that could influence the decisions of German multinational banks to locate their subsidiaries in some markets of Asia, Eastern and central Europe and Latin America from 1994 to 2001, employing the structural model of banking FDI. The results suggest that FDI by non-banks tend to strongly attract banking FDI flows, just as low country risk and highly developed financial markets.

Abdelkarim et al (2013) conducted an investigation on the drivers of inward FDI flows into the Middle East and North Africa (MENA) region during the period 1970-2007. Employing panel data estimation techniques for the study, and taking into account the importance of economic dependencies and structural breaks, he found the macro determinants of FDI inflows into MENA to include openness, exchange rate, growth rate, while economic instability had a long-run effect on FDI flow into the study.

In another study, Pravin (2012) investigated the influence of institutional, economic, and political factors in FDI inflow into BRICS economy as well as the relative significance of each of these factors in driving into the FDI. Employing panel data technique for a period of ten years (2000-2009), his findings indicate that economic factors are more significant than

institutional and political factors in BRICS economies. The results further indicate that natural resource availability has negative effect on total inward FDI, an indication that FDI is not motivated by resource-seeking purpose in BRICS economies.

Zenasni and Benhabib (2013) using a dynamic panel system GMM estimator examined the drivers of and the growth effects of FDI in three Arab Maghreb Union (AMU) countries of Morocco, Tunisia and Algeria for the period 1980-2010. The results revealed that political stability, adequate infrastructure, good governance and an effective judicial system are among the potential determinants of FDI into AMU countries. The results also partly revealed that FDI positively affect the growth rate in the long-run and enhances the economic fortunes in AMU countries. In a related study, Sichei and Kinyondo (2012) provided panel data evidence on the determinants of FDI for 45 African countries for the sample period of 1980 to 2009. Employing dynamic panel estimation techniques, the study identified the factors that drive inward FDI flows in Africa to include agglomeration economies, real GDP growth, natural resources, and international investment, agreements, among others.

Sannasee, Seetanah and Diksha (2014) attempted to empirically ascertain the determinants of FDI flows in South African Development Community (SADC) countries for the period of 1985 to 2010 using the PVECM and PVAR models for the short-run and long-run relationships, respectively. Their findings showed that trade openness, GDP, natural resources and secondary school enrolment rate are the most crucial determinants of FDI inflows into the Southern African Development Community.

Janicki and Wunnava (2004) examined bilateral FDI between the EU-15 member states and 8 Central and East European countries (CEEC) using data for 1997. The study revealed that the key drivers of inward FDI into the CEECs are the market size of the host country, the prevailing risk level in the host country, the availability and cost of labour in the

host country, as well as the level of openness of the host economy. In a similar study, Mateev (2008) investigated the major drivers of inward FDI into Southeastern and Central European nations for the period 2001-2006. Using panel estimation techniques, the results indicated that both gravity factors (distance, population, and GDP) and non-gravity factors (corruption, risk, and labour costs) significantly explained the magnitude of inward FDI into the emerging economies under consideration.

Busse and Carsten (2005) investigated the links between FDI flows and institutions and political risk for 83 developing economies for the sample period of 1984 to 2003. According to Busse and Carsten (2005), factors like accountability, ethnic rivalries investment profile, as well as internal and external conflicts is major determinants of FDI flows. In addition, the relatively large coefficients of the political indicators such as those of government stability and law/order, are suggestive of the fact that positive changes in these variables may greatly attract investments from multinationals.

Hisarciklilar, et al (2006) attempted to empirically ascertain the locational drives of FDI for 18 countries for the period of 1980-2001. The study reveals that FDI into the MENA countries are majorly attracted by the market size of the host economies. Besides, foreign capital in the MENA region is largely horizontal. This suggests that FDI flow into the MENA region is essentially aimed at supplying the domestic market in those countries.

Vijayakumar, et.al (2010) examine the determinants of FDI flows into the BRICS economies, employing time series data which spans from 1975 to 2007. The study employed panel estimation technique and found out that gross capital formation, infrastructure, market size, currency value and labour cost are the major drivers of FDI into the BRICS nations.

Robust as the outcomes may be, Oxera (2013) has affirmed that pooled OLS technique cannot be relied upon as it has the tendency of producing biased and inconsistent parameter estimates. This is particularly so, when the residuals themselves depend on some

exogenous variables (observed or unobserved) as in the study under focus. In a study on 81 emerging markets, Ahmed et al (2005) attempted to investigate the determinants of the volume and components of capital flows into South Africa, using Ordinary Least Squares (OLS) and the Generalized Moments Method (GMM) for the period 1975-2002. Their findings revealed that FDI inflows are potentially influenced by business cycle development and international interest rates prevailing in those industrial nations. In addition, they also discovered that agglomeration effect (measured by past stock of FDI) tend to affect future FDI flows.

Although the authors employed the GMM technique in their estimation, with estimators considered to be robust to heteroscedasticity and autocorrelation, the GMM estimates often suffer from a weak instrument problem, particularly when the variance of the observed unit specific effects is large, as in the above study (see Bun and Windmeijer 2010). Ralhan (2006) identifies the determinants of capital flows using conventional approach based on a cross-sectional study of eight emerging economies, using the nonlinear seemingly unrelated regression estimation technique. The result indicates that the level of gross domestic product, exchange rates as well as the growth in the size of these economies were quite significant in explaining the rise in FDI inflow in those economies.

The application of nonlinear SUR (NLSUR) Method by the authors may have produced acceptable results; however it has been argued in the literature that the NLSUR is usually prone to misspecification of equation problems (Moon and Perron, 2006). As of now, there is no unique method of ascertaining whether or not such shortcoming are genuinely absent in a model, a development that may cast doubt on the predictive power of equations.

Focusing on the effects of macroeconomic and institutional factors on FDI flows into 21 emerging markets, Dumludag and Sukruoglu (2007) employed the maximum likelihood

method for the period 1984-2006. Their results suggest that institutional variables such as functioning judicial system, government stability, investment environment and socioeconomic conditions have significant impact on FDI in emerging markets.

It has been argued in the literature that the Maximum Likelihood Estimation Methods are versatile and may help provide efficient methods for quantifying uncertainty through confidence bound, it is apparently susceptible to asymmetrical presence of data in partitions as in the study under consideration. In a related study, Wernick and Haar (2010) investigated the impact of governing institutions for a group of 64 emerging economies from 1996 to 2006, using ordinary Least Squares (OLS) with panel correct standard errors (PCSEs). The results indicate that strong institutions and business-friendly policies promote FDI and economic growth in those economies concerned.

Much as the findings of the study lend credence to the notion that the quality of institutions is a major driver of FDI flows to emerging markets, the study's sample size coupled with its inability to account for lags in the time between institutional reforms are implemented and investment decisions are made, may limit the generalizability of its findings. Arbatli (2011) analyses the driver of FDI inflows to the G-7 nations by using the dynamic, partial adjustment model to which he applied the two-step GMM system estimator for the period, 1984-2009. Results show that reducing tariffs and corporate tax rates, adopting the right exchange rates and removing rigid FDI related controls were quite instrumental in attracting FDI into those G-7 economies. Laudable as the results may seem, it has been proved in the literature that the coefficient estimators of the two step GMM estimation can be badly biased, while the standard t or Wald tests can be heavily size distorted for a significant part of the parameter space (Bun and Windmeijer, 2010).

In another related study on the drivers of FDI into the Vietnam economy, Delaunay and Torrasi (2012) employed the OLS multiple regression technique for the period 1991 to 2008. Results indicate that while macroeconomic variables such as GDP and labour costs were predictably significant determinants of FDI in Vietnam, exchange rate was a significant and negative factor influencing FDI inflow for the sample period investigated. In a related study, Alavinasab (2013) attempted to investigate the drivers of FDI into the Iranian economy during the 1991 to 2009 period, using Ordinary Least Squares estimation technique. His findings indicate that real GDP growth rate, proportion of import to GDP, return on investment as well as infrastructure were important determinants of FDI flows to Iran within that period.

In both separate studies by Delaunay and Torrasi (2012) and Navinasab (2013), their application of OLS is fraught with certain shortcomings. More importantly, not testing for unit root may produce spurious and misleading results and, the policy measures based on such findings may be faulty. Amaya and Rowland (2004) studied the determinants of investment flows into 18 emerging market economics during the 1975 to 2000 time frame, utilizing cross-sectional and panel data techniques. The result of their study indicates that large open economies with a high growth rate coupled with sound fiscal policies and moderate debt levels resulted in higher levels of foreign investment in those economies. The authors utilized the panel data technique in the estimation of their models. Panel data models have been shown to be susceptible to the familiar Nickell (1981) bias of estimated coefficients. Where this is not appropriately corrected for, as in the present work, the predictive power of the model may become questionable.

Ngouhouo (2013), on a broader study, examined the multidimensional determinants of FDI in the Economic and Monetary Community of Central Africa (EMCCA) for the period

1970-2005, utilizing a modified gravity GMM panel approach. The result shows that the size of the market and the availability of natural resources are by far the most significant drivers of FDI flows into those central African countries.

Although the authors employed the GMM estimator, it is however observed that the GMM difference estimator has the problem of weak instrument, with the consequence of producing biased coefficients and standard error estimates (See Roodman, 2009). In his empirical work on the drivers of FDI into Africa, Morrisset (2000) affirms that economies characterized by large local market and/or enormous natural resources have the greater advantage of attracting more investors. In addition, he observed that countries with better investment environment were in a vantage position to pull in more FDI.

Asiedu (2003) employed panel estimation technique for 22 African nations utilizing the data from 1984-2000 to empirically examine the effect of some macroeconomic variables on FDI flows. The findings from the study correct the impression that FDI into Africa is majorly driven by the availability of natural resources. Rather, her findings reveal that other factors like markets size, an efficient legal framework, quality of infrastructure, and natural resource endowment help to drive FDI into the 22 African countries studied. In another study, Opolot et.al, (2008) utilized panel estimation technique to empirically investigate the determinants of FDI into 41 Sub-Saharan African nations from 1990 to 2007. The results suggest, among others, that openness to trade, urbanization, market potentials infrastructure and the level of return on investment favourably affect FDI. In a similar study, Bezuidenhout and Naude (2008) utilized the modified gravity model to examine the nexus between FDI and in the Southern African Development Community (SADC) for the period 1973-2004. Their findings reveal that a positive causal relationship exists between trade and FDI inflows to

SADC, and exports. More importantly, they observed that distance and political instability are major determinants of FDI to SADC.

These various authors, Morrisset (2000), Asiedu (2003), Opolot et al (2008) and Naude and Bezuidenhout (2008) utilized panel data estimator (GMM) technique in their various research works. Interestingly, as with most GMM estimators, when the variance of the unobserved unit specific effects is large (as in the foregoing studies), there is the tendency for numbers of instruments to be larger than the sample size. The consequences of such numerous instruments range from biased coefficients used standard error estimates as well as weakened specification tests. In another related study, Mhlanga et al (2009) investigated the determinants and trends of FDI flows into Southern African development community (SADC) region using a uniquely rich project-level data set for the period 1994-2005. The results indicate that the size of the market tends to impact positively and significantly on FDI flows under all specification.

The use of fixed effect model by the authors may have helped to remove heterogeneity bias from the results; however, such fixed effect models tend to lose a large amount of important information. Notably, in a fixed effect model, it is impossible to measure the effects of time-invariant variables because all degrees of freedom at the higher level have been consumed. Where time-variant variables are of particular interests as in the foregoing study, this is obviously critical.

#### **2.1.19.2 Studies in Sub-Saharan Africa**

Over the years, several empirical studies have been conducted on the determinants of FDI, and the number of studies is on the increase (Bandera and White, 1968; Schmitz and Bieri, 1972; Root and Ahmed, 1979; Torrissi, 1985; Schnieder and Frey, 1985; Petrochilas, 1989; Wheeler and Mody, 1992; Jun and Singh, 1996; Nunnenkamp and Spatz, 2002). In an

empirical analysis, Athukorala (2009) posits that issues relating to the drivers of FDI are multi-dimensional in nature. He argued that while some multi-national companies base their decisions to invest in an economy on the availability of natural resources, others are motivated by the size of the market in such host economies. Yet, a number of other multinational firms simply decide to relocate their plants and machineries to other regions with a view to reducing their production costs and access the global market more efficiently.

On the determinants of FDI, Borensztein, et al (1995) observed that FDI contributed to economic growth in economies where the available labour force has attained a given level of educational standard, while, Carkovic and Levine (2002) outlined openness of the economy and human capital as essential drivers of FDI. In another perspective, Blomstrom et al (1996), state that FDI can enhance growth, especially when such a country has attained a reasonably high level of per capita income. The results of De Mello (1999) corroborated the above findings.

Balasubramayan et al (1996) looking at a cross-section of 46 countries, find that FDI performed better under export-oriented or neutral regime than under import substitution regimes. They further analyzed a cross-section model and observed that FDI can impact positively on growth only when the available human capital has attained a certain minimum benchmark. In the same vein, Obwona (2004) pointed that FDI spillovers is a function of the capacity of the recipient country to adequately absorb the inflow of such foreign technological know-how as well as the kind of prevailing investment environment. Blomstorm et al (1994), looking at the determinants of growth in 78 developing and 23 developed nations observed that FDI impacted positively on growth almost exclusively for those economies in higher income brackets. They concluded that if the host economy is to benefit from FDI inflows, it has to develop the capability of absorbing the new technology brought in by the FDI. However, Zhang and Ram (2002), looking at a cross-country of 85

countries did not find sufficient evidence to debunk the claim that a certain threshold of human capital must be in place if FDI is to have a positive and significant effect on growth. De Mello (1999) using time series data of selected countries, found evidence that the degree to which FDI promoted growth is a function of the degree of substitution between domestic investment and FDI and the level of complementarity. In another study, Makki and Somaru (2004), utilized data from 66 economies in their investigation of the determinants of FDI. The results obtained shows that human capital, foreign trade, and domestic capital are determinants of FDI just as economic growth is a consequence of FDI. Frenkel, et al (2004) on their own part pointed out that increase in FDI tends to positively influence the growth rate in those countries under study.

From the foregoing, it can be seen that not only is there an avalanche of empirical studies on the drivers of FDI flows but such is also characterized by divergent opinions regarding some drivers of FDI, especially as they relate to developing countries. According to Chakrabarti (2001), the literature on the drivers of FDI is both extensive as well as controversial. In terms of consensus of literature on FDI determinants, Tsai (1994), remarked that market size (as proxied by GDP per capita) appears to be the most commonly accepted driver of inward FDI flows. This, according to him, is so because virtually all empirical studies on the drivers of FDI adopted have the market in the recipient country as one of the independent variables. Campos and Kinoshita (2002) found positive effect of market size on FDI, while Edwards (1990) and Jasperon et al (2000) recorded an inverse relationship between FDI flows and market size.

In analyzing other determinants of FDI, Morriset (2000) reports that natural resource availability, business climate, government policies, trade openness, growth rate of GDP are among drivers of FDI in African countries. Using panel data for 29 countries, he observes that GDP growth rate and trade openness have been positively and significantly correlated

with the investment climate in Africa. In addition, other factors such as the level of literacy, the proportion of the population living in urban centres as well as the number of telephone line per capita were found to be other determinants of the business climate for FDI in the African continent. As for Bengos and Sanchez-Robles (2003), they posit that much as FDI enhances economic growth, there is however a required minimum threshold of such factors as human capital stock, stable economic environment and a liberalized market structure that the recipient countries must meet if they are to sufficiently reap the long-term benefits of FDI inflows. Ekpo (1995) in his study, observed that factors like world interest rate, rate of inflation, real income per capita, political regime, credit worthiness and the ability of the host country to promptly service its debt obligations as the major drivers of inward FDI inflows. The study by Obwona (2001) confirms that political stability and macroeconomic policy, are dependable drivers of FDI in to the sub-Saharan African countries, while Singh and Jun (1995) recorded real exchange rate as the major driver of FDI.

There are empirical studies analyzing FDI determinants that are country-specific. For instance, consistency is an major determinant of FDI in Uganda. With reference to studies on Nigeria, Akinlo (2004) identified exports, labour and human capital as drivers of FDI, while Anyanwu (1998) reported that changes in certain macroeconomic variables like the market size, the level of domestic investment, the level of openness of the domestic economy as well as significant amendments in the indigenization policy are fundamental drivers of inward FDI into the Nigeria economy. Asiedu and Esfahani (2001) report that the drivers of FDI are infrastructure development, human capital, market size, stable macroeconomic policy and openness to trade. In another study, Asiedu (2002) identifies infrastructure, trade openness, as well as the rate of return on investment, drivers of FDI, while Asiedu (2003) listed large markets, natural resource endowment, and infrastructural availability as factors promoting FDI, while corruption, political instability, investment restrictions and macroeconomic

instability tend to inhibit FDI inflows. The study by Blomstorm et al (1994) noted that FDI can impact positively on economic growth, only when a minimum threshold level of income has been attained. Borensztein et al (1998) report that only the positive interplay between human capital stock and FDI that can bring about the growth of the economy, while the divergence in their respective technological absorptive abilities may provide an explanation regarding the differences in the effect of FDI on growth across the different economies.

In a study on the determinants of FDI flows into the West African Economic and Monetary Union (WAEMU) countries, Batana (2011) conducted three estimations, namely, “within” estimation, a random effect (RE) estimation, and an estimation using the Arellano and Bond (1991) GMM. His results indicate that the rate of domestic investment, literacy, the level of economic openness, and delayed foreign investment are relevant factors that help to explain the inflow of foreign investment into the WAEMU countries.

Ajide (2014) attempted to uncover the determinants of FDI flow into some selected ECOWAS countries, given due consideration to the roles of governance and human capital. Employing panel data techniques for the period 2002-2010, his findings showed that per capita GDP, infrastructural quality, human capital and governance variables were the key predictors driving FDI to the region during the period under focus.

Suliman and Mollick (2009) employed the panel estimation technique to identify the drivers of FDI for 29 sub-Saharan African nations from 1980 to 2003. They tested whether human capital development and the occurrence of war affect FDI flows to these countries. From their results, it was found that FDI inflows were majorly influenced by literacy rate and the level of improvements in political rights and civil liberties, while war events, by contrast, exert strong negative effects on FDI. Kudaisi (2014) conducted an empirical investigation into the determinants of FDI flows into sixteen West African countries for a period of thirty three years (33years), that is from 1980 to 2012, using the panel estimation technique. The

result suggested that FDI in West Africa is mainly affected by the availabilities of natural resources and labour, as well as the level of GDP per capita, market size and official exchange rate.

The empirical study of Masuku and Dlamini (2009) reported that flow of FDI is determined by economic openness to foreign trade, infrastructure, economic stability as well as size and attractiveness of the domestic market of the previous year. On the part of the Africa Competitiveness Report (1998), it was observed that the meagre inflow of FDI into the economies of African is a function of a combination of factors such as the exorbitant administrative cost of doing business, high incidence of bribery and corruption, the difficulty of accessing to capital, and the precarious political environment among others. In like manner, UNCTAD (1999) reports that the flow of FDI into the African region is constrained by a number of factors such as the prevailing level of education, unstable political terrain, unfavourable terms of trade, and the poor state of financial development, while Olofsdotter (1998) points that the positive effect of foreign direct investment on economic growth are usually stronger in economies with reasonable level of institutional quality.

While analyzing determinants of FDI on a macroeconomic basis, the empirical works of Bhattacharaya et al (1996), Collier and Patillo (1999) and Collier and Gunning (1999) established that the prevailing policy environment is a crucial driver of FDI. This is so because economies, like those in Africa, characterized by poor transport and telecommunication facilities, systemic corruption, low productivity level as well as closed trade policy, tend to be would-be investors. In the same line of analysis, Hess (2000) appraises the prevailing investment environment in each of the sub-Saharan African countries, and identified five barriers to FDI. These are: unstable economic and political environment, inefficient and complex bureaucracies which, in turn, encourages corruption; high taxation, poor infrastructural facilities as well as lack of transparency.

In summary, we can emphatically state that size and growth of local markets, access to other markets, access to low-cost labour, profitability of investment, and state of physical infrastructure, trade policies, political and economic outlook among others constitute determinants of FDI in sub-Saharan Africa. Basically, these determinants can be categorized into two; policy framework and economic determinants of FDI. Following UNCTAD (1999), the policy framework of drivers of FDI include the existing trade and tax policies, stable political and social climate, functional market structures, and the extent to which the privatization policy encourages foreign investors. On the other hand, the economic factors that determine the inflow of FDI include business facilitation, investment promotion activities, incentives for investment, level of corruption, after-investment policies, administrative efficiency and social amenities,. This calls for a deliberate effort on the part of the managers of the different economies in Sub-Saharan Africa to put in place viable policies that will stimulate inflow of FDI into their countries.

### **2.1.19.3 Sectoral Determinants of FDI**

As mentioned earlier, FDI has grown faster than the global output and trade over the past three decades. This development has, in turn, spurred several empirical studies aimed at investigating its determinants, particularly in the developing countries at the aggregate or national level. Lately, however, academics started directing their attention on the drivers of FDI at the sectoral level, considering the fact that the factors that investors take into cognizance in their investment decisions tend to vary with the kind of industry/ sector.

In terms of sector analysis for developing countries, only Mathiyazhagan (2005), to the best of the researcher's knowledge, appears to have comprehensively examined the nexus between host countries' economic activities and FDI inflows at the sectoral level, using time series data from 1990 to 2000 for India. Applying panel co-integration test for the empirical

analysis, the results reveal that FDI inflows have contributed to raising output, productivity and export for India's economy in some sectors. Other studies are largely sector-specific studies involving panel data. Hence, in what follows, we briefly review some of those few studies on the three major sectors, namely; primary, secondary and tertiary sectors.

Although the author used the panel co-integration estimation technique, the results obtained cannot be sufficiently relied upon for two reasons. First, the proliferation of instrumental variables in the study increases the probability of drawing misleading conclusions about the coefficients estimates. Second, the decision of the author to arbitrarily fix the lag length of the variable makes it difficult to interpret such results as robustness checks, since degrees of freedom are arbitrarily fixed or determined.

#### ❖ **Primary Sector**

The numbers of studies on the determinants of FDI into the primary sector are quite few partly because FDI in this sector is mainly driven by natural resources and this factor is difficult to adequately capture in any econometric studies. However, in one of such limited studies, Ho (2005), using panel data analysis, for the period 1997-2002, observed that the size of the domestic market and the prevailing wage rate are the major drivers of FDI into the primary sector in China.

Nauwelaerts and Beveren (2005) in a study of some OECD countries found that flow of FDI in the primary sector of those countries under focus is concentrated in a few number of countries that have abundance of natural resources. Walsh and Yu (2010) study the sectoral drivers of FDI for 27 emerging markets and developed countries for the period 1985 to 2008. Using both macroeconomic and qualitative variables, they observed that, the relationship between the former and primary sector FDI was quite minimal. On the contrary,

qualitative variables such as clustering effects, labour market flexibility and financial depth were found to be significant in attracting FDI to that sector.

The various authors, Ho, (2005), Nauwelaerts and Beveren (2005) and Walsh and Yu (2010), all applied the panel data (GMM) estimation technique in studying the determinants of FDI into the primary sector for the various countries concerned. However, it has been acknowledged in the literature that GMM difference estimator has the problem of weak instrument. That is, the tendency of producing biased coefficients and standard error estimates. Where this is the case, the policy prescriptions drawn from such results will be quite misleading.

In Nigeria, Ajuwon and Ogwumike (2013) examined the role of uncertainty (both economic and political) in determining the inflow of FDI into the agricultural sub-sector for the period 1970-2008 using co-integration and error correction approach. Their results indicated that, in the short-run, inflation impacted negatively but significantly on FDI inflow to the agricultural sector, while political freedom had a positive and significant effect. In the long run however, exchange rate volatility had a negative but significant effect on FDI into the sector.

Ajuwon and Ogwumike (2013) may have obtained robust results arising from the application of cointegration and error-correction techniques; however the introduction of several instrumental variables in their bid to capture the influence of some qualitative variables has the tendency of producing biased coefficient estimates and, by extension, increases the probability of providing misleading policy conclusions (Roodman, 2009).

## ❖ Secondary Sector

Unlike the primary sector, foreign capital flows into the manufacturing sector tend to exhibit horizontal and backward linkages with the host nation (Aykut and Sayek, 2007). Benacek and Visek (1999) research on the determinants of FDI flows into Czech manufacturing industries using the trimmed Least Squares and leverage point estimation technique for 91 industries in 1994. Their results reveal that low wage rate, high factor productivity, high GDP growth rate and the level of research and development are significant drivers of FDI inflows into the manufacturing sector in Czech Republic.

In other studies by Aykut and Sayek (2005) and Benacek and Visek (1999), the trimmed least square and leverage point estimation technique were utilized in empirical literature, it has been shown that the trimmed least squares technique is highly resistant to leverage points, and is robust to outliers in the response. In both studies, the high leverage points is indicative of the amount of effects on the estimates of the regression coefficients, thus casting doubts over the reliability of the parameter estimates obtained.

In another study, Bellak, et. al., (2008), using an industry-level data for 1995 to 2003 for 11 European countries within a dynamic panel data framework, observed that increase in research and development expenditure in GDP and the labour cost position (via increase in labour productivity) result in substantial increase in FDI inflow in those countries under investigation. Walsh and Yu (2010) study of the drivers of FDI into 27 developed and emerging market economies for the period of 1985 to 2008 using a GMM dynamic approach reported that the prime drivers of manufacturing FDI into those countries concerned included, trade openness, agglomeration effect, and GDP growth rate, among others. For Sweden, Karparty and Poldahl (2006) analyze inward FDI at both the firm and industry level for the manufacturing and service sectors during the period of 1990 to 2000. Employing

traditional panel estimators, the results reveal that, the drivers of manufacturing FDI into the Swedish economy includes the level of skills acquisition, energy intensity and capital intensity.

Bellak et al (2008), Walsh and Yu (2010), and Karpathy and Poldal (2007), all applied the panel estimators (GMM). As stated previously, it has been revealed in empirical studies that the GMM estimator has one fundamental shortcoming. Specifically, the GMM estimator tends to suffer from weak instrument problem. That is, it has the tendency of producing biased coefficients and standard error estimate. Thus, on the surface, such estimates may look robust, but a close look may reveal how distorted they are.

Harvey and Abor (2009) investigated the drivers of FDI into the manufacturing sector in Ghana using the Regional Project on Enterprise Development (RPED) dataset. Utilizing the binary logistic regression model, the results indicate that firm size, capital requirement, skill intensity, labour cost, technological capability and unionization of a firm's workers positively affect FDI inflow.

The author may have obtained robust results regarding the drivers FDI into the Ghanaian manufacturing sector, but the choice of binary logistic model has certain flaws which the author did not correct for. Essentially, in a binary logistic regression, not only are the error terms heteroskedastic, but they are also not normally distributed. These shortcomings tend to negatively influence the parameter estimates and, by implication, the conclusion that may be arrived at.

Dell' Erba and Reinhardt (2011) investigated the linkage between large gross FDI inflows and the distribution of same among the various sectors for the period 1994 and 2009 for 95 emerging market and industrial countries. They find that high growth rates of the economy, privatization and low public debt are instrumental in attracting large inflows of FDI

into those countries under consideration. Their choice of balanced panel data approach to examining the large gross FDI inflows at the sectoral level for a emerging market and industrial countries should expectedly, produce robust results. This aim may not be realized considering the small sample size chosen (1994 to 2009). Following Calendo (2005), such small sample size may generate problems in terms of higher variance. This, in turn, could generate underestimated estimates in the long run.

Fakhreddin et. al (2011) in their study of the drivers of FDI into the manufacturing sector in Malaysia for the period 2000-2009 and employing quarterly data , observed a positive and significant effect of local bank credit provided by the banking system to the private sector as well as the development expenditure of government on FDI as major determinants within the sample period. In their study of the nexus between FDI and its potential determinants, the authors utilized the ordinary least square(OLS) technique. Although the authors tested and corrected for autocorrelation in their study, they failed to test for homogeneity of variance as well as the normality of residual distribution. Yet, the violation of these two assumptions is capable of rendering the OLS estimator inefficient, even though it could still be unbiased and consistent. The implication of this is that, the OLS will produce incorrect estimates of the parameters standard errors.

For China, Liu et.al (2012) investigated the regional determinants of FDI manufacturing industry for the period 2001-2008. In order to provide accurate information for policy makers to attract right FDI into the right location, they classified manufacturing industries into low and high tech categories. Their results reveal that while domestic market, labour cost and agglomeration effects are important determinants in the former development of telecommunication was vital for the latter.

### ❖ Tertiary Sector

Unlike the primary and manufacturing sectors, where product is tradable, services are mostly non-tradable in nature. Besides, much of inward FDI into the sector is attracted by the market size, where forward linkages for FDI are well-defined and potential impact of FDI in the sector is immense.

Kolstad and Villanger (2008) examine the host country drivers of FDI into the service sector. Using a group of 57 countries, the authors demonstrate that both democracy and institutional quality are more vital in attracting FDI into services than investment risk and political stability. In addition, democracy is found more important in developing than developed countries, with a threshold level below which a country is unable to attract FDI.

The authors, Liu et al (2012) and Kolstad and Villanger (2008), adopted the panel data technique in their study of the drivers of FDI flows into the manufacturing sector in the case of the former, and service sector in the case of the latter. In both studies, the methodology adopted is characterized by two major flaws. First, the small sample is capable of generating problems in terms of higher variance and, by extension, producing underestimated estimates in the long-run. Second, the authors in both studies did not correct for the familiar Nickell (1981) bias, a development that could make the parameter estimates to be inefficient.

Focusing on the relative degree of openness to FDI inflows among countries, Golub (2009) found an inverse relationship between the stock of existing FDI in the service sector and FDI restriction scores. The author's comparative analysis of openness to FDI in services is fraught with a number of shortcomings. First, despite the author's attempt to rely on multiple sources and objective reports of restrictions across countries, there is an unavoidable element of arbitrariness and subjectivity in the scoring. Second, with the exception of General

Agreement on Trade in services (GATs) schedules, there is no international agreement on standardized reporting on policies towards FDI in services. These shortcomings could distort the final outcomes of the research investigation. Little wonder that the author cautioned that, “the results should be interpreted as estimates rather than precise and definitive findings.”

Focarelli and Pozzolo (2001), in a study on the trends in cross-border bank mergers and the arrangements regarding shareholdings for OECD countries found the recipient country’s (expected) economic growth rate and the extent of development of the financial system are among the major determinants of financial FDI. They argue that foreign banks would like to invest in economies that are characterized by few banks, but well developed financial system.

In the foregoing studies, the authors adopted micro-econometric methods to explore while banks expand abroad. Although a panel data estimation technique was employed, the methodology was characterized by a number of inconsistencies. Beside their failure to correct for the familiar Nickell (1981) bias, their adoption of a micro-econometric approach to study a macroeconomic issue leaves much to be desired. As rightly observed by Clarke et al (2001), such an approach may obscure the macroeconomic fundamentals of the different economies being considered in the study and, by extension, the true determinants of financial FDI.

Walsh and Yu (2010), utilizing the GMM dynamic approach for 27 advanced and emerging market countries from 1985 to 2008, reported that factors like real exchange rate, clustering effects, rate of GDP growth, and openness have positive effect on inward FDI inflow.. The authors approach by using disaggregated data comprising macroeconomic, institutional/qualitative data for the 3 sectors, namely, primary, secondary and tertiary sectors may have provided a deep insight into the respective determinants of FDI in those countries, but the methodology is not without some shortcomings. Although the authors adopted the

GMM dynamic approach in a bid to overcome the problems of multicollinearity, endogeneity and weak instrumental variables, however, the variance of the unobserved unit specific effects seem large; hence, the large number of instruments relative to the sample size. The likely consequences of such numerous instruments include biased coefficients, biased standard error estimates and weakened specification tests, among others.

Feng (2011) in a study on the impact and determinants of FDI in china's service sector observe that FDI into the service industry in China is mainly a function of market scale and cumulative FDI, the degree of openness, while high wage rate tends to hinder inward FDI. The author conducted a detailed study by testing and correcting for unit root problems, transformed all the variables into natural log in order to avoid the problem of heteroscedasticity, etc. However, the methodology utilized (i.e. OLS) leaves much to be desired. For instance, no attempt was made to test whether or not the residuals are normally distributed. The implication of this is that, the parameter estimates so obtained may be incorrect estimates of the parameters standard errors.

#### **2.1.19.4 FDI – Domestic Investment Nexus**

In theoretical literature, it is often opined that inward FDI has enormous potential to promote the rate of growth of the economy of a nation. However, the attainment of such goal depends largely on whether or not the activities of foreign multinational firms truly promote or stifle local investment (Gardiner, 2000). Hence, in the empirical literature, the question of whether or not FDI will displace domestic investment especially in developing countries has remained inconclusive. In general, there exists three prevailing views from previous literature, namely crowding in effect (Bosworth and Collins, 1999; Agosin and Machado, 2005), crowding out effect (Agosin and Machado, 2005; Titarenko, 2006; Udomkerdmongkol and Morrissey, 2008) and no effect, Wang and Li (2004).

Table 4 in Appendix 1 illustrates the results from selected previous research on FDI displacement effect in developing, transitional and developed economies. Specifically, Bosworth and Collins (1999) studied the effect of foreign capital flows on local investment for 58 developing economies for the 1978-1995 periods. The authors distinguished three types of capital flows: portfolio investment, FDI and bank loans. The results reveal that a dollar increase in capital flows brings about 50 cents rise in the level of local investment, thus providing evidence of crowding in effects. There was however little or no connection between portfolio inflows and local investment; while the actual effect of loans falls between those of portfolio inflows and investment. In a related study, Borensztein et.al (1998) investigated the effect of FDI on economic growth rate and domestic investment in a panel study using time series data on FDI inflows from 69 developing countries over a 22-year period. Their results indicate that FDI crowds in local investment, where a dollar rise in FDI inflows is associated with more than one dollar increase in total investments in the host country. Fry (1993) examined the nexus between domestic investment and FDI for five Basin countries and a group of other 11 other developing nations. The study found out that, for the eleven developing nations, FDI tends to substitute local investment. For the five Pacific Basin market economies, however, FDI enhances local investment by the same margin as the inflow of FDI. Razen (2004) tested the interactions between, local investment, FDI, international portfolio investment and international loans and for 64 developing countries during the period of 1976 to 1997, within a simultaneous equations framework. The results revealed that FDI impacted more on the level of local investment than other forms of capital inflows. Agosin and Machado (2005) investigated the issue of whether FDI substitutes or enhances local investment in 12 countries, three countries each from the developing regions of Africa, Asia and Latin America for thirty years (i.e., 1971-2000). Their results reveal that

FDI crowds out local investment in Latin America; it crowds-in domestic investment in Asia. In Africa, FDI had no effect on local investment.

In China, Wang and Li (2004) examined the effect of FDI on domestic investment adopting a larger sample of panel data, and then compared the various estimates from ‘absolute’ and ‘relative’ models. The results did not reveal any appreciable crowding in or out effects in China, that is, on country level. However, a breakdown of the results revealed significant regional differences, with Eastern China indicating crowding out effect, Middle area of China showed crowding in effect, while no significant effect was found for Western China.

On a country-specific case, Titarenko (2006) estimated the extent to which FDI influences (enhances or substitutes) local investment process in Latvia economy during the period 1995-2004. The results are supportive of a substitution effect of FDI on local investment, where one additional lat of FDI inflow in Latvia economy gives rise to less than a one-lat rise in total investment.

In China, Tang et.al (2008) examined the linkage between FDI, domestic investment, and economic growth from 1988 to 2003, utilizing a multivariate VAR system with error correction methodology. The results reveal that FDI helps to crowding in local investment in China, the greater the quantity of such FDI inflows, the greater the increase on the level of local investment.

In Malaysia, Hooi and Wah (2010) assessed the dynamic linkages between domestic investment, FDI and economic growth for the 1970 to 2009, within the framework of vector autoregressive system. Their findings reveal that FDI complements domestic investment. In a similar study, Udomkerdmongkol and Morrissey (2008) investigated the effect of FDI on domestic private investment in 36 low/medium income countries covering the period 1995-

2001. Their findings demonstrate that FDI tends to substitute domestic private investment, and this displacement effect is more pronounced in economies with good governance institutions.

Ndikumana and Verick (2007) studied the causal relationship between domestic investment, FDI and in 38 Sub-Saharan African countries during the 1970-2005 periods. The results indicate that there is a two-way relationship between FDI and local investment. Specifically, it shows that private investment and FDI tend to complement each other in those Sub-Saharan countries investigated. In a related study, Eregha (2012) examined the dynamic linkages between domestic investment and FDI in 10 ECOWAS countries for the period 1970 to 2008 employing panel cointegration method of analysis. His findings reveal that, FDI inflow substitutes (i.e. crowds out) local investment in the 10 ECOWAS countries within the time frame under consideration.

Morrissey and Udomkerdmongkol (2012) investigated the question of crowding in/out effect and if alternative elements of governance have differing effects on the relationships between domestic private investment and FDI for 46 developing economies covering the period 1996-2009. Results suggest that total investment (FDI and private) is more pronounced in countries with good governance structures, which is indicative of FDI displacing domestic private investment, with the extent of crowding out closely related to governance. Political instability and corruption, as governance indicators, had strong effect on investment. Of the two indicators however, political instability represented the most significant facet of governance in terms of their relationship with FDI and domestic private investment; thus, a rise in FDI has the greatest effect on reducing private investment, (but increasing total investment) in politically stable regimes.

Acar et.al (2012) investigated the nexus between domestic investment and FDI for 13 selected nations in the Middle East and North Africa (MENA) region for the period 1980-2008. Employing dynamic panel GMM techniques, they estimated the model for three country groups; all selected countries, oil-rich and oil-poor countries. Their results reveal that FDI substitutes domestic investment in the region (specifically in the 13 countries chosen for analysis) as well as in the oil-poor and oil-rich countries of MENA. They attributed this development partly to the inability of domestic investors to compete with the technologically efficient MNCs, hence the crowding out effect.

In terms of research in Nigeria, there are limited studies, to the best of the researcher's knowledge that explicitly examine the nexus between local investment and FDI. Most studies in the literature (e.g. Agosin and Machado, 2005; Ndikumana and Verick, 2007; Eregha, 2012) employed panel estimation technique to examine the relationship between local investment and FDI; and these techniques are prone to the problem of heterogeneity and data comparability. Thus, while Agosin and Machado (2005) and Eregha (2012) provided support for the crowding out hypothesis, showing that overseas investment (FDI) in Nigeria have substituted those by domestic enterprises in industries where the products are competing directly with each other, Ndikumana and Verick (2007) provided evidence in support of crowding in effect.

Uremadu (2011) did not directly examine the question of crowding in/out effect in Nigeria. However, his research shed light on some important linkages between FDI and ID via domestic savings. According to him, foreign private investment in real terms crowded out gross domestic saving which, in turn, makes it difficult for savings to positively and significantly impact on capital formation. In another study on Nigeria, Orji and Mba (2011) examined the nexus between capital formation, foreign investment, and economic growth

utilizing the two-stage least squares (2SLS) approach for the period 1970-2007. Their findings reveal, among others, that foreign private investment has a crowding out effect on capital formation (a proxy for domestic investment) in Nigeria within the period investigated.

Olaniyi (1988) investigated the impact of direct foreign capital on domestic investment as well as the overall contribution the impact of the former to the enhancement of the domestic savings capacity within Nigeria. His model of domestic savings and investment financing in Nigeria attempted to test the effect of FDI on the level of domestic savings and investment. His results confirm that domestic savings is by far more relevant in determining investment growth than foreign capital flows in Nigeria. At best, the latter complements the former. This finding has also been confirmed by the work of Adegbite and Owuallah (2007)

## **2.2 Theoretical Framework**

The theoretical framework of this study follows the approach introduced by Agosin and Machado (2005), but with significant modifications. This study, thus, decomposes total gross investment into two components, namely domestic investment and foreign investment. Hence, total investments ( $IT$ ) is the summation of both domestic and foreign investment such that the resulting identity relation can be represented in equation (1).

$$IT_i \cong Id_i + If_i \tag{1}$$

Here, investment by MNEs is taken as a function of FDI (Sunny and Sawant, 2011).

Where:

$IT_i$  = Total investment in selected ECOWAS countries;

$Id_i$  = Domestic investment in selected ECOWAS countries; and

$If_i$  = Foreign investment in selected ECOWAS countries.



$If_{i,t-n}$  = ‘Nth’ lag period of foreign investment at time ‘t’ in selected ECOWAS countries ‘i’

Expressing equation (2) in an econometric form for the purpose of empirical estimation yields Equation (3):

$$If_{i,t} = \beta_0 + \beta_1 Id_{i,t} + \beta_2 If_{i,t-n} + \epsilon_t \dots \dots \dots (3)$$

In finding an expression for factors that determine domestic investment,  $Id_{i,t}$ , we invoke the capital adjustment model. Rama (1993), Agosin and Machado (2005), noted that domestic investment is a stock adjustment variable which responds to difference between the desired and actual capital stock due to liquidity constraint faced by firms and influence of time. See Equation (4) for the algebraic representation of the capital adjustment model.

$$Id_i = \theta_i (k^*d - kd) \dots (4)$$

Taking time into consideration, equation (4) becomes equation (5)

$$Id_{i,t} = \theta_i (k^*d_t - kd_t) \dots (5)$$

Where:

$Id_{i,t}$  = Domestic investment at time ‘t’ in selected ECOWAS countries ‘i’;

$k^*d_{i,t}$  = Desired capital stock at time ‘t’ in selected ECOWAS countries ‘i’;

$kd_{i,t}$  = Actual capital stock of domestic investment at time ‘t’ in selected ECOWAS countries ‘i’; and

$\theta_i$  = Adjustment coefficient; value lies between 0 &  $\infty$ ; i.e ,  $\theta$  is strictly positive.

We know that actual capital stock,  $kd_{i,t}$ , is the sum of current capital stock and real investment. In this study, we define real investment as the difference between new investment and depreciation; therefore from Equation (5), the values of  $kd_t$  can be derived. It follows that the future value of actual capital stock,  $kd_{i,t+1}$ , is given by its current value and real investment,  $rI_{i,t}$  at time t. See Equation (6) for the algebraic representation.

$$kd_{i,t+1} = kd_{i,t} + rI_{i,t} \dots \quad (6)$$

$$kd_{i,t+1} = kd_{i,t} + I_{i,t} - kd_j I_{i,t} \dots \quad (7)$$

$$kd_{i,t+1} = kd_{i,t} + (1 - d_j)I_{i,t} \dots \quad (8)$$

$$kd_{i,t} = kd_{i,t-1} + (1 - d_j)I_{i,t-1} \dots \quad (9)$$

Where:

$kd_{i,t}$  = Actual level of capital stock at time 't' in selected ECOWAS countries 'i';

$kd_{i,t-1}$  = One period lag of actual level of capital stock at time 't' in selected ECOWAS countries 'i';

$I_{i,t-1}$  = One period lag of investment in selected ECOWAS countries 'i';

(1-d<sub>j</sub>) = Depreciation charged on investment (d<sub>j</sub>); and

$rI_t$  = Real investment at time "t".

Furthermore, the Neoclassical Investment Model (especially Hall and Jorgensen 1967), hypothesized that desired capital stock,  $k^*d_t$ , depends partly on expected growth and partly on the difference between actual output and full employment output.

$$k^*d_t = \alpha_i (G_t^e, Y_t) \dots \dots \quad (10)$$

$$k^*d_t = \alpha_i (G_t^e, Y_t - Y_t^f) \dots \quad (11)$$

$$k^*d_t = \alpha_0 + \alpha_1 G_t^e + \alpha_2 Y_t - \alpha_3 Y_t^f \dots \quad (12)$$

Where:

$k^*d_t$  = Desired capital stock at time 't'

$G_t^e$  = Expected growth of investment at time 't'

$Y_t$  = Actual output of the economy at time 't'

$Y_t^f$  = Full-employment output at time 't'

Substituting Equations (9) and (12), representing expressions for actual ( $kd_t$ ) and desired ( $k^*d_t$ ) capital stock, respectively, into Equation (4), yields Equation (13).

$$Id_{i,t} = \theta_1 \alpha_0 + \theta_i \alpha_i G_t^e + \theta_i \alpha_2 Y_t - \theta_i \alpha_3 Y_t^f - \theta_i kd_{t-1} - \theta_i(1 - d_j)I_{t-1} \dots \quad (13)$$

Equation (12) is a theoretical expression of the determinants of domestic investment along the framework of a regional open economy, like ECOWAS. Where  $\theta_i \alpha_0 = \theta_i \alpha_1 = \theta_i \alpha_2 > 0$  are expected to be positive, while  $\theta_i \alpha_3 = -\theta_i = \theta_i(1 - d_j) < 0$  are negative on a priori expectation. Other variables remain as defined in the earlier derivations.

Existing studies (for example, Mauro, 1996; Alfaro et al., 2004; Fowowe 2011; Alemu 2012) have demonstrated that macroeconomic factors significantly influence investments, whether domestic or foreign. Therefore, unique effects of macroeconomic factors are endogenously incorporated in developing the general framework for this study. Let M represent constellation of all possible macroeconomic factors that may affect investment in ECOWAS, such that Equation (3) can be expanded by including the effects of macroeconomic characteristics, M. The functional expression for the macroeconomic factors is presented in Equation (14).

$$M_t = \varphi_i(Natres, Rgdp, Open, Exchr, Cpi, Infra, Labour, Instfac) \dots \quad (14)$$

$$M_t = \varphi_1 Natres_{i,t} + \varphi_2 Rgdp_{i,t} + \varphi_3 Open_{i,t} + \varphi_4 Exchr_{i,t} + \varphi_5 Cpi_{i,t} + \varphi_6 Labour_{i,t} \quad (15)$$

Equation (16), therefore, becomes an important modification to our theoretical framework specified in Equation (3) due to the inclusion of influence of macroeconomic factors into the modeling framework of this study.

$$If_{i,t} = \beta_0 + \beta_1 Id_{i,t} + \beta_2 If_{i,t-n} + \sum_{i=1}^I \varphi_i M_{i,t} + \epsilon_{i,t} \quad \dots (16)$$

Again, the important role that institutional quality and good governance play in stimulating economic growth, via its effects on investment, has been accepted in both economic and political literatures (see North, 1990; Hall and Jones, 1999; Ajayi, 2002, 2006; Acemoglu, Johnson and Robinson, 2004; Rodrik, Subramanian and Trebbi, 2004; Banerjee and Iyer, 2005; Fosu, Bates and Hoeffler, 2006; Rodrik, 2007). Hence, Equation (16) is further modified by employing the use of institutional variable to capture governance stability and this is specified as Equation (17).

$$If_{i,t} = \beta_0 + \beta_1 Id_{i,t} + \beta_2 If_{i,t-n} + \sum_{i=1}^I \varphi_i M_{i,t} + \sum_{j=1}^J \omega_j Inst_{i,t} + \epsilon_{i,t} \quad \dots (17)$$

Where:  $\sum_{j=1}^J \omega_j Inst_{i,t}$  represents institutional variables including “voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law and control of corruption” (Worldwide Governance Indicators (WGI)).

Additionally, a number of studies have confirmed the relevance of infrastructure in enhancing FDI and economic growth. Such studies include Wheeler and Mody (1992), Loree and Guisinger (1995), Richaud et al. (1999), and Asiedu (2002, 2006). These authors are of the opinion that the availability of good infrastructure is prerequisite condition if foreign investors are to successfully operate. A good infrastructure tends to enhance the investment

environment for FDI. Others like Wei et al. (2000) and Estache and Fay (2007) opined that availability of quality infrastructure helps to enhance the level of comparative advantage a region enjoys.

Thus, incorporating the effect of infrastructure into Equation (17) yields Equation (18), which shows that the current level of foreign investment is influenced by macroeconomic factors, institutional quality, infrastructure, lag values of foreign investment, as well as, factors which determine domestic investment.

$$If_{i,t} = \beta_0 + \beta_1 Id_{i,t} + \beta_2 If_{i,t-n} + \sum_{i=1}^I \varphi_i M_{i,t} + \sum_{j=1}^J \omega_j Inst_{i,t} + \sum_{k=1}^K \gamma_k Infra_{i,t} + \epsilon_{i,t} \dots \quad (18)$$

Substituting Equation (13) and (15) into Equation (16), yields:

$$\begin{aligned} If_{i,t} = & \theta_i \alpha_0 + \theta_i \alpha_1 G_{i,t}^e + \theta_i \alpha_2 Y_{i,t} + \theta_i \alpha_3 Y_{i,t}^f - \theta_i k d_{i,t-1} - \theta_i (1 - d_j) I_{i,t-1} \\ & + \beta_2 If_{i,t-n} + \varphi_1 Natres_{i,t} + \varphi_2 Rgdp_{i,t} + \varphi_3 Open_{i,t} + \varphi_4 Exchr_{i,t} \\ & + \varphi_5 Cpi_{i,t} + \varphi_6 Labour_{i,t} + \omega_j Inst_{i,t} + \gamma_k Infra_{i,t} + \epsilon_{i,t} \dots \quad (19) \end{aligned}$$

Re-arranging equation (19); and invoking theoretical assumption two (2) of this study, that is,

$If_{i,t} \cong FDI_{i,t}$ , yields Equation (20),

$$\begin{aligned} If_{i,t} \cong FDI_{i,t} = & (\theta_i \alpha_0 + \beta_0 + \varphi_0) + \theta_i \alpha_1 G_{i,t}^e + \theta_i \alpha_2 Y_{i,t} - \theta_i \alpha_3 Y_{i,t}^f - \theta_i k_{i,t-1} \\ & - \theta_i (1 - d_j) I_{i,t-1} + \beta_2 If_{i,t-n} + \varphi_1 Natres_{i,t} + \varphi_2 Rgdp_{i,t} + \varphi_3 Open_{i,t} \\ & + \varphi_4 Exchr_{i,t} + \varphi_5 Cpi_{i,t} + \varphi_6 Labour_{i,t} + \omega_1 Inst_{i,t} + \gamma_1 Infra_{i,t} \\ & + \mu_{i,t} \dots \quad (20) \end{aligned}$$

Further, the respective coefficients of variables in Equation (20) are reparametized and represented by  $\delta$  for purpose of uniformity, and rearranged, yielding Equation (21).

$$\begin{aligned} FDI_{i,t} = & \delta_0 + \delta_1 G_{i,t}^e + \delta_2 Y_{i,t} + \delta_3 Y_{i,t}^f + \delta_4 k d_{i,t-1} + \delta_5 I_{i,t-1} + \delta_6 If_{i,t-n} \\ & + \delta_7 Natres_{i,t} + \delta_8 Rgdp_{i,t} + \delta_9 Open_{i,t} + \delta_{10} Exchr_{i,t} + \delta_{11} Cpi_{i,t} \\ & + \delta_{12} Infra_{i,t} + \delta_{13} Labour_{i,t} + \delta_{14} Inst_{i,t} \\ & + \epsilon_{i,t} \dots \quad (21) \end{aligned}$$

Therefore, Equation (21) becomes the main equation for this study, and forms the underlying framework on which subsequent estimations, analysis and discussions on the determinants of FDI in ECOWAS are based. Data are included in the model based on availability from established sources, such as World Bank's World Development Indicators.

Where:

FDI = Net FDI inflows as a percentage of GDP

Natres= Total natural resources rents (% of GDP)

Rgdp = Real GDP per capita (constant 2005 US\$)

Open = Trade (% of GDP)

Exchr = Official exchange rate (LCU per US\$, period average)

Cpi = Consumer price index (2010 = 100)

Infra = Telephone lines (per 100 people)

Labour = Labor force, total

Inst= Government policy, proxy by country's ranking in CPIA business environment.

$If_{i,t-n} = FDI_{t-n}$  = Period lagged values of FDI)

The 'i's and 't's represent individual country and time frame, respectively.

**Note:**

*Expected sign of the parameter estimates*

$\delta_0 = \delta_1 = \delta_2 = \delta_6 = \delta_7 = \delta_8 = \delta_9 = \delta_{12} = \delta_{13} = \delta_{14} > 0$  are expected to be positively signed, while the remaining coefficients, namely,  $\delta_3 = \delta_4 = \delta_{10} = \delta_{11} < 0$  should have negative signs.

## **CHAPTER THREE**

### **RESEARCH METHOD**

This chapter contains the description of the research design used in ascertaining the determinants of FDI in ECOWAS. These include sample and sampling techniques, as well as the methodology used in analyzing the data for this study.

#### **3.1 Research Design**

Research design can be variously defined as a plan, structure and scheme of investigation so designed as to enable the researcher to obtain answers to research questions or problems. It is a procedural plan that is adopted by the researcher(s) to provide answers to questions validly, objectively, accurately and economically (Kumar, 2005). Polit, Hungler and Beck (2001) define a research design as “the overall plan for collecting and analyzing data including specification for enhancing the internal and external validity of the study”. In a similar vein, Omorogiuwa (2006) describes a research design as a strategy on how data will be collected, analyzed and the extent to which conclusions reached are applicable and generalizable. From the foregoing, it can be inferred that a research plan is essentially the overall plan for connecting the conceptual research problems to the pertinent (and achievable) empirical research. Thus, it follows that the major role of a research design is to offer the necessary guide towards ensuring that the evidence from the research work enables the researcher to answer the preliminary question raised as unambiguously as possible.

This study is a causal-comparative study of the determinants of foreign direct investment (FDI) in the Economic Community of West African States (ECOWAS). Specifically, ex post facto research method will be used, the subject being drawn from a population of ECOWAS countries in the sub – Saharan Africa region. According to Kerlinger (1964) an ex post facto research is that research in which the explanatory variable or

variables have already occurred and in which the researcher starts with the observation of an explained variable or variables. He then studies the independent variables in retrospectively with a view to ascertaining their relationship to, and effects on, the dependent variable.

Following Babbie (2013), there are three basic features of ex post facto research approach. First, in an ex post facto research, attempt is made to infer the existence of a cause and effect relationship; thus, the ex post facto research must demonstrate an association between the independent and dependent variables. Second, an ex post facto research requires the study to be non-spurious. In this regard, non-spurious refers to a causal relationship between two variables. Finally, in an ex post facto design, there are two categories of causes that contribute to its design, namely necessary and sufficient causes. In this context, the term 'cause' is taken to mean something that produces an effect.

Essentially, the choice of an ex post facto research approach is justified by the following advantages. First, in an ex post facto research, causes are usually studied after the effect on another variable must have been occurred. Thus, the basic ex post facto technique involves commencing from an effect and there after ascertaining the possible causes of such effects. Second, an ex post facto research method allows us to investigate cause-and-effect relationships in situations where the use of experiments would be near impossible. Thus, ex post facto research permits investigation in a variety of variables which would be impossible to study experimentally. Lastly, ex post facto studies help to identify variables worthy of experimental investigation. In fact, ex post facto studies are carried out with the sole aim of identifying the likely outcome of an experimental study. Put differently, ex-post facto research approach allows us to study several relationships in a given research investigation.

In summary, in an ex post facto study the data are already collected (mainly secondary data), obtaining permission to conduct the study is less involved than enrolling participants, as less time is involved in conducting the study than by creating new data.

### **3.2 Population of the Study**

Population is defined by Polit et al (2001) as “the entire aggregation of cases that meet a specified set of criteria”. The target population in this study represents the fifteen countries that constitute the Economic Community of West African States. The countries are Benin, Cote d’Ivoire, Cape Verde, Ghana, Burkina Faso, Nigeria Guinea, Guinea Bissau, Niger, Liberia, Mali, Gambia, Sierra – Leone, Senegal, and Togo.

The main focus of this research investigation was to employ panel data covering a period of thirty four years (1980 – 2013) for these countries.

### **3.3 Sample and Sampling Technique**

Sampling refers to the process of selecting a fraction of the total population that conforms to a designated set of specification to be studied. Essentially, the sampling technique is divided into two major techniques namely probability and non-probability. The probability sampling technique is the technique where every unit of the population has the equal chance to be as a member of the sample. According to Kothari (2004), the non-probability sampling technique is variously referred to as “deliberate sampling, purposive sampling and judgment sampling”. In this type of sampling, items for the sample are selected deliberately by researcher, his choice concerning the items remains indisputable. In this study, the purposive sampling was utilized in selecting the sample. The ECOWAS region comprises fifteen (15) countries as stated in the population of the study. Out of this number,

fourteen (14) of these countries excluding Cape Verde was utilized. Cape Verde was excluded because of data unavailability of most of the variables of interest.

ECOWAS was disaggregated into its constituents on the basis of two major criteria, namely: Income Group (IG) and Legal Code Origin (LCO). The first criterion classified the fourteen countries into low income countries and lower- middle income countries. The second criterion classified the 14 into 3 categories viz (i) Francophone countries, (ii) Anglophone countries and, (iii) Luzophone countries.

Thus, the sample size for this study consists of fourteen countries made up of eight (8) francophone countries, five (5) Anglophone countries and one (1) Luzophone country.

### **3.4 Method of Data Collection**

The data used for this study were obtained from secondary sources. The secondary sources data include the International Monetary Fund (IMF), World Economic Outlook data base, World Development Indicators of World Bank, United Nations World Investment Directory country profile and the CPIA Business Environment, amongst others. The foregoing secondary sources were supplemented by journal articles, conference proceedings and other documentations that have bearing on the research.

The secondary data collected in this study were related to the following:

- Foreign direct investment
- Openness to trade
- Exchange rate
- Inflation rate
- Infrastructure
- Market size

- Natural resources
- Human capital
- Institutions
- Agglomeration economies
- Gross fixed capital formation

### **3.5 Method of Data Analysis**

Broadly speaking, this study adopted the panel data technique for empirical analysis. This technique was necessitated by the range of the countries (14) in the ECOWAS region being investigated.

The estimation technique adopted by the study in analyzing the first objective was the system generalized method of moment (GMM)(see sub-section 4.3.1). Basically, given the narrow panel of only 14 countries, it is reasonable to proceed using first difference dynamic GMM as proposed by Arellano and Bond (1991). However, in a bid to overcome the weaknesses associated with the use of fixed effects and first difference GMM estimators, we utilized a system GMM approach which combines both regression in differences and in levels as suggested by Blundell and Bond (1998). The variables were tested for unit root using Levin, Lin and Chu (LLC, 2003) and the Im, Pesaran and Shin (IPS, 2003). Both the LLC and IPS are panel-based unit root tests based on the Augmented Dickey-Fuller (ADF) principle. Next, the study employed co-integration test for linear combination of long-run relationship among variables.

However, considering the shortcomings of traditional procedures (e.g. Engle and Granger, 1987;Engle and Yoo,1987), this study adopted the Johansen-Fisher panel co-integration test, as developed by Larsson, Lyhagen and Lothgren (2001),to examine the existence of co-integration. The choice of this technique is premised on the fact that it enables

one to deal with cases where more than one co-integrating relationship exists. The Hausman's model specification test is essentially designed to enable one choose between random effects and fixed effects model. However, we intend to report alongside results for the random-effect for emphasis. For the dynamic panel model, the Sargan test is designed to show whether or not the instruments included in the specified dynamic panel regression are valid. Lastly, the second order autocorrelation test is meant to ascertain the existence or otherwise of a second-order autocorrelation.

In line with the second objective, the study adopted panel data granger causality test and the pair-wise causality procedure in conducting country - specific analysis. The choice of conducting country-specific pair-wise causality test was to buttress the robustness of results obtained in the overall panel data casualty test. The procedure was complemented by conducting structural breaks and impact assessment analyses.

The estimation approach for the third objective followed the Granger causality procedure as put forward by Granger (1969) and popularized by Sims (1972). Testing causality in the Granger sense entails using F-test. The decision rule lies on the F- test , if the F - test is statistically significant then, the study concludes the two variables “granger cause” each other .in this sense , there are three major terms, namely , bi – directional causation, unidirectional causation and independent causation).

### **3.5.1 Justification for Estimation Technique**

From the review of estimation techniques surveyed thus far in sub-section 2.1.19 for estimating the determinants of FDI in extant literature, it is evident that each of the techniques has its own advantages and disadvantages. In this study however, we utilized the system generalized method of moment (GMM) as it has several advantages over other estimation techniques.

First, the system GMM is best suited for studies as this because it is more robust to missing data, accounts for simultaneity bias and reversed causality, especially when lagged values of the dependent variable enter the equation as an instrument, instead of explicitly as regressors.

Second, it encompasses several standard approaches such as the Ordinary Least Squares (OLS), Two Stages Least Squares (2SLS), Instrumental Variable (IV) and non-linear simultaneous estimation techniques (see Hamilton, 1994).

Third, compared with classical regression methods such as the OLS, which requires a spherical disturbance, the system GMM requires relatively weaker assumption for measuring the residual.

Fourth, by adjusting a covariance matrix, the system GMM estimator becomes robust to autocorrelation and heterogeneity in the residual.

Lastly, it enables one to deal with the problem of endogeneity bias by allowing one to introduce instrumental variables.

### **3.5.2 Model Specification**

In line with the three objectives stated in this study, we specify below three models, each corresponding to each of the objectives.

#### **Model Specification for Objective One**

Based on the theoretical framework in sub-section 2.2, we re-present Equation (18) which is the major model specified to analyze the first objective of “*ascertaining the determinants of aggregate FDI in ECOWAS countries*”. The dependent variable of the model is foreign direct investment (FDI), while explanatory variables include factors that determine

domestic investment and lagged values of foreign investment. Others are macroeconomic, institutional and infrastructural variables. The estimated dynamic model derived in Equation (18) is represented below as Equation (22) as follows:

$$FDI_{i,t} = \beta_0 + \beta_1 Id_{i,t} + \beta_2 If_{i,t-n} + \sum_{i=1}^I \varphi_i M_t + \sum_{j=1}^J \omega_j Inst_t + \sum_{k=1}^K \gamma_k Infra_t + \epsilon_t \dots \quad (22)$$

Where:  $FDI_{i,t}$  is aggregate foreign direct investment (FDI) in selected ECOWAS countries;  $Id_{i,t}$  is domestic investment;  $If_{i,t-j}$  is lagged values of foreign investment;  $M_t$  represent macroeconomic factors.  $Inst_t$  and  $Infra_t$  are institutional and infrastructural factors, respectively. The  $\beta_i$ ,  $\varphi_i$ ,  $\omega_j$  and  $\gamma_k$  are the coefficients of the respective variables whose a-priori expected signs are as previously defined, while  $\epsilon_t$  is the random term.

The estimation technique adopted by the study in analysing the first objective which is to “ascertain the determinants of aggregate FDI in ECOWAS countries” was the system GMM. The variables were tested for unit root, following the procedure developed by Im, Pasaran and Shin (IPS, 2003). The presence of unit root in time series has important implications for the choice of estimation, choice of specification and properties of the estimator. The choice of unit root test is based on the trends of the variables; therefore, before testing for stationary process of data, the study presented a descriptive statistics that exhumed some properties of the data utilized by the study.

The study employed the cointegration test to test for the linear combination of long run relationship among variables. The implication behind this series of tests is to ascertain stationarity among variables. A non-stationary variable or variables have their linear combination difficult and might result in spurious results. In this case, the necessity to test for cointegration becomes paramount. Therefore, the study tested for cointegration among the

variables used and the choice of cointegration test depended on the descriptive properties of the data and the order of integration. The fact that variables are co-integrated suggests that there is an adjustment process which prevents errors in the long run from becoming larger and larger.

After the cointegration test result, the study presented both static and dynamic panel models. The estimator for the traditional panel (static) models are based on the “*Within and Between Groups Estimators (WBGE)*” and “*Feasible Generalized Least Square (F-GLS)*”, while the dynamic panel model are estimated based on “*Generalized Method of Moment (GMM)*” methodology proposed by Arellano and Bond (1991), Arellano and Bover (1995) and Blundell and Bond (1998).

### **Model Specification for Objective Two**

In order to achieve the second objective of the study, which is “*to explore the empirical relationship between foreign direct investment (FDI) and real GDP in selected ECOWAS countries*”, the study adopted the model in line with the model in Equation (21).

This model is presented in Equation (23)

$$\left. \begin{aligned} FDI_{i,t} &= \delta_0 + \delta_1 GDP_{i,t}^g \\ GDP_{i,t} &= \delta_0 + \delta_1 FDI_{i,t}^g \end{aligned} \right\} \quad (23)$$

Where:

$FDI_{i,t}$  = Foreign Direct Investment at time ‘t’ in selected ECOWAS countries.

$GDP_{i,t}$  = Gross Domestic Product at time ‘t’ in selected ECOWAS countries

The study adopted the traditional panel data Granger causality test and pairwise causality procedure to conduct country-specific analysis in line with the objective of the

study. The study preferred the pooling of the countries' information together for estimation for two major reasons: first, panel data help combine and apparently examine both time and country-specific effects. These enhance the quality of estimation procedure and even, improve robustness of empirical estimation as huge amount of degree of freedom is obtained for precision. However, the study also considered pair-wise causality test for country-specific analyses, with the view to understanding the nature and direction of causality between FDI and economic growth in each of the ECOWAS countries that make up the sample size of our study. The choice of conducting country-specific pair-wise causality test is to buttress the robustness of the overall panel causality test. This idea is to establish whether or not investment-led growth hypothesis is applicable in ECOWAS region as a whole and/ or specific ECOWAS country under focus. This procedure will be complemented by conducting structural breaks and impact assessment analyses.

### Model Specification for Objective Three

The third objective is to “*determine whether foreign direct investment (FDI) inflows complement domestic investment in selected ECOWAS countries*”. The model adopted by the study is specified in equation (24) as follows:

$$\left. \begin{aligned} FDI_t &= \sum_{m=1}^M \alpha_m DI_{t-m} + \sum_{n=1}^N \beta_n FDI_{t-n} + \varepsilon_{1t} \\ DI_t &= \sum_{m=1}^M \alpha_m FDI_{t-m} + \sum_{n=1}^N \beta_n DI_{t-n} + \varepsilon_{2t} \end{aligned} \right\} \dots \quad (24)$$

Where:

FDI is foreign direct investment at time ‘t’

DI stands for domestic investment at time ‘t’

'M' and 'N' represent the optimum lag length as selected by the lag length selection criteria employed by the study. For the sake of this study, the Schwarz Bayesian Criterion (SBC) and Akaike Information Criterion (AIC) were used.

The estimation approach for the third objective followed the Granger causality approach. This approach will enable one to contribute to the on-going inconclusive debate of whether or not FDI will displace domestic investment especially in developing countries. In general, there exists three prevailing views from previous literature, namely crowding-in (Bosworth and Collins, 1999; Agosin and Machado, 2005), crowding-out (Agosin and Machado, 2005; Titarenko, 2006; Udomkerdmongkol and Morrissey, 2008) and no effect, Wang and Li (2004).

**Table 6: Variables, Expected Signs and Data Sources**

SN	Explanatory Variables	Indicators	Expected Sign	Data Sources
1	Policy Variables	A) Macroeconomic Stability: Inflation (CPI) and Exchange Rate	Negative (-)	World Development Indicators (WDI)
		B) FDI Policy: Trade Openness	Positive (+)	
2	Government Policy	Institutional Variable	Positive (+)	CPIA Business Environment
3	Real Gross Domestic Product	Market Size	Positive (+)	World Development Indicators (WDI)
4	Natural Resource Endowment	Resource rent flows as a percentage of GDP	Positive (+)	World Development Indicators (WDI)
5	Telephone Lines per 100 persons	Infrastructure	Positive (+)	World Development Indicators (WDI)
6	Total Labour Force	Human Capital	Positive (+)	World Development Indicators (WDI)
7	Lagged FDI Stock	Agglomeration	Positive (+)	World Development Indicators (WDI)

*Source: Author.*

## CHAPTER FOUR

### PRESENTATION, ANALYSIS OF DATA AND DISCUSSION OF FINDINGS

This chapter presents and discusses the empirical results from the study. First, the descriptive statistics of the principal variables in this study, inward FDI, real GDP per capita and gross fixed capital formation are presented, then the explanatory variables are also presented and discussed. In addition, the results from the models estimated are presented and discussed.

#### 4.1 Descriptive Statistics

The descriptive/summary statistics of all the variables utilized in the study are presented and discussed below. Specifically, the mean, median, minimum and maximum values, standard deviation, the skewness and kurtosis, Jarque-Bera values and their corresponding probability values are also reported in Table 7A, while Table 7B reports the correlation matrix. The mean of each of the variables is an indicator of the average of the respective variables as it is used in the study. The standard deviation additionally shows how distributed the variable is from the mean; thus it shows the volatility of the variables. Additionally, the skewness and kurtosis indicators reveal asymmetry and flattening/peakedness of the distribution while the normality test was conducted using the Jarque-Bera statistics.

The results in Table 7A reveal that both mean and median values for all the variables are in line with normal (random) time series trend. The normality test conducted using the Jarque-Bera statistics reveal that all the variables are normally distributed. The Jarque-Bera statistics and the respective probability values are reported in Table 7A.

From Table 7A, all the variables were positively skewed, while the kurtosis for inward FDI, real GDP per capita, openness, exchange rate, telephone lines, natural resource rent, labour force, institutional factors and gross fixed capital formation have positive excess kurtosis, suggestive of the presence of leptokurtic behavior in the distribution. However, consumer price index was platykurtic in its distribution.

### **Analysis of Correlation Matrix**

The correlation matrix is presented in Table 7B. The result reveals that the relationship among inward FDI, policy variables (consumer price index and exchange rate) and the institutional variable (government policy) is positive. This tends to suggest that improvements in government policies correlate favourably well with inward FDI inflows. In addition, inward FDI is also positively related to natural resource rent and the extent to which the domestic economies are engaged in foreign trade. Similarly, gross fixed capital formation (a proxy for domestic investment) is positively related to consumer price index, exchange rate level, institutional factor, labour, natural resource rent and the real gross domestic product, suggesting that macroeconomic stability, institutional factors, market size and the availability of human capital help to improve the level of domestic investment. Both inward FDI and the level of domestic investment are negatively related to the level of infrastructure, but only inward FDI that has a negative relationship with human capital, measured by the availability of labour. In essence, the existence of abundance of unskilled workers does not attract FDI. In other words, FDI inflow into this region is not the labour-seeking type. Also from the results, natural resource rent is negatively correlated with consumer price index, level of infrastructure and the real GDP per capita. Thus, economic growth is retarded in countries that are highly dependent on natural resources and could indicate the presence of resource curse in the economic sector.

A key point to note is that institutional factor positively correlates with all the variables used in this study, suggesting that an appreciable improvement in the level of institutional factors in these economies would not only promote inward FDI and domestic investment, but also guarantee some level of macroeconomic stability.

**Table 7A: Descriptive Statistics of all Variables**

<b>Variables</b>	<b>Mean</b>	<b>Median</b>	<b>Skewness</b>	<b>Kurtosis</b>	<b>Std. Deviation</b>	<b>Jarque-Bera</b>	<b>Probability</b>	<b>Observations</b>
<b>Inward FDI</b>	3.27	1.29	3.39	40.02	10.80	28088.70	0.00	476
<b>Real GDP Per Capita</b>	478.42	425.03	1.64	6.03	239.13	394.64	0.00	476
<b>Openness</b>	63.80	60.37	1.04	5.02	24.01	166.42	0.00	476
<b>Exchange Rate (LCU/US)</b>	513.33	328.61	4.27	23.83	901.64	10053.86	0.00	476
<b>Consumer Price Index</b>	58.55	57.03	0.06	2.51	31.73	5.00	0.08	476
<b>Telephone lines per 100</b>	0.67	0.40	2.05	6.96	0.68	643.68	0.00	476
<b>Natural Resource Rent</b>	12.75	8.50	2.03	7.67	12.27	758.64	0.00	476
<b>Labour Force</b>	5362020.00	2713661.00	3.43	14.52	9185660.00	3566.54	0.00	476
<b>Institutional Factors</b>	0.75	0.64	1.86	5.29	1.11	379.68	0.00	476
<b>Gross Capital Formation</b>	792000000000.00	241000000000.00	3.30	17.25	1320000000000.00	4892.43	0.00	476

*Source: Author's Computation*

**Table 7B: Correlation Statistics of All Variables Employed**

Variables	CPI	EXCHR	GFCF	INFRA	INSTFAC	INWFDI	LABOUR	NATRES	OPEN	RGDP
<b>Consumer Price Index (CPI)</b>	<b>1.00</b>	0.34	0.04	0.37	0.56	0.13	-0.05	-0.17	0.15	0.09
<b>Exchange Rate in LCU/US (EXCHR)</b>	0.34	<b>1.00</b>	0.23	-0.12	0.17	0.03	-0.11	0.02	-0.03	-0.13
<b>Gross Capital Formation (GFCF)</b>	0.04	0.23	<b>1.00</b>	-0.08	0.03	-0.04	0.72	0.35	-0.12	0.38
<b>Telephone lines per 100 (INFRA)</b>	0.37	-0.12	-0.08	<b>1.00</b>	0.32	-0.02	-0.02	-0.28	0.14	0.33
<b>Institutional Factors (INSTFAC)</b>	0.56	0.17	0.03	0.32	<b>1.00</b>	0.09	0.06	0.01	0.10	0.11
<b>Inward FDI (INWFDI)</b>	0.13	0.03	-0.04	-0.02	0.09	<b>1.00</b>	-0.02	0.19	0.29	-0.11
<b>Labour Force (LABOUR)</b>	-0.05	-0.11	0.72	-0.02	0.06	-0.02	<b>1.00</b>	0.46	-0.12	0.34
<b>Natural Resource Rent (NATRES)</b>	-0.17	0.02	0.35	-0.28	0.01	0.19	0.46	<b>1.00</b>	0.20	-0.20
<b>Openness (OPEN)</b>	0.15	-0.03	-0.12	0.14	0.10	0.29	-0.12	0.20	<b>1.00</b>	0.11
<b>Real GDP Per Capita (RGDP)</b>	0.09	-0.13	0.38	0.33	0.11	-0.11	0.34	-0.20	0.11	<b>1.00</b>

*Source: Author's Computation*

## 4.2 Test for Stationarity and Panel Co-integration Test

Table 7C shows the results of the stationary tests conducted. They reveal that all the variables under consideration have first-order integration; hence the panel estimations exhibit a common unit root process. This in turn suggests the appropriateness of using panel least squares estimation procedure since the theoretical formation is premised on normality assumption. The stationarity test follows the Levin, Lin and Chu (with the attendant assumption of homogeneity in the dynamics of the autoregression coefficients for all panel members) and the Im, Pesaran and Shin (which provides for heterogeneity in the dynamics). Essentially, the stationarity test for this study follows the Im, Pesaran and Shin unit root test, though the Levin, Lin and Chu results is reported alongside. From the stationarity test results, all the series were found to be stationary, although not at levels, but at first difference  $I(1)$ . Thus, the variable entering our dynamic panel model, GMM, is in line with the prescription of Arellano and Bond (1991), Arellano and Bover (1995) and Blundell and Bond (1998), that elements of the equation must be in their first difference.

The panel co-integration test follows the procedure of Johansen Fischer. The co-integration result for the first objective reveals evidence of a co-integrating relationship as shown by the significance of the Fisher statistics from Trace test and that from Max-Eigen test. The result shows that all the variables used in the study are all significant at the conventional test levels as shown in Table 7D. Basically, the test was conducted to ascertain the reliability of proceeding on panel pooling of countries data and analysis. Therefore, the result from the co-integration test tends to support panel pooling procedure for estimation in this study.

**Table 7C Stationarity Test: The Levin, Lin and Chu; and Im, Pesaran and Shin Approach**

Variables	Levin, Lin and Chu		Remarks	Im, Pesaran and Shin W-stat		Remarks
	Null Hypothesis: Unit root (assumes common unit root process)			Null Hypothesis: Unit root (assumes individual unit root process)		
	Statistic	Prob		Statistic	Prob	
<b>INWFDI</b>	-1.82093	0.0343**	I(1)	-3.11743	0.0009***	I(1)
<b>D(RGDP)</b>	-9.07357	0.0000***	I(1)	-10.4126	0.0000***	I(1)
<b>D(OPEN)</b>	-8.66213	0.0000***	I(1)	-10.8704	0.0000***	I(1)
<b>D(EXCHR)</b>	-5.58193	0.0000***	I(1)	-7.84641	0.0000***	I(1)
<b>D(CPI)</b>	-4.57966	0.0000***	I(1)	-4.87273	0.0000***	I(1)
<b>D(INFRA)</b>	-8.79545	0.0000***	I(1)	-8.12368	0.0000***	I(1)
<b>D(NATRES)</b>	-11.1392	0.0000***	I(1)	-11.0389	0.0000***	I(1)
<b>D(LABOUR)</b>	-1.5171	0.0646*	I(1)	3.37507	0.0000***	I(1)
<b>D(INSTFAC)</b>	-11.6318	0.0000***	I(1)	-8.92165	0.0000***	I(1)
<b>D(GFCF)</b>	-4.45337	0.0000***	I(1)	-17.2093	0.0000***	I(1)

NB: \*Significant at 10%, \*\*Significant at 5%, \*\*\*Significant at 1%.

Source: Author's Computation

**Table 7D: Johansen-Fisher Cointegration Test Results**

Variables	Hypothesized No. of CE(s)	Fisher Statistics from Trace Test		Fisher Statistics from Max- Eigen Test	
		Statistics	P-Values	Statistics	P-Values
Series: INWFDI CPI EXCHR GFCF INFRA INSTFAC LABOUR NATRES OPEN	None	822.1	0.0000	277.2	0.0000
	At most 1	345.4	0.0000	714.1	0.0000
	At most 2	1197.	0.0000	347.3	0.0000
	At most 3	628.9	0.0000	297.6	0.0000
	At most 4	503.1	0.0000	201.7	0.0000
	At most 5	350.9	0.0000	175.6	0.0000
	At most 6	212.9	0.0000	95.51	0.0000
	At most 7	140.0	0.0000	80.87	0.0000
	At most 8	87.92	0.0000	68.19	0.0000
	At most 9	60.81	0.0001	60.81	0.0001

Source: Author's Computation

### **4.3 Empirical Results**

#### **4.3.1 The Determinants of aggregate FDI**

##### **Preliminary Analysis**

The first objective of ascertaining the determinants of aggregate foreign direct investment (FDI) was carried out using the panel data technique. The panel estimation result for the overall 14 ECOWAS countries is presented in Table 7E. Essentially, the dynamic panel estimation model is the fundamental model for this study. However, the traditional estimation is conducted as part of our robustness check. Thus, results are obtained and presented for both traditional panel estimates –fixed and random effects models – and the dynamic panel model as well. The Hausman specification test reported in the lower section of Table 7E rejects the random-effects model in preference for the fixed effects model. This tends to suggest that some omitted variables may vary over time but fixed between countries, and others may vary between countries but fixed over time. The conclusion drawn from the Hausman test is that the fixed-effects model better explains the output of the research investigation than random-effects model for the levels regression estimates. The dynamic model is presented in the second loop of the Table 7E. The result of the second-order serial correlation test helps to dispel doubts that residuals from the dynamic panel are serially correlated. This, in turn, suggests that the instrumental variable used in our modeling is valid and unbiased. The p-value of the Sargan test is reasonably large. Thus, we accept the null hypothesis at 1% level, that there is no misspecification problem among the set of instruments we adopted in the GMM. The variables included in the dynamic panel model are at first difference, and is in consonance with Arellano and Bond (1991).

From the results, the coefficient of the one-period lagged value of FDI was positive and significant and is true to our a priori expectation in the dynamic panel estimation for both the model with and without control variables. Specifically, while it was statistically

significant at 1% in the dynamic panel model without control variables, it was however significant at 5% in the case of panel model with control variables. This implies that a 1% increase in the FDI flows received into ECOWAS countries in the previous year will lead to an increase of FDI flows received in the current year by 0.09%.

This result suggests that previous stock of investment help to create positive externalities. This, in turn, tends to portray the present investment condition and the future prospects of the recipient countries. In addition, this variable not only conveys the agglomeration (clustering) condition prevailing in the recipient economies, but also reveals the absorbing capability of the recipient countries. This finding is consistent with results in studies by Wheeler and Mody (1992); Head et al (1995); Barrell and pain (1997); Braunerhjelm and Svensson (1998), Campos and Kinoshita (2002); Agiomirgianakis et al (2006); Walsh and Yu (2010); Anyanwu (2012); Kariuki (2015), although they employed different agglomeration effect proxy.

The coefficient of real GDP per capita (RGDP), though significant in both the fixed-effects and dynamic panel models, but exhibited evidence of sign reversals in each successive time periods. For instance, the sign of RGDP coefficient at level was negative and significant, while the one-period lag coefficient is positive as expected and significant at 1% level. The coefficient of the two-period lagged RGDP was negative but significant at the 1% level of significance. The size of the coefficient is broadly the same in both models, on average, thus suggesting that the level and trajectory of per capita income in ECOWAS directly influences the inflows of FDI into the region. Thus, the results imply that increases in real GDP per capita enhance inward FDI in the selected ECOWAS countries. Therefore, our finding is in consonance with studies by Agarwal (1980); Nabende (2002); Tarzi (2005); Asiedu (2006); Ezeoha and Catteneo (2010); Anyanwu (2012). The policy implication of this is the need to

adopt strategic measure to boost per capita income growth, as such efforts would cause the right quantum of FDI to gravitate towards the ECOWAS region.

The coefficient of gross fixed capital formation (GFCF) is positively but statistically insignificant in both the fixed effects model and the dynamic in panel model. The implication of this is that increase in domestic investment may not significantly crowd in foreign direct investment. This finding is consistent with studies by Harrison and Revenga (1995), Nidikumana and Verick (2007); Lautier and Moreaub (2012) that policies aimed at enhancing the profitability and scope of domestic investment may not be effective to increase FDI inflows in the region as well.

The coefficient of total trade as a percentage of GDP (openness) is positive and statistically significant at 5% level in both the fixed effect model and the dynamic panel model (GMM). It shows that when openness to trade variable increases by 1%, this will lead to an increase in FDI flows into the ECOWAS sub-region by 0.07%. This implies that further liberalization of trade may bring about a rise in FDI flows into the ECOWAS sub-region. The inclusion of this variable (OPEN) is particularly significant because several countries in the sub-region have been engaged, in varying degrees, in economic opening to facilitate the entry of foreign investors. This result is in support of findings by Wheeler and Mody (1992), Onyeiwu and Shrestha (2004), Sekkat and Varoudakis (2007); and Ezeoha and Cattaneo (2012) that trade openness positively affect FDI inflows, especially in the developing economies.

The coefficient of exchange rate was positive but statistically insignificant in both the fixed effect model and the dynamic panel model (with control variables). It shows that an appreciation in the level of exchange could marginally impact on FDI inflow into the ECOWAS region. As observed by Benassy-Quere et al (2001), this may occur if the investor

aims at serving a local market where trade or non-trade barriers are impediments to enter the market, such that trade and FDI become substitutes. This finding is consistent with studies by Cushman (1985); Kathryn (1995); Stevens (1998); Ali (2005) that the current level of exchange rate has no consistently significant effect on FDI inflow. Similarly, the coefficient of inflation (another proxy for macroeconomic stability) was negative but statistically insignificant even at 10% level of significance in both the fixed effect model and the model. This result, however, is contrary to study by Onyeiwu and Shrestha (2004), Naude and Krugell (2007) and Nonnemberg and Mendonca (2004) which found that inflation is a significant variable which influences investors who wish to invest in Africa. However, the findings by Asiedu (2006) tend to lend support to our finding. The net implication of this is that macroeconomic stability is not a major driver of foreign direct investment into the ECOWAS sub-region.

The coefficient of infrastructure (proxied by telephone lines per 100 people) is negative and insignificant even at 10% level of significance in both the fixed effects and dynamic panel model estimations. This result is however contrary to our a priori expectation. However, according to ODI (1997), poor infrastructure can be viewed both as a hinderance and an opportunity for foreign investment. Besides, following Asiedu (2002) and Ancharaz (2003), though in the literature the average telephones lines per 100 inhabitants is a known measure for infrastructural development, this measure however falls short simply because it considers the availability and not the reliability telephone lines. Furthermore, it incorporates only fixed-line infrastructure and not mobile telephones. This result confirms earlier studies that poor infrastructure may not deter foreign investors because factors such as natural resources and other macroeconomic variables may be more significant (see Cheng and Kwan, 2000; Asiedu, 2002; Onyeiwu and Shrestha, 2004; and Vijayakumar, Sridharan and Rao, 2010).

Natural resource rent coefficient, which represents the degree to which a country depends on its natural resources, is negative and statistically significant at the 1% level in both the fixed effects and the dynamic panel estimations. The negative sign suggests that the continuous dependence on natural resource rent in the countries studied negatively impact on openness to FDI. One plausible reason for this negative association between natural resources and FDI is premised on the notion that resource booms may give to an increase in the value of the domestic currency. This, in turn may make the country's exports to be less competitive at world prices, thereby crowding out investment, in some other sectors. On the long run, if the displacement effect is more than one-for-one, it may ultimately bring about total decline in FDI. The negative effect of natural resource may provide evidence of resource curse in the economy and that its abundance and dependence may hinder FDI inflow. This result confirms studies by Gylfason (2004); Jadhav (2012); Rogmans and Ebbers (2013) and Akpan, Isihak and Asongu (2014).

The coefficient of human capital proxy by total labour force is positive in all panel estimation models, which corroborates our a priori expectation. It performed well in both the traditional panel data analysis and dynamic panel model at the 5% level of significance. This finding tend to suggests that, despite the gradual move of FDI away from labour-intensive, low-cost, manufacturing line of production to a more capital, knowledge and skill-intensive industries, low-cost unskilled labour remains an important consideration for labour-intensive, efficiency-seeking FDI in sub-Saharan Africa (UNCTAD, 1994). That abundant and low-cost labour exerts a positive on FDI flow Tsai (1994) was also found in Kravis and Lipsey (1982); Wei (1997), and Noorbakhsh, Paloni and Youssef (1999).

The coefficient representing institutional factor is positive in all estimated models, but statistically insignificant. In terms of the relative effect, a 100% increase in government

policy leads to a 0.42%, 0.41% and 0.40% increase in inward FDI in the fixed-effects, random-effects and dynamic-effects models respectively. This finding is in conformity with findings by Globerman and Shapiro (1999); Busse and Hefeker (2005); Asiedu (2005); Kostevc, Redek and Susjan (2007); Fiodendji and Evlo (2015). However, Brewer (1993) has observed that government policies, through their on market imperfections can directly and indirectly affect FDI. The implication of this is that, the same government policy can promote and/or hinder market imperfections and, by extension, raise and/or stunt the inflow of FDI.

**Table 7E: Panel Data Estimation Results**

Variables	Fixed Effect Model			Random Effect Model			Dynamic Panel Model (Without Control Variables)			Dynamic Panel Model (With Control Variables)		
	Coefficient	t-stats	Prob.	Coefficient	t-stats	Prob.	Coefficient	t-stats	Prob.	Coefficient	t-stats	Prob.
C	11.883	2.898	0.004**	-4.644	-2.541	0.0114**	4.957	1.700	0.09*	10.684	2.585	0.0101**
INWFDI(-1)							0.142	2.859	0.0045**	0.096	1.928	0.0546*
RGDP	-0.073	-3.568	0.0004***	-0.070	-3.727	0.0002**	-0.058	-2.869	0.0043**	-0.067	-3.260	0.0012**
RGDP(-1)	0.124	4.303	0.000***	0.108	3.884	0.0001**	0.107	3.693	0.0003**	0.122	4.266	0.000***
RGDP(-2)	-0.056	-2.983	0.003**	-0.044	-2.518	0.0122**	-0.053	-2.804	0.0053**	-0.060	-3.175	0.0016**
GFCF	0.000	1.325	0.186	0.000	0.411	0.682	0.000	0.587	0.558	0.000	1.346	0.179
GFCF(-1)	0.000	0.666	0.506	0.000	0.258	0.796	0.000	0.422	0.674	0.000	0.734	0.463
GFCF(-2)	0.000	0.772	0.440	0.000	0.745	0.457	0.000	0.240	0.810	0.000	0.606	0.545
OPEN	0.057	1.747	0.082*	0.119	5.331	0.000***				0.057	1.767	0.0781*
EXCHR	0.000	0.525	0.600	-0.001	-0.963	0.336				0.000	0.466	0.642
CPI	-0.010	-0.217	0.828	0.045	2.266	0.0239**				-0.012	-0.267	0.790
INFRA	-0.364	-0.262	0.793	-0.766	-0.965	0.335				-0.233	-0.168	0.867
NATRES	-0.413	-4.693	0.000***	0.098	1.817	0.0699*				-0.380	-4.253	0.000***
LABOUR	0.000	2.245	0.0253**	0.000	0.112	0.911				0.000	2.190	0.0291**
INSTFAC	0.419	0.629	0.530	0.413	0.827	0.409				0.402	0.605	0.546
<i>No. of Observation</i>		320			320			256			320	
<i>R-Square</i>		0.373			0.157			0.340			0.379	
<i>Adjusted R-Square</i>		0.281			0.132			0.255			0.286	
<i>F-Statistics (prob)</i>		4.071 (0.00)***			6.213 (0.00)***			3.998 (0.00)***			4.093 (0.00)***	
<i>Hausman Test</i>				Chi <sup>2</sup> (13) = 88.406544 (0.0000)								
<i>Sargan Test</i>										Chi <sup>2</sup> (26) = 30.44 (0.377)		
<i>Test for Second Order Autocorrelation</i>										Z = -2.78 (0.773)		

NB: \*Significant at 10%, \*\*Significant at 5%, \*\*\*Significant at 1%.

Source: Author's Computation

## **Robustness and Sensitivity Checks:**

### **(a) Controlling for Income-Effects**

This study also estimates models for each income group, in line with the World Bank classification, to ascertain whether differences in income levels affect the drivers of inward foreign direct investment (FDI) in ECOWAS countries. See Appendix 2A and 2B for the panel data estimation results for each income groups. From the result, the coefficient of natural resources is positive though insignificant at the conventional test levels in the dynamic panel model, but negative and significant at the 1% significance level following results obtained from the fixed-effects model in the low income economies. However, although the coefficient is not significant in the dynamic model, the positive sign confirms the resource-seeking motive of FDI, while the negative but highly significant result from the fixed-effects model may provide evidence of resource curse and that its abundance and dependence may hinder incentives to invest (Beck, 2011; Kurronen, 2012). For the lower-middle-income countries however, when income effect is controlled for, the more there are natural resources the more is FDI attracted into such countries. In terms of its relative effects, a unit increase in natural resources leads to about 6% and 12% in FDI inflows in low-income and lower-middle-income economies respectively (using the dynamic panel model). It follows from the result that, all things being equal the higher the income level a country in the ECOWAS region attains, the more relevant is natural resource variable in attracting FDI in such an economy.

### **(b) Controlling for Legal Origin Effects**

In addition, we used legal origin effects as control and for robustness and sensitivity checks, to ascertain whether presence of legal origin directly affects the drivers of inward

foreign direct investment (FDI) in ECOWAS countries. By legal origin, we mean whether a country's legal system is predicated on British, or French, German or Scandinavian law and the implication of such for inward FDI in ECOWAS countries (Beck, Demiguc-Kunt and Levine, 2003). See Appendix 3A and 3B for the panel data estimation results for each legal origin classification. From the result, the coefficient of natural resource was negative but statistically significant at 1% level of significance in the model for Anglophone countries as was in the estimated model for the overall sampled ECOWAS countries. The result of the dynamic panel estimation for Anglophone countries suggests that a 100% increase in natural resource rent brings about 60.6% decline in aggregate FDI into the Anglophone economies, all other things being equal. As previously stated, the negative effect of natural resource may provide evidence of resource curse in the economy of the Anglophone countries which may in turn hinder the inflow of FDI. However the result was the direct opposite for Francophone countries, when we controlled for legal origin effect. From the dynamic panel estimation for Francophone, the coefficient of natural resource was positive but statistically insignificant, while the coefficient of institutional actor was negative and statistically significant. This implies that the quality of institutions in Francophone countries is relatively poor, when compared to those of the Anglophone nations who depend on natural resource rent. It follows therefore that why the dependence on natural resource rent may deter inward FDI flow in the Anglophone countries, poor institutional quality may do same for the Francophone countries.

#### **4.3.2 Presentation of Empirical Results on Foreign Direct Investment and Real GDP**

This section presents and discusses the results to validate the second objective of the study. The goal here is to determine the empirical relationship between real GDP and foreign direct investment (FDI) in selected ECOWAS countries. First, we present the correlation matrix for the two principal variables under focus and in each of the countries under

consideration. Next, we present the panel data Granger causality test of FDI and RGDP for the overall ECOWAS countries. This is closely followed by test for stationarity of the two variables (i.e. FDI and real GDP growth in each of the ECOWAS countries, as well as the pairwise causality test result between FDI and RGDP. The latter is presented and analyzed with a view to providing a better understanding of the type and direction of causality between real GDP and FDI in each sampled country in ECOWAS. Finally, we also conduct impact assessment and structural breakpoints as part of our robustness and sensitivity checks.

### **Analysis of Pair-wise Correlation Results and Test for Stationarity**

The correlation statistics is presented in Table 7F. The correlation matrix shown in Table 7F provides a first-hand but rough approximation of the nexus between FDI and real GDP for the individual countries in our sample size. The Table reveal that FDI is highly positively correlated with real GDP in four countries, namely, Burkina Faso, Ghana, Guinea and Mali, with correlation values of 0.724, 0.857, 0.612 and 0.742 respectively. Also, in countries like Benin, Gambia, Liberia, Senegal, Sierra Leone, Togo and Guinea Bissau, the correlation between FDI and real GDP is positive but not that strong as shown by the size of their correlation coefficients, indicating that in this group of countries, the correlation between FDI and growth of the economy is somewhat weak. On the other hand, the correlation between FDI and real GDP is strong but negative for such countries as Cote-D'Ivoire, Nigeria and Niger. This relationship tends to suggest that a negative relationship exists between these two variables under consideration.

However, as previously reported in Table 7C, the panel stationarity test followed the Im, Pesaran and Shin unit root procedure. This approach provides for heterogeneity in the dynamics, although the Levin, Lin and Chu results are also reported alongside. From the stationarity test results, both FDI and GDP growth were found to be stationarity at first

difference, that is I(1). In addition, both FDI and real GDP were statistically significant at 1% level of significance.

**Table 7F: Pairwise Correlation Results of FDI and RGDP**

Benin			Burkina Faso			Cote D'ivoire			Guinea Bussau		
	INWFDI	RGDP		INWFDI	RGDP		INWFDI	RGDP		INWFDI	RGDP
INWFDI	1	0.044	INWFDI	1	0.724	INWFDI	1	-0.334	INWFDI	1	0.072
RGDP	0.044	1	RGDP	0.724	1	RGDP	-0.334	1	RGDP	0.072	1
Ghana			Guinea			Gambia			Liberia		
	INWFDI	RGDP		INWFDI	RGDP		INWFDI	RGDP		INWFDI	RGDP
INWFDI	1	0.857	INWFDI	1	0.612	INWFDI	1	0.071	INWFDI	1	0.004
RGDP	0.857	1	RGDP	0.612	1	RGDP	0.071	1	RGDP	0.004	1
Mali			Niger			Nigeria			Senegal		
	INWFDI	RGDP		INWFDI	RGDP		INWFDI	RGDP		INWFDI	RGDP
INWFDI	1	0.743	INWFDI	1	-0.254	INWFDI	1	-0.147	INWFDI	1	0.447
RGDP	0.743	1	RGDP	-0.254	1	RGDP	-0.147	1	RGDP	0.447	1
Sierra Loene			Togo								
	INWFDI	RGDP		INWFDI	RGDP						
INWFDI	1	0.010	INWFDI	1	0.000884						
RGDP	0.010	1	RGDP	0.000884	1						

Source: Author's Computation

### Causality Tests for Overall ECOWAS Countries and Sampled Country-Specific Tests

In line with the second objective of this study which is to explore the empirical relationship between real GDP and FDI in the ECOWAS countries, we attempt to ascertain the nature of causality between the two variables. This we achieved in two stages. First, we conducted the traditional panel data Granger causality test by pooling the countries' information together in order to enhance the quality of estimation procedure as huge amount of degree of freedom is obtained for precision. The result is presented in Table 7G. Next, we conducted country-specific pair-wise causality test to buttress the robustness of the overall panel causality test. This is reported in Appendix 4. The time lags explored include two, four,

six, eight, ten and twelve-year horizon for the panel causality test, while time lags explored for the country-specific test include two, four and six-year horizon.

From the result in Table 7G, all the lagged values of FDI and RGDP suggest the existence of a bi-directional causation running from RGDP to FDI, and from FDI to RGDP in the overall sampled ECOWAS countries, with the exception of the 6-year horizon that shows unidirectional causation,

As to whether RGDP granger causes FDI, the 2 to 12-year-period time lags passed the significance test at 1% level. The statistical significance of RGDP (market size) variable remained steadily the same from period 2 to 12, suggesting that the effectiveness of market size in attracting FDI does not wane over time for ECOWAS countries. This result tends to corroborate the positive impact of high GDP on the increasing FDI inflow experienced during most of the period under study. On the other hand, the issue of whether FDI granger causes RGDP passed the significance test at 10% level during the 2-year period and 4-period time lags, while longer time periods (8-and 12-time lags) were statistically significant at 1% level. However, the t-statistic of the 6-year horizon lag was hardly significant at any conventional test levels. The results suggest that, in the ECOWAS countries, FDI has been a crucial factor in the bloc's economic growth. On the whole, the result tends to corroborate previous empirical evidence obtained from previous studies (Choe, 2003; Hsiao and Shen, 2003; Chowdhury and Marrotas, 2006; Hansen and Rand, 2006; Sridharan, Vijayakumar and Chandra, 2009). In general, the bi-directional causality between real FDI and GDP tend to convey some policy implications. Firstly, the economic growths of the ECOWAS countries stand to gain more from increasing inflows of FDI to the economies of this group of countries. Secondly, ECOWAS may also benefit by adopting more favorable policies geared towards attracting more FDI flows into their respective economies.

Specifically, the results tend to suggest that FDI and RGDP growth are mutually reinforcing. Put differently, higher growth of ECOWAS countries' real GDP is the propelling force behind the rising inflow of FDI in addition to being the result of these inflows.

**Table 8G: Causality Tests for Overall ECOWAS Countries**

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI	448	5.24	0.006	RGDP → FDI
	INWFDI does not Granger Cause RGDP		2.58	0.077	FDI → RGDP
4-Period	RGDP does not Granger Cause INWFDI	420	3.53	0.008	RGDP → FDI
	INWFDI does not Granger Cause RGDP		2.23	0.065	FDI → RGDP
6-Period	RGDP does not Granger Cause INWFDI	392	2.78	0.012	RGDP → FDI
	INWFDI does not Granger Cause RGDP		1.59	0.15	
8-Period	RGDP does not Granger Cause INWFDI	364	4.52	0.000	RGDP → FDI
	INWFDI does not Granger Cause RGDP		2.58	0.009	FDI → RGDP
10-Period	RGDP does not Granger Cause INWFDI	336	5.12	0.000	RGDP → FDI
	INWFDI does not Granger Cause RGDP		3.19	0.000	FDI → RGDP
12-Period	RGDP does not Granger Cause INWFDI	308	4.44	0.000	RGDP → FDI
	INWFDI does not Granger Cause RGDP		2.32	0.007	FDI → RGDP

*Source: Author's Computation*

### **Robustness and Sensitivity Checks:**

#### **(a) Country-Specific Pair-wise Causality Test between FDI and RGDP**

As part of our sensitivity and robustness checks, we conducted a pair-wise granger causality test in order to throw more light on the causal relationship between FDI and RGDP. As a precondition however, and since macroeconomic time series are known to be non-stationary (Nelson and Plosser, 1982) and thus prone to be spurious regression, we tested for stationarity of the time series data using the Augmented Dickey-Fuller (ADF) test. The stationarity test reveals that the two variables, FDI and RGDP, in each of the fourteen (14)

ECOWAS countries have first-order integration, that is, of the I(1) order. The unit root test results are presented in Table 8H.

The country-specific causality test revealed some discernible relationships between FDI and RGDP. From the results in Appendix 4, there was no causality between FDI and RGDP in countries like Cote d'Ivoire, Gambia, Liberia, Nigeria and Togo in the 2-period, 4-period and 6-period time lags. Outcomes such as this could be due to the structural and policy reforms, which may result in a decline in production and employment in the inefficient firms. This can bring about little or even fizzle out the positive effect of FDI on economic growth. Evidence of no causality relationship between these two variables have been observed in studies by Hanson, 2001; Carkovic and Levine, 2003; Hermes and Lensink, 2003; Dhakai, Rahman, Upadhyaya, 2007.

For a group of three countries however, FDI was found to granger cause real GDP. In these countries, FDI may have had appreciable effect on economic growth via several channels such as capital formation, technological transfer and spillover, and through enhancement of human capital (knowledge and skill), among others. Findings from a number of studies tend to lend support to this FDI-growth causal relationship (see Campos and Kinoshita, 2002; Omram and Bolbol, 2003; Hansen and Rand, 2003; Li and Liu, 2005).

Also, evidence from our study tend to partly support the hypothesis that economic growth granger causes FDI for countries like Benin, Burkina Faso, Guinea and Niger. The significance of economic growth in driving FDI into these countries is closely related to the fact that in investing firms' strategic decisions FDI is a vital component. Following the market size hypothesis, rapid economic growths (as measured by real GDP per capita or its growth) tend to provide opportunities to multinational companies to enjoy improved sales and profits which, in turn, helps to attract more investment from them (Grosse and Trevino 1996).

Empirically, the positive impact of recipient country economic growth on FDI inflow has been corroborated in extant literature (see Barrell and Pain, 1996; Taylor and Sarno, 1999; Trevino, Daniels, and Upadhyaya, 2002).

Lastly, for Ghana and Mali, our study reveals a case of bi-directional causation. In other words, FDI granger causes economic growth and economic growth in turn granger causes FDI. From standard economic theory, such causality is feasible if FDI inflow is brought about by the economic growth of the host nation and if such recipient country provides a reasonably large consumer market. In such a situation, FDI tends to take the place of commodity trade, or if growth provides more economies of scale and reduces cost in the recipient country. Conversely, FDI may contribute to the economic growth of the host nation by increasing the level of existing capital stock of capital, providing much-needed inputs, encouraging the transfer of technology and skill acquisition, or by encouraging greater competition in the domestic industry. This finding is in conformity with earlier findings by Basu, Chakraborty and Reagle (2003); Chowdhury and Mavrotas (2005); Dhakai, Rahman and Upadhyaya (2007); and Sridharan, Vijayakumar and Chandra (2009).

In all, our robustness check analysis seems to reveal significant variation in the FDI-growth nexus across countries, suggesting that generalization of any causality results between any two variables can be somewhat problematic, and such outcomes should be interpreted with caution.

**Table 7H: Test for Stationarity Using Augmented Dickey-Fuller (ADF) Test**

S/N	COUNTRY	Foreign Direct Investment (FDI)					Remark	Real Gross Domestic Product (RGDP)					Remark
		ADF Statistics (t-stat)	Prob.	CRITICAL VALUES				ADF Statistics (t-stat)	Prob.	CRITICAL VALUES			
				1%	5%	10%				1%	5%	10%	
1	Benin	-6.22	0.0001***	-4.27	-3.56	-3.21	I(1)	-6.71	0.0000***	-4.27	-3.56	-3.21	I(1)
2	Burkina Faso	-3.88	0.0267**	-4.32	-3.58	-3.23	I(1)	-6.85	0.0000***	-4.27	-3.56	-3.21	I(1)
3	Cote d' Ivoire	-7.16	0.0000***	-4.27	-3.56	-3.21	I(1)	-3.94	0.0216**	-4.27	-3.56	-3.21	I(1)
4	Guinea Bissau	-5.83	0.0002***	-4.30	-3.57	-3.22	I(1)	-5.81	0.0002***	-4.27	-3.56	-3.21	I(1)
5	Ghana	-4.26	0.0103**	-4.27	-3.56	-3.21	I(1)	-3.43	0.0586*	-4.30	-3.57	-3.22	I(1)
6	Guinea	-4.04	0.0190**	-4.39	-3.61	-3.24	I(1)	-4.07	0.0161**	-4.27	-3.56	-3.21	I(1)
7	The Gambia	-5.38	0.0006***	-4.27	-3.56	-3.21	I(1)	-6.67	0.0000***	-4.27	-3.56	-3.21	I(1)
8	Liberia	-8.04	0.0000***	-4.27	-3.56	-3.21	I(1)	-3.82	0.0282**	-4.27	-3.56	-3.21	I(1)
9	Mali	-6.28	0.0001***	-4.34	-3.59	-3.23	I(1)	-6.51	0.0000***	-4.27	-3.56	-3.21	I(1)
10	Niger	-7.92	0.0000***	-4.27	-3.56	-3.21	I(1)	-5.74	0.0002***	-4.27	-3.56	-3.21	I(1)
11	Nigeria	-3.33	0.0813*	-4.30	-3.57	-3.22	I(1)	-6.12	0.0001***	-4.27	-3.56	-3.21	I(1)
12	Senegal	-10.28	0.0000***	-4.27	-3.56	-3.21	I(1)	-6.70	0.0000***	-4.27	-3.56	-3.21	I(1)
13	Sierra Leone	-5.68	0.0003***	-4.28	-3.56	-3.22	I(1)	-7.81	0.0000***	-4.27	-3.56	-3.21	I(1)
14	Togo	-5.82	0.0002***	-4.28	-3.56	-3.22	I(1)	-4.30	0.0101**	-4.31	-3.57	-3.22	I(1)

NB: \*Significant at 10%, \*\*Significant at 5%, \*\*\*Significant at 1%.

Source: Author's Computation

## **(b) Structural Breaks**

Considering the length of the time period this study covers and the heterogeneity of the ECOWAS countries under focus, it is likely that our variables of interest may have been influenced by various shocks arising from, for instance, policy regime changes. As evident from literature, most ECOWAS countries have implemented economic reforms which may have had a direct effect on FDI inflows. In addition, our variables of interest may have been influenced by exogenous shocks given the dynamics of the global economy. Therefore, in order to fully understand the nexus between FDI and its determinants, structural breaks and impact assessments need to be accounted for.

Thus, in this study, as additional robustness and sensitivity checks, we implement the Quandt-Andrews breakpoints test. The Quandt-Andrews test is carried out on the premise that the structural break point(s) are unknown. The null hypothesis for this test is that there is “no breakpoint”. The three tests that are developed by Quandt and Andrews have their foundation on the Chow test. These are maximum statistics (MaxF), the exponential test (Exp F) and the average test (Ave F). Of these 3 tests, the MaxF is adjudged better and more powerful than the remaining two test statistics (see Andrews, 1993; Ahmed, Haider and Zaman, 2014). Thus the Quandt-Andrews test results for the 14 ECOWAS countries are reported in Table 7I. From the Table 7I, the MaxF statistic rejects the null hypothesis of no structural breaks at either the 5% or 1% significant test levels, with the exception of Niger Republic. Based on this evidence, there appears to have been effects of structural break in each country with the exception of Niger, where summary statistics measure fails to reject the null hypothesis of no structural breaks within the period under consideration.

**Table 7I: Quandt-Andrews Structural Break Tests Result 1980-2013.**

<b>Statistics</b>	<b>Benin</b>	<b>Burkina Faso</b>	<b>Cote d'Ivoire</b>	<b>Guinea Bissau</b>	<b>Ghana</b>	<b>Guinea</b>	<b>Gambia</b>	<b>Liberia</b>	<b>Mali</b>	<b>Niger</b>	<b>Nigeria</b>	<b>Senegal</b>	<b>Sierra Leone</b>	<b>Togo</b>
Maximum L-R	8.0283	14.2782	69.2292	11.3089	85.2216	32.415	40.7944	14.0529	31.4989	5.8831	170.979	34.2794	9.9816	30.5776
F-statistics	-0.0651	-0.0035	0	-0.0143	0	0	0	-0.0039	0	-0.1692	0	0	-0.0287	0
Maximum Wald	8.0283	14.2782	69.2292	11.3089	85.2216	32.415	40.7944	14.0529	31.4989	5.8831	170.979	34.2794	9.9816	30.5776
F-statistics	-0.0651	-0.0035	0	-0.0143	0	0	0	-0.0039	0	-0.1692	0	0	-0.0287	0
Exp LR	1.7562	5.2212	31.6062	3.4875	39.4766	13.9635	17.8879	4.4764	13.4851	1.5086	82.3542	14.1486	3.9979	12.7347
F-Statistics	-0.0712	-0.0003	0	-0.0077	0	0	0	-0.0014	0	-0.0976	0	0	-0.0035	0
Exp Wald	1.7562	5.2212	31.6062	3.4875	39.4766	13.9635	17.8879	4.4764	13.4851	1.5086	82.3542	14.1486	3.9979	12.7347
F-Statistics	-0.0712	-0.0003	0	-0.0077	0	0	0	-0.0014	0	-0.0976	0	0	-0.0035	0
Average LR	1.3762	7.8674	19.3869	3.6028	27.4634	12.975	15.7502	6.3973	16.3098	2.2473	26.6554	16.3466	7.3913	13.1482
F- statistics	-0.2191	-0.0001	0	-0.0266	0	0	0	-0.0015	0	-0.0883	0	0	-0.0003	0
Average Wald	1.3762	7.8674	19.3869	3.6028	27.4634	12.975	15.7502	6.3973	16.3098	2.2473	26.6554	16.3466	7.3913	13.1482
F Statistics	-0.2191	-0.0001	0	-0.0266	0	0	0	-0.0015	0	-0.0883	0	0	-0.0003	0

*NOTE: Average Maximum Wald F-statistics value = 0.02034*

*Source: Author's Computation*

### (c) **Impact Assessment of FDI on RGDP**

The impact assessment summary result using the least squares method for each of the 14 ECOWAS countries is presented in Table 7J. The result gives an overview of the relative effect of FDI (positive or negative) on economic growth in each of the 14 ECOWAS countries. From the Table 7J, while in nine of the countries, FDI has a positive impact on economic growth, the reverse was the case for the other five countries. In terms of positive impact, a unit increase in FDI inflow into Cote d'Ivoire, Gambia, Niger and Togo, for instance, cause real GDP to rise by 0.7, 2.4, 4.6 and 3.7 units respectively in those countries during the period under consideration. FDI may have contributed to these countries' economic growth by increasing the country's stock of capital, providing relevant inputs, and encouraging technology transfer and skill acquisition, or increasing competition in the local industry. This result is consistent with studies by Fry (1993); Borensztein, Gregorio and lee (1998); Campos and Kinoshila (2002); Omran and Bolbol (2003); Hansen and Rand (2004); Busu and Guarigha (2005); Li and Liu (2005); Lensink and Morrissey (2006); and Aurangzeb and Haq, (2012). However for countries like Benin, Burkina Faso, Guinea Bissau, Guinea and Nigeria, the effect of FDI on real GDP was negative. This negative effect of FDI on the economic growth of the host country could occur even when FDI enhances the investment level and the productivity of such investments. While this may in turn raise the average consumption level in the recipient country, It may ultimately reduce the rate of growth of the economy by promoting major distortions in factor prices or through resources misallocations. This result supports earlier studies that inward FDI may impact negatively on the economic growth trajectory of an economy (see Bacha, 1974; Sattz, 1992; and Moran, 1998).

**Table 7J: Country-Specific Impact of FDI on RGDP**

<b>Particulars</b>	<b>Benin</b>	<b>Burkina Faso</b>	<b>Cote d'Ivoire</b>	<b>Gambia</b>	<b>Ghana</b>	<b>Guinea Bissau</b>	<b>Guinea</b>	<b>Liberia</b>	<b>Mali</b>	<b>Niger</b>	<b>Nigeria</b>	<b>Senegal</b>	<b>Sierra Leone</b>	<b>Togo</b>
<b>Coefficient (Log INFDI)</b>	-0.6745	-1.8146	0.7018	2.3524	0.1677	-0.8353	-0.439	1.6055	0.1702	4.5979	-0.1407	1.9795	0.5506	3.7176
<b>Standard Error</b>	0.4509	0.3734	1.564	0.7342	0.6633	0.8379	0.582	0.1571	0.7202	0.5929	0.6126	1.5165	0.6506	0.9509
<b>Prob.</b>	0.1459	0	0.6566	0.0033	0.8019	0.3261	0.456	0	0.8148	0	0.8199	0.2028	0.4051	0.0005
<b>t-statistic</b>	-1.4957	-4.8591	0.4487	3.204	0.2529	-0.9969	-0.7542	10.1905	0.2363	7.7546	-0.2297	1.3052	0.8463	3.9093
<b>Adjusted (R<sup>2</sup>)</b>	-0.5063	-0.4022	-0.2746	-0.2022	-0.2317	-0.3368	-0.1145	-0.1328	-0.13	-0.2093	-0.1908	-0.3521	-0.1032	-0.3327

*Source: Author's Computation*

### **4.3.3 Presentation of Results on Foreign Direct Investment and Domestic Investment**

The third and final objective of the study was to ascertain whether or not inward foreign direct investment (FDI) will displace local investment in the ECOWAS sub-region. This objective was investigated using the traditional panel data granger causality test, a technique which involves the pooling of the fourteen countries' information together in order to enhance the robustness of the estimates obtained. Essentially, theoretical literature posits that there exists relationship between inward foreign direct investment and domestic investment, thus imperative for ECOWAS to aid policy formulation. However, in order to overcome spurious correlation in the test of the nature and direction of causality, this study conducted test for non-stationarity in the variables, namely, inward FDI and domestic investment. The study employed the Im, Pesaran and Shin unit root test for the two variables. (see Table 7C).

Next, we presented the panel data Granger causality test of FDI and local investment for the overall ECOWAS. Also, as part of our robustness checks, we presented the pair-wise causality test between domestic investment and FDI for each of the sampled countries. The essence of the bi-directional granger causality test is to provide a better understanding of country-specific behaviour of these two variables. Finally, in order to further enhance knowledge of the relationship between these two variables of interest, we conducted impact assessment (using the least square technique) as well as stability tests, using the cumulative sum of Recursive Residual (CUSUM) and cumulative Sum of Squares of Recursive Residual (CUSUMSq).

#### **Overall ECOWAS Causality Test**

According to Granger and Newbold (1974), regression results maybe spurious if the variables are non-stationary, especially for variables with a time dimension. Hence, to avoid

spurious estimation results, it is essential to ascertain whether the series are stationary or not. The unit root test was conducted using Im, Pesaran and Shin (IPS) unit root test. The Im, Pesaran and Shin (IPS) unit root tests the null hypothesis that the variables are non-stationary against the alternate hypothesis of stationarity in the variables. The results from the IPS unit root tests are presented in Table 7C.

From the result in Table 7K, all the lagged values of inward FDI suggest that there is no causation running from inward FDI to domestic investment in the overall sampled ECOWAS countries. Also from the result, evidence of reverse causation does not hold. The absence of causation from inward FDI to domestic investment seem to suggest that, financing of domestic investment is not a role that FDI flows play in these ECOWAS countries under focus (Lipsey, 2000).

**Table 7K: Causality Test: Foreign Direct Investment and Domestic Investment**

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	GFCF does not Granger Cause INWFDI INWFDI does not Granger Cause GFCF	448	0.705 0.032	0.495 0.968	No Causality
4-Period	GFCF does not Granger Cause INWFDI INWFDI does not Granger Cause GFCF	420	3.53 0.091	0.838 0.985	No Causality
6-Period	GFCF does not Granger Cause INWFDI INWFDI does not Granger Cause GFCF	392	0.293 0.072	0.94 0.998	No Causality
8-Period	GFCF does not Granger Cause INWFDI INWFDI does not Granger Cause GFCF	364	0.363 0.037	0.939 1.000	No Causality
10-Period	GFCF does not Granger Cause INWFDI INWFDI does not Granger Cause GFCF	336	0.395 0.059	0.948 1.000	No Causality

Where: INWFDI is inward foreign direct investment, while GFCF is gross fixed capital formation, representing domestic investment

*Source: Author's Computation*

Similar results can be seen in studies by Kim and Seo (2003); Agosin and Machado (2005); Wang (2010); Chowdhary and Kushwaha (2013), Kamaly (2014). Specifically, extant literature has identified a variety of probable reasons why FDI may not granger cause domestic investment. For instance, the kind or make up of FDI in terms of mergers and acquisition (M & A) and Greenfield investment. This is particularly so when FDI is essentially of the M & A type, as it were in the 1990s, the impact of FDI on domestic investment maybe small and insignificant. Second, when FDI inflow is largely located in the tradable sector of the economy, where substitution between domestic investment and FDI is almost impossible, especially when multinational corporations and domestic firms can access and operate in the global market.

## **Robustness and Sensitivity Checks**

### **(a) Country-Specific Pair-wise Causality Test between FDI and GFCF**

Considering the fact that there are many country-specific variables that determine how FDI influences domestic investment, but which the granger causality test for the overall ECOWAS countries may have significantly conceal, we conducted the pair-wise granger causality test as part of our robustness checks. Table 7L presents the results of the pair-wise granger causality test on inward FDI and domestic investment for each of the fourteen ECOWAS countries that make up our sample.

From the results in Table 7L, four distinct categories can be discerned. First, for countries, such as Benin, Guinea Bissau, Ghana and Nigeria, there was a unidirectional causality, running from FDI to domestic investment. This finding tends to suggests that, increases in FDI crowds-in local investments, suggesting that FDI has significant impact on the development of local productivity and growth. This finding is consistent with studies by Borensztein et al (1998); Bosworth and Collins (1999); de Mello (1999); Tang et al (2008);

Ndikumana and Verick (2008); Ramirez (2011); Al-Sadig (2013). Second, in countries like Burkina Faso, Guinea, Mali, Senegal and Sierra Leone however, domestic investment was to found granger cause FDI. This finding tends to support the view that FDI can have a positive effect on growth by enhancing domestic capital accumulation. Studies with similar findings include Ndikumana and Verick (2007); Lautier and Moreau (2012). Third, in the case of Niger, there exist a two- way causality between domestic investment and FDI. This implies that just as domestic investment is important in predicting the inflow of FDI, the reverse is also true in the case of Niger. Thus, both FDI and domestic investment reinforces each other, that is, they are complementary. Similar mixed evidence between FDI and domestic investment have been recorded in studies like Agosin and Mayer (2000); Misun and Tornsik (2002); Apergis et al (2006); and Adams (2009). Lastly, results from Cote d'Ivoire, Gambia, Liberia and Togo confirmed the existence of no causality like the granger causality test result obtained for the overall ECOWAS countries.

**Table 7L: Results from Granger Causality Test: GFCF VS IFDI**

Country	Null Hypothesis	F-Statistics	P-Value	Conclusion
Benin	H <sub>01</sub>	0.0035	0.9536	GFCF ← IFDI
	H <sub>02</sub>	7.7061	0.0094***	
Burkina Faso	H <sub>01</sub>	6.7342	0.0042***	GFCF → IFDI
	H <sub>02</sub>	0.1130	0.8936	
Cote d' Ivoire	H <sub>01</sub>	0.0001	0.9999	No Causality
	H <sub>02</sub>	0.0175	0.9827	
Guinea Bissau	H <sub>01</sub>	0.0017	0.9677	GFCF ← IFDI
	H <sub>02</sub>	4.3033	0.0467**	
Ghana	H <sub>01</sub>	0.8423	0.4417	GFCF ← IFDI
	H <sub>02</sub>	5.8079	0.008***	
Guinea	H <sub>01</sub>	5.6120	0.0092***	GFCF → IFDI
	H <sub>02</sub>	1.8745	0.1729	
The Gambia	H <sub>01</sub>	0.6072	0.5522	No Causality
	H <sub>02</sub>	2.2979	0.1198	
Liberia	H <sub>01</sub>	1.4113	0.2612	No Causality
	H <sub>02</sub>	0.3830	0.6854	
Mali	H <sub>01</sub>	10.9820	0.0003***	GFCF → IFDI
	H <sub>02</sub>	0.1721	0.8428	
Niger	H <sub>01</sub>	7.7764	0.0022***	GFCF ↔ IFDI
	H <sub>02</sub>	23.305	0.0000***	
Nigeria	H <sub>01</sub>	1.3304	0.2812	GFCF ← IFDI
	H <sub>02</sub>	0.3602	0.0008***	
Senegal	H <sub>01</sub>	9.4701	0.0044***	GFCF → IFDI
	H <sub>02</sub>	2.8440	0.1021	
Sierra Leone	H <sub>01</sub>	6.3075	0.0057***	GFCF → IFDI
	H <sub>02</sub>	0.1061	0.8997	
Togo	H <sub>01</sub>	1.6340	0.2139	No Causality
	H <sub>02</sub>	0.2317	0.7948	

**Note:** Null Hypothesis: H<sub>01</sub>: GFCF does not Granger Cause IFDI, and H<sub>02</sub>: IFDI does not Granger Cause GFCF. Where the notation; X → Y means, variable X Granger Causes Y.

\*Significant at 10%, \*\*Significant at 5%, \*\*\*Significant at 1%.

Source: Author's Computation

**(b) Impact Assessment of FDI on GFCF**

In addition, we conducted impact assessment analyses for each of the fourteen countries using the log form of the ordinary least squares (OLS). The result of OLS for each of the countries is reported in Table 7M. A close look at the results confirm our conjecture that the impact of FDI on domestic investment depends largely on the country concerned since the size and the direction of the FDI coefficient varied largely across the fourteen ECOWAS countries. Overall, why in twelve of the ECOWAS countries, FDI crowded in domestic investment as shown by the positive value of their individual country coefficient (though with varying levels of significance), it was a case of FDI crowding out domestic investment in Guinea Bissau and Nigeria. In the case of Nigeria, for instance, a unit rise in FDI inflow will cause domestic investment to decline by about 0.55 units. This latter result (that is, crowding out effect) supports studies by Agosin and Machado (2005); Titarenko (2006); Udomkerdmongkol and Morrisey (2008); and Adams (2009).

**Table 7M: Country-Specific Impact of FDI on GFCF**

COUNTRY	Constant	Coefficient (logIFDI)	R2	ADJ. R2	F-Stat	DW
Benin	25.39(302.62)	0.27(5.07***)	0.32	0.29	3.88(0.05**)	1.91
Burkina Faso	27.06(239.06)	0.09(0.32)	0.15	0.13	25.34(0.00***)	1.86
Cote D' Ivoire	28.09(2989.12)	0.001(0.12)	0.04	0.03	3.01(0.07*)	1.52
Guinea Bissau	17.55(222.41)	-0.03(-0.56)	0.45	0.42	2.89(0.09*)	2.01
Ghana	22.23(576.07)	0.69(3.74**)	0.39	0.38	13.97(0.00***)	2.24
Guinea	28.47(685.68)	0.03(1.26)	0.04	0.02	2.91(0.08*)	1.99
The Gambia	21.85(493.80)	0.09(0.05)	0.05	0.03	3.69(0.06*)	1.61
Liberia	20.83(104.06)	0.06(0.91)	0.07	0.06	2.92(0.08*)	1.73
Mali	26.13(236.16)	0.01(0.04)	0.19	0.16	7.09(0.00***)	2.12
Niger	27.27(2089.24)	0.93(4.36***)	0.51	0.49	19.07(0.00***)	2.04
Nigeria	29.09(200.15)	-0.55(3.93**)	0.35	0.34	3.74(0.06*)	2.31
Senegal	27.18(370.29)	0.20(0.02)	0.15	0.13	5.19(0.00***)	1.89
Sierra Leone	26.63(153.05)	0.38(0.88)	0.39	0.36	4.03(0.05*)	1.75
Togo	25.69(332.45)	0.12(1.21)	0.07	0.04	3.56(0.07*)	2.09

NB: t-statistics is in parenthesis &\*Significant at 10%, \*\*Significant at 5%,\*\*\*Significant at 1%.

Source: Author's Computation

### (c) **Parameter Stability Assessment**

Lastly, in order to further strengthen the robustness of our analysis, we examined whether the estimated simple regression equation for each country exhibited the desired property of structural stability over time. In this regard, we employed the plots of the Cumulative Sum of Recursive Residual (CUSUM) and the cumulative sum of squares of Recursive Residual (CUSUMSq). Essentially, while the CUSUM test is appropriate for detecting defined changes in the regression coefficients, the CUSUMSq is utilized in situations where the departure from the constancy of the regression coefficients is haphazard and sudden. The findings from the parameter stability test are reported in Appendix 5. As evident from the result in Appendix 5, and using the CUSUM test, the test showed sign of parameter stability for each of the countries, excepting that of Benin. However, when both the CUSUM and CUSUMSq tests are simultaneously utilized, parameter stability was confirmed only in seven (7) of the countries, namely, Ghana, Senegal, Togo, Cote d'Ivoire, , Liberia, Niger, and Guinea Bissau.

## **4.4 Evaluation of Working Hypotheses**

In this sub-section of the study, we attempted to evaluate those 5 working hypotheses stated in sub-section 1.5 against the empirical evidence contained in this chapter. This is done in order to validate or otherwise those hypotheses earlier stated.

### **4.4.1 Evaluation of Working Hypothesis One**

H<sub>0</sub>: There is no significant relationship between aggregate FDI in ECOWAS countries and domestic/macroeconomic factors.

#### **DECISION:**

The p-value of the slope coefficients of RGDP (0.0004), OPEN (0.082), NATRES (0.000) and LABOUR (0.0253) all passed the conventional 5 percent (5%) level of

significance. Accordingly, we therefore reject the null hypothesis that there is no significant relationship between aggregate FDI inflow in ECOWAS countries and domestic/macroeconomic factors. Thus, we conclude that domestic/macroeconomic factors are significant determinants of aggregate FDI inflow in ECOWAS countries.

#### **4.4.2 Evaluation of Working Hypothesis Two**

H<sub>0</sub>: There is no significant relationship between FDI and real GDP in ECOWAS countries.

#### **DECISION**

The p-values of the coefficients of FDI and RGDP all passed the conventional 5 percent (5%) level of significance. We therefore reject the null hypothesis of no significant relationship between FDI and real GDP in ECOWAS countries. Hence, we conclude that both FDI and real GDP are mutually re-enforcing. In other words, while FDI helps to promote growth, real GDP also attract more FDI inflows.

#### **4.4.3 Evaluation of Working Hypothesis Three**

H<sub>0</sub>: There is no significant (negative) relationship between FDI inflow and domestic investment in ECOWAS region.

#### **DECISION:**

None of the p-values of the coefficients of FDI and domestic investment (GFCF) passed the conventional 5 percent (5%) level of significance. As such, we accept the null hypothesis that there is no significant (negative) relationship between domestic investment and FDI in the ECOWAS region. Hence, we conclude that FDI does not complement local investment in that ECOWAS region.

#### **4.4.4 Evaluation of Working Hypothesis Four**

H<sub>0</sub>: There is no significant relationship between FDI inflow and policy reform in the ECOWAS region.

#### **DECISION:**

The average p-value of the Maximum Wald F-statistics of 0.02034 (see Table 71) passed the conventional 5 percent (5%) level of significance. Thus, we therefore reject the null hypothesis that there is no significant relationship between FDI Inflow in ECOWAS countries and policy reforms. Accordingly we conclude that policy reforms significantly influence the inflow of FDI into the ECOWAS region.

#### **4.4.5 Evaluation of Working Hypothesis Five**

H<sub>0</sub>: There is no significant relationship between FDI inflow and quality of institutional factors in the ECOWAS region.

#### **DECISION**

The p-value of the coefficient of INSTFAC did not pass the conventional five percent (5%) level of significance. We therefore accept the null hypothesis of no significant relationship between FDI inflow and institutional factors in ECOWAS countries. Thus, we conclude that the quality of institutions does not significantly influence the quantum of FDI into the ECOWAS region.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

The study examines the determinants of aggregate foreign direct investment in ECOWAS region. It is hypothesized that the determinants of FDI are location-specific. Thus, an investigation of the germane drivers of FDI inflow in the context of the ECOWAS region becomes imperative. Other corollary objectives are: to investigate the empirical relationship between FDI and real GDP; to determine whether FDI crowds-in local investment in the region; to ascertain the impact of policy reforms in promoting FDI inflow into the ECOWAS region, and to determine the relevance or otherwise of institutional factors in attracting FDI into the region.

The data for the study were sourced from secondary sources, namely, The World Bank's Development Indicators and the CPIA Business Environment, for fourteen (14) nations in the ECOWAS sub-region for the period of 1980 to 2013. The modified Agosin and Machado (2005) Investment Model was utilized as the theoretical justification, while the fixed effects and Generalized Method of Moment (GMM) as estimation techniques. These were complemented by the traditional panel data Granger causality test.

#### **5.1 Summary of Findings**

##### **5.1.1 Major Findings**

The major findings of this study include:

1. Only the institutional variable was found to have been positively correlated with all other variables( namely, inflation rate, exchange rate, trade openness, real GDP, natural resource rent, infrastructure, total labour force and agglomeration) , suggesting that an appreciable improvement in the level of institutional factor(s) in ECOWAS

economies would not only promote inward FDI and domestic investment, but also guarantee some measure of macroeconomic stability.

2. Both economic fundamentals, namely; large market size and human capital, and non-economic fundamentals such as, agglomeration economies, were found to be statistically significant in attracting FDI into the ECOWAS region, an indication of the absorbing capacity of the ECOWAS countries
  - (i) Trade openness was also found to be significant in attracting FDI into the region, suggesting that further trade liberalization by ECOWAS countries is likely to increase FDI inflow into the sub- region.
  - (ii) The continuous dependence of ECOWAS countries on natural resource rent may negatively impact on FDI, thus providing evidence of resource curse.
3. The empirical relationship between FDI and real GDP suggest the existence of bi-directional relationship between the duo. This suggests that while the market size has been effective in attracting FDI into the region. FDI, on the other hand, has been a key contributing factor to the growth rate of the sub-region.
4. There is no causation between inward FDI and domestic investment. The absence of causation from FDI to domestic investment seems to suggest that financing of local investment is not a prime role that FDI flows play in ECOWAS region. On the other hand, it may also be due to the kind of FDI that flows into the sub-region. Where FDI inflow is predominantly in the form of mergers and acquisitions as recorded in the 1990s, the impact of FDI on domestic investment may become inconsequential.

### 5.1.2 Other Findings

Besides the major findings listed in numbers 1 to 4, other findings of the study include:

- 5 The income level effect reveals that the higher the income level an ECOWAS nation attains, the more relevant is natural resource in attracting FDI into such an economy. Similarly the legal origin effect indicates that, while the continuous dependence on natural resource may hinder inward FDI in Anglophone and Lusophone countries, poor institutional quality may do same for those Francophone countries in the ECOWAS bloc. Both effects tend to further underscore the importance of considering non-economic fundamentals in the formulation of FDI strategies in the ECOWAS region.
- 6 Structural breaks were reported to be a significant determinant of FDI inflow in most of the ECOWAS countries under focus. While the country-specific impact assessment of FDI on economic growth produced mixed results, suggesting that FDI inflow may not readily translate to economic growth in a nation.
- 7 Agglomeration economies were also found to be a driver determinant of FDI flow to ECOWAS countries. This suggests that, once the inflow of FDI sets in, it has the tendency to re-enforce itself and further attract more FDI as new investors would like to situate their investment next to other multinationals. This factor further underscores the need to accord non-economic fundamentals a vital place in the design and implementation of FDI strategies in the ECOWAS region.

## 5.2 Conclusion

The crucial role FDI can play in enhancing economic growth in developing countries has been theoretically recognized and emphasized in the literature. In recognition of the potential role of FDI, many countries are actively trying to lure foreign investors in a bid to promote the growth prospects of their economies.

In the ECOWAS region however, the issues of whether FDI enhances growth on the one hand, and whether FDI local domestic investment in the region on the other hand, appear to have been largely ignored in the process of policy formulation in the region. It is on this note that this study examined the determinants (economic and non-economic fundamentals) of aggregate FDI inflow, the nexus between economic growth and FDI, as well as the complementarity or otherwise of FDI and domestic investment in the ECOWAS region.

Generally, FDI inflow into the ECOWAS region was found to be determined partly by economic fundamentals like market size, openness and human capital and non-economic fundamentals like agglomeration economies, income effect, legal origin effect and policy reforms (as measured by the structural breaks). In addition, the study also confirmed the existence of a bi-directional relationship between FDI and real GDP, implying a mutually reinforcing relationship between the duo.

The foregoing findings tend to challenge the conventional wisdom, arguing that FDI flows to sub-Saharan countries in general, and ECOWAS countries in particular, are driven majorly by economic fundamentals and incentive measures of the host economies. Rather our findings tend to suggest that, non-economic fundamentals like agglomeration economies, legal origin, policy reforms and income level are just as vital as economic fundamentals and incentives in attracting FDI into the ECOWAS region.

It follows therefore that, if the current marginalization of the ECOWAS region in terms of FDI inflows is to be reversed then equal recognition should be accorded to both economic and non-economic fundamentals in the conception, formulation and implementation of FDI policies aimed at inducing FDI-led growth in the long-run.

### **5.3 Limitations of the Study and Suggestions for Further Studies.**

The place of quality domestic institutions in attracting FDI to developing nations has been widely acknowledged in the literature. Thus, there are several institutional variables. However, due to data unavailability, this study could not consider the effect of other measures of institutional quality. Thus, this study recommends that future research investigations in this area should explore the role of other institutional determinants developed by La Porta et al (1999) and compare the impacts of both types of indicators on FDI to inform policy formulation in the ECOWAS sub-region.

In net terms, the effect of FDI on local investments tends to be neutral for the pooled estimation as well as for some of the countries. So, FDI appears to have no impact on domestic investment. However, for a number of countries in the ECOWAS sub-region, FDI is seen to have crowded in local investment. Therefore, some countries have benefited more from FDI inflows than others. Thus, it will be necessary in ECOWAS sub-region for future studies to conduct in-depth examination of factors that account for the greater success recorded for some countries in terms of FDI having a positive and appreciable effect on investment. In addition, further studies are needed to reveal the level to which policy (at the industry or sectoral level) has engendered FDI to have either a crowding in or a crowding out effect on the level of local investment.

This study has focused primarily on ascertaining the determinants of FDI inflow at the sub-regional level (ECOWAS). Result from this panel study may have significantly masked

the peculiarities of the individual countries that make up this economic bloc. Thus, this study recommends that subsequent future research work in this regard should be replicated at the macro level so as to reveal the relative importance of these determinants of FDI. Such efforts should be complemented by conducting sectorial analysis in order to enhance understanding of industry specific FDI flows and its associated determinants.

Lastly, theoretical literature has identified three major channels of positive externalities that lead to spatial clustering of investors (that is, agglomeration economies). However, with the aggregate data we have available, we have merely lumped these three types together by using a single variable, the one-period lagged value of FDI stock. Thus, this study recommends that subsequent research studies in this area should consider, again, subject to data availability, the relative importance of these three in attracting FDI into the ECOWAS sub-region so as to enhance future policies aimed at attracting the right kind of FDI into the sub-region

#### **5.4 Contribution to Knowledge**

This study adds to existing knowledge on the importance of identifying the germane drivers of FDI inflow in the ECOWAS region. Previous studies on the determinants of inward FDI in ECOWAS region have reported that FDI into the ECOWAS bloc is largely driven by natural resource endowment and macroeconomic fundamentals such as: market size and cost of labour, among others. This study however, adds to the existing body literature on the drivers of FDI into the ECOWAS region. First, this study confirms that although macroeconomic fundamentals like market size, openness and labour cost are significant drivers of FDI inflows into the sub-region, dependence on natural resource tend to engender resource curse on the long-run.

Secondly, the study also adds to the existing literature by confirming that FDI to ECOWAS region are equally driven by non-economic fundamentals like income effect, and agglomeration economies. For instance, the study was able to confirm that, in terms of legal origin, while the dependence on natural resource endowment is a major hindrance to FDI inflow in Anglophone and Lusophone countries within the ECOWAS bloc, poor institutional quality is a major impediment to FDI inflow in the Francophone ECOWAS nations. As for the income effect, the study confirmed that, the higher the level of average income in an ECOWAS country, the more the significance of natural resource endowment in attracting FDI to such an economy.

Finally, the study contributes to the limited study on the contribution of FDI to economic growth, particularly in the ECOWAS sub-region. Two studies have been conducted with differing conclusions. Alege and Ogundipe (2013) reported that the effect is not significant, while Adamu and Oriakhi (2013) posit that the effect is significant. This study however confirms a case of bi-directional relationship between the two variables of interest. Additionally, the study also confirmed the significance of structural breaks (policy reforms) in the specification of FDI-Economic growth nexus in ECOWAS region.

## **5.5 Recommendations.**

Some policy lessons can be drawn from the findings of study. Considering the theoretical positive correlation between institutional quality and all other variables in the study, the study recommends that the region should make conscious effort to improve on the prevailing institutional quality and governance as that will not only unlock the region's wealth potentials, but also help redistribute wealth within each ECOWAS country and hence reduce poverty and make it easier to draw benefits from FDI inflow.

Given our finding that trade openness positively affects FDI inflows from our result, it is therefore necessary for the ECOWAS bloc to improve their trade relationship with the other regions of the world as this contributes immensely in attracting more potential investors who could invest in their countries to meet not only local demand but also external demand. In this regard, the international development partners have a role to play. They should continue to promote the institution of a more open and equitable trade regime. This is particularly necessary for those African exporters of agricultural produce who often suffer from the high subsidies in developed countries exporting similar agricultural products.

To overcome the resource curse problem, we advocate a special form of privatization whereby the royalties and other revenues that accrue to government are turned over to their citizens-often referred to as ‘voucher’ or mass privatization. Such an agreement will help to decrease the leeway these firms and government have in diverting revenues away from welfare-maximizing goals while also increasing the incentives for citizens to take part in productive, rather than rent-seeking activity.

Additionally, arising from our finding that the larger the market size the greater the flow of inward FDI, policies should be put in place to promote growth of the market size as well as step up the volume and composition of export from the ECOWAS sub- region. In formulating such policies, proper attention should be given the fact that primary sector-oriented exports have insignificant or no effect on growth and that such may not significantly encourage larger flow of foreign exchange for the ECOWAS countries. This is so because primary product-based exports have inelastic demand which, in turn, have serious negative implication for growth. On the other hand, exports should be encouraged majorly in the secondary sector as this helps to promote growth. In this regard, policies that will promote the diversification of the productive base of these economies by encouraging the growth of their

secondary sectors should be formulated and implemented. Such policies should focus on the as development of efficient and effective institutions, infrastructural base, sector as well as security.

Furthermore, given the documented evidence of no causation between FDI and domestic investment for the overall sampled ECOWAS countries, the study recommends that policies should be directed to review the open door policy to attract all forms of foreign direct investment to the region as this will not yield the desired benefits. Specifically, policy makers in the ECOWAS countries should embark on promotional resources aimed at attracting the right kind and quantity of FDI as well as take relevant steps to regulate others. Such policies should be complemented by putting in place better targeted approach to screen FDI applications in order to find out their productive capacity before encouraging such inflows.

The study also reports that, as for the income effect, the higher the income level an ECOWAS country attains, the more relevant natural resource is in attracting resource-seeking FDI. Much as this is desirable, the proceeds from such inflow need to be meaningfully utilized in order to avoid resource curse. One of the ways to achieve this is by setting up of natural resource funds in each of the countries concerned. Such funds-mostly state-owned investment account that are invested overseas-are designed to protect, manage, sterilize and/or stabilize resource revenue, avoid appreciation identified as central to Dutch disease, as well as improve the conditions for business and thereby promote diversification. Also, the study also recorded evidence of structural breaks in the FDI-growth model for each of the countries, except Niger. The study identified some plausible breaks in the trends, suggesting the need for policy changes to be taken into consideration in the specification of FDI-growth function in each of the thirteen countries concerned. This is particularly imperative considering the fact that the structural breakpoints identified in the result for each

of the ECOWAS seems to match with the corresponding critical economic incidents in each of those countries.

Last but not the least, given the positive and significant effect of agglomeration of countries in attracting FDI inflows, efforts must be made by all nations within the ECOWAS sub-region to put in place appropriate strategies that would promote investment-friendly environment aimed at attracting the right kind and quality of FDI into the individual ECOWAS nation in particular, and the ECOWAS sub-region in general. After all, once the inflow of FDI kick-starts, it helps to perpetuate itself and attract more FDI since potential investors would like to locate their investments close to other multinational corporations.

## REFERENCES

- Abdelkarim, J., Khaled, G., & Ilyes, A. (2013). Determinants of foreign direct investment in MENA region: Panel cointegration analysis. *Journal of Applied Business Research*, 29(4), 1103-1108.
- Acar, S., Eris, B., & Tekce, M. (2012). *The effects of foreign direct investment on domestic investment: Evidence from MENA countries*. Paper presented at the 14<sup>th</sup> Annual Conference of the European Trade Study Group (ETSG), Leuven. Retrieved from <http://www.etsg.org/ETSG2012/programme/paper/143>.
- Acemoglu, D., Johnson, S., & Robinson, J. (2004). *Institutions as the fundamental cause of long-run growth*. (NBER Working Paper 10481). Cambridge MA: National Bureau of Economic Research.
- Adams, S. (2009). Foreign direct investment, domestic investment and economic growth in Sub-Saharan Africa. *Journal of Policy Modeling*, 31, 939-949.
- Adamu, P.A., & Oriakhi, D.E. (2013). The Impact of Foreign Direct Investment on economic Growth in Economic Community of West African States. *African Journal of Economic Policy*, 20(2), 89-144.
- Adegbite, E.O. & Owuallah, S.I. (2007). First national finance and banking conference on economic reforms and the Nigerian financial system. *A communiqué read at National Conference organized by the Department of Finance*, University of Lagos, 3-4, April.
- Agarwal, J.P. (1980). Determinants of foreign direct investment. *Weltwirtschaftliches Archive*, 4(116), 739-73.
- Agiomirgianakis, G., Asteriou, D., & Papatoma, K. (2006). *The determinants of foreign direct investment: a panel data study for the OECD countries*. Retrieved from [http://www.city.ac.uk/economics/dps/discussion\\_papers/03/06/pdf](http://www.city.ac.uk/economics/dps/discussion_papers/03/06/pdf).
- Agosin, M.R., & Mayer, R. (2000). *Foreign investment in developing countries: Does it crowd in domestic investment?* (UNCTAD Paper, No. 146). Geneva. United Nations Conference on Trade and Development, UNCTAD,.
- Agosin, M. R., & Machado, R. (2005). FDI in developing countries: Does it crowd-in domestic investments? *Oxford Development Studies*, 33(2), 149-162.
- Ahmed, F., Arezki, R., & Funke, N. (2005). *The composition of capital flows: is South Africa different?* (IMF Working Paper 05/40). Washington D.C. International Monetary Fund (IMF),
- Ahmed, M., Haider, G., & Zaman, A. (2014). *Changing point and parameter stability with heteroskedastic models*. Retrieved from <http://dx.doi.org/10.2139/ssrn.2471479>.
- Ahmad, S. (1990). Foreign capital inflows and economic growth: A two-gap model for the Bangladesh economy. *Bangladesh Institute for Development Studies*; 18(1), 55-78.

- Ajayi, S. I. (2002). *Institutions: The missing link in the growth process?* Presidential address delivered at the 43<sup>rd</sup> annual conference of the Nigerian Economic Society held in Lagos, 7-8 August.
- Ajayi, S. I. (2006). The determinants of foreign direct investment in Africa: A survey of the evidence. In: Ajayi, S.I. (Ed.) *Foreign direct investment in sub-Saharan Africa: Origins, targets, impact and potential* (pp.11-32).Nairobi : African Economic Research Consortium (AERC).
- Ajide, K.B. (2014). Determinants of foreign direct investment in ECOWAS countries: The roles of governance and human capital. *The Empirical Econometrics and Quantitative Economics Letters*, 3(2), 61-74.
- Ajuwon, O.S., & Ogwumike, F.O. (2013). Uncertainty and foreign direct investment: A case of agriculture in Nigeria. *Mediterranean Journal of Social Sciences*,4(1), 155-163.
- Akinlo, A.E. (2004). Foreign direct investment and growth in Nigeria: An empirical investigation. *Journal of Policy Modeling*, 36, 627-639.
- Akpan, U.S., Isihiak, S.R.,& Asongu, S.A. (2014).*Determinants of foreign direct investment in fast-growing economies: A study of BRICS and MINT.*(Working Papers N0.14/002), African Governance and Development Institute. Retrieved from <http://ideas.repec.org/s/agd/wpaper>.
- Alavinasab, S.M. (2013). Determinants of FDI in Iran. *International Journal of Academic Research in Business and Social Sciences*,3(2), 258-267.
- Alege, P. O., & Ogundipe, A. A. (2013). Foreign direct investment and economics growth in ECOWAS: A System- GMM approach. *Covenant Journal of Business and Social Sciences*,5(1), 1-22.
- Alemu, A. M. (2012). Effects of Corruption on FDI Inflows in Asian Economies. *Seoul Journal of Economics*. 25 (4) : 387- 395.
- Alfaro, L., Chanda, A., Kalemli-Ozcan, S,yek, S,&Sayek, S.(2004). FDI and economic the role of local financial markets. *Journal of International Economics* 64, 89-112.
- Ali, S.,& Guo, W. (2005).Determinants of FDI in China. *Journal of Global business and Technology*,1(2), 21-33.
- Al-Sadig, A. (2013). The effects of foreign direct investment on private domestic investment: evidence from developing countries. *Empirical Economics*,44(4), 1267-1275.
- Al-Iriani, M.,& Al-shamsi, F. (2007).*Foreign direct investment and economic growth in the GCC countries: A causality investigation using heterogeneous panel analysis.* (Discussion Paper No. 07/01). Retrieved from <http://luc.edu/orgs/meea/vol.9/pdf>.
- Amaya, C. A. G., & Rowland, P. (2004). Determinants of investment flows into emerging markets. Retrieved from <http://www.banrep.gov.co/docum/ftp/borra313.pdf> (20.04.2015).

- Ancharaz, V.D. (2003). Determinants of trade policy reform in sub-Saharan Africa. *Journal of African Economics*, 12(3), 417-443.
- Andrews, D.W.K. (1993). Testing for parameter stability and structural change with unknown change point. *Econometrics*, 61(4), 821-856.
- Anyanwu, J. C. (1998). An econometric investigation of determinants of foreign direct investment in Nigeria. *Proceedings of the Nigerian Economic Society (NES) Conference*, 219-40. Ibadan, Nigeria.
- Anyanwu, J.C. (2012). Why does foreign direct investment go where it goes: New evidence from African countries? *Annals of Economics and Finance*, 13(2), 425-462.
- Anyanwu, J.C., and Erhijakpor, A.E. (2009). Health Expenditures and Health Outcomes in Africa. *African Development Review*, 21(2), 400-433.
- Apergis, N., Katrakilidis, C. P., & Tabakis, N. M. (2006). Dynamic linkages between FDI inflows and domestic investment: A panel cointegration approach. *Atlantic Economic Journal*, 34, 385-394.
- Arbatli, E. (2011). *Economic policies and FDI inflows to emerging market economies*. (IMF Working Paper 11/192). Washington D.C. International Monetary Fund (IMF),
- Arellano, M., & Bond S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equation. *Review of Economic Studies* 58: 277-297
- Arellano, M. & O. Bover (1995) Another look at the instrumental variable estimation of error component models. *Journal of Econometrics* 68, 29-51
- Arndt, C., Buch, C.M., & Schnitzer, M. (2007). *FDI and domestic investment: An industry-level view*. (GESY Discussion paper No. 212). Governance and the Efficiency of the Economic Systems. Retrieved from <http://www.sfbtr15.de/uploads/media/212.pdf>
- Asiedu E., & Esfahani, M.S. (2001). Ownership structure in foreign direct investment projects. *Review of Economics and Statistics*, 81(4), 647-662.
- Asiedu, E (2002). On the determinants of foreign direct investment to developing countries: Is Africa different? *World Development*. 30(1), 107-119.
- Asiedu, E. (2003). *Foreign direct investment to Africa: The role of government policy, governance and political instability*. University of Kansas, Kansas, Mimeo.
- Asiedu, E. (2004). Policy reform and foreign direct investment in Africa: Absolute progress but relative decline. *Development Policy Review*, 22(1), 41-48.
- Asiedu, E. (2006). Foreign direct investment to Africa: The role of government policy, institutions and political instability, *World Economy*, 29(1), 63-77.
- Asteriou, D. (2009). Foreign aid and economic growth: New evidence from panel data approach for five South Asian countries. *Journal of Policy Modeling*, 31, 155-161.

- Athukorala, P. (2009). Trends and patterns of foreign direct investment in Asia: A comparative perspective. *The Journal of Applied Economic Research*, 3(4), 365-408.
- Aurangzeb, A., & Haq, A.U. (2012). Impact of Investment activities on economic growth of Pakistan. *Business and Management Review*, 2(1), 92-100.
- Aykut, D., & Sayek, S. (2007). The role of the sectoral composition of FDI on growth. In: Piscitello, L., & Santangelo, G.D. (Eds.). *Do Multinationals feed local development and growth?* (36-63). Amsterdam: Elsevier.
- Babbie, E. (2013). *The Practice of Social Research*. (13<sup>th</sup> ed.). Wadsworth :Cengage Learning.
- Bacha, E.L. (1974). Foreign capital inflow and the output growth rate of the recipient country. *Journal of Development Studies*, 10, 374-381.
- Bacic, K., Bacic, K., & Ahec-Sonje, A. (2005). The effect of FDI on recipient countries in Central and Eastern Europe. *Hamburg Institute of International Economics*. Retrieved from: [http://www.hwwa.de/etc/EIWS\\_050916/Bacic\\_Racic\\_Sonje.pdf](http://www.hwwa.de/etc/EIWS_050916/Bacic_Racic_Sonje.pdf).
- Balasubramanyam, V.N., Salisu, M. and Sapsford, D. (1996) 'Foreign direct investment and growth in EP and IS countries', *The Economic Journal*, 106(434), 92-105.
- Baldacci, E., Guin-Siu, M.T., & Mello, L.D. (2003). More on the effectiveness of public spending on health care and education: A covariance structure model. *Journal of International Development*, 15(6), 709-725.
- Bandera, V.N., & White, J.T. (1968). US direct investment and domestic markets in Europe. *Economic Internationale*, 31, 117-233.
- Banerjee, A. V., & Iyer, L. (2005). History, institutions, and economic performance: The legacy of colonial land tenure systems in India. *American Economic Review*, 95(4), 1190-1213.
- Barrel, R., & Pain, N. (1996). Domestic institution, agglomeration and foreign direct investment in Europe. *European Economic Review* 43, 29-45.
- Barrel, R., & Pain, N. (1997). Foreign direct investment, technological change and economic growth within Europe. *The Economic Journal* 107, 1770-86.
- Basu, P., Chakraborty, C. and Reagle, D. (2003). Liberalization, FDI, and Growth in Developing Countries: A Panel Cointegration Approach. *Economic Inquiry*, 41, 510-516.
- Basu, A., & Srinivasan, K. (2002). *Foreign direct investment in Africa: Some case studies*. (IMF Working Paper 02/61). Washington D.C: International Monetary Fund (IMF).
- Batana, Y.M. (2011). *Analysis of the determinants of foreign direct investment flows to the West African Economic and Monetary Union Countries*. (AERC Research Paper 239). Nairobi: African Economic Research Consortium (AERC).

- Batra, G., Kaufmann, D., & Stone, A. (2003). Investment climate around the World: Voices of the firms. *World Business Environment Survey*. World Bank, Washington, D.C.
- Beck, T. (2011). *Finance and oil: Is there a curse in financial development?* European Banking Centre. (Discussion Paper, No. 2011-004). Netherlands: European Banking Centre.
- Beck, T., Demirguc-Kunt, A., & Levine, R. (2003). Law and finance: why does legal origin matter? *Journal of Comparative Economics*, 31, 653-675.
- Bellak, C., Leibrecht, M., & Stehrer, R. (2008). Policies to attract foreign direct investment: An industry-level analysis. Paper presented at the OECD Global Forum on International Investment, March 27-28. Retrieved from <http://www.fiw.ac.at/fileadmin/Documents/Publikationen/fiwstudie19.pdf>
- Benacek, V., & Visek, J.A. (1999). *Determinants of FDI flows into Czech manufacturing industries: Theoretical background for an empirical study*. Charles University, mimeo.
- Benassy-Quere, A., Fontagne, L., & Lahreche-Revil, A. (2001). Exchange rate strategies in the composition for attracting foreign direct investment. *Journal of the Japanese and International Economics*, 15, 178-198.
- Bengos, M., & Sanchez-Robles, B. (2003). Foreign direct investment, economic freedom and growth: New evidence from Latin America. *European Journal of Political Economy*, 19(3), 529-545.
- Berhanu N. (1999). Foreign investment in Ethiopia. *Economic Focus*, 2(3), 7-16
- Berhanu, N., & Kibre, M. (2003). *International competitiveness and the business climate in Ethiopia*. (Working Paper, No.1). Ethiopia. Ethiopian Economic Association (ECA).
- Bevan A.A., & Estrin, S. (2004). The determinants of foreign direct investment into European transition economies. *Journal of Comparative Economics*, 32, 775-787.
- Bezuidenhout, H., & Naude, W. (2008). *Foreign direct investment and trade in the Southern African Development Community*. (Working Paper, No. 2008/88). Helsinki : United Nations University/World Institute of Development Economics Research (UNU/WIDER).
- Bhandari, R., Dhakal, D., Pradhan, G., & Upadhyaya, K. (2007). Foreign aid, foreign direct investment and economic growth in East European countries. *Economic Bulletin*, 6(13), 1-9.
- Bhattacharya, A., Montiel, P.J., & Sharma, S. (1996) *Private capital flows to Sub-Saharan Africa: An overview of trends and determinants*. Unpublished paper, The World Bank, Washington, D.C.
- Blomstrom, M., Lipsey, R. E., & Zejan, M. (1996). Is fixed investment the key to economic growth? *The Quarterly Journal of Economics*, 111, 269-276.

- Blomstrom, M., Lipsey, R.E., & Zejan, M. (1994). *What explains developing country growth?* (NBER Working Paper No. 4132). Massachusetts : National Bureau of Economic Research,.
- Blomstrom, M., & Kokko, A. (1998). Multinational corporation and spillovers. *Journal of Economic Surveys*, 12(3), 247-277.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87, 115-143.
- Borensztein, E. Gregorio, J., & Lee, J.W. (1998): How does foreign direct investment affect economic growth? *Journal of International Economics*, 45, 135-135.
- Borensztein, E., DeGregorio, J., & Lee, J.W. (1995). How does foreign direct investment affect economic growth? *Journal of International Economics*, 45(1), 115-135.
- Bosworth, B.P., & Collins, S.M. (1999). Capital flows to developing economies: Implications of savings and investments. *Brooking Papers on Economic Activity*, 30(1), 143-180.
- Braunerhjelm, P., & Svensson, R. (1998). Agglomeration in the geographical location of Swedish MNFs: In P. Braunerhjelm and K. Ekholm, (Eds.). *The Geography of Multinational firms*. Dordrecht: Kluwer Academic Publishers.
- Brecher, R.A., & Diaz-Alejandro, C.F. (1977). Tariffs, foreign capital and immiserizing growth, *Journal of International Economics*, 7, 317-322.
- Brewer, T.L. (1993). Government policies, market imperfections and foreign direct investment. *Journal of International Business studies*, 24, 101-120.
- Buckley, P., Clegg, J., Wang, C., & Cross, A. (2002). FDI, regional differences and economic growth: Panel data evidence from China, *Transnational Corporation* 11, 1-23.
- Buckley, P.J., & Casson, M. (1976). *The future of the multinational enterprise*. London: Macmillan.
- Bun, M.J. G., & Windmeijer, F. (2010). The weak instrument problem of the system GMM estimator in dynamic panel data models. *The Econometrics Journal*, 13(1), 95-126
- Burns, N., & Grove, S.K. (2001). *The practice of nursing research: conduct, critique and utilization*. (4<sup>th</sup>ed.). Philadelphia: Saunders
- Burnside, C., & Dollar, D. (2000). Aid, policies and growth. *American Economic Review*, 90, 847-868.
- Busse, M., & Carsten, H. (2005). *Political risk, institutions and foreign direct investment*. (HWWA Discussion paper No. 315). Retrieved from: <http://www.hwwa.de/Forschung/publikationen/Discussion-paper/2005/315.pdf>.
- Calendo, M., & Kopeinig, S. (2005). *Some practical guidance for the implementation of propensity score matching* (IZADiscussion Paper No. 1588). Cambridge: Cambridge University Press.
- Campos, N.F., & Kinoshita, Y. (2002). FDI as technology transferred: Some panel evidence from transition economies, *The Manchester School*, 70(3), 398-419.

- Carcovic M. and Levine R., 2002, *Does Foreign Direct Investment Accelerate Economic Growth?*, (Minnesota, Working paper Series 03/2002). Retrieved from [http://www.worldbank.org/research/conferences/financial\\_globalization/fdi.pdf](http://www.worldbank.org/research/conferences/financial_globalization/fdi.pdf)
- Caves, R. E. (1996). *Multinational Enterprise and Economic Analysis: Cambridge Surveys of Economic Literature*, (3rd ed.). Cambridge : Cambridge University Press.
- Chakrabarti, A. (2001). The determinants of foreign direct investment: Sensitivity analysis of cross-country regressions. *KYLOS*, 54, 89-114.
- Cheng, L.K., & Kwan, Y.K. (2000). What are the determinants of the location of FDI? The Chinese Experience. *Journal of International Economics*, 51, 379-400.
- Cheng, L.K., & Kwan, Y.K. (2000): What are the determinants of the location of FDI? The Chinese experience. *Journal of International Economics*, 51, 379-400.
- Choe, J.I. (2003). Do foreign direct investment and gross domestic investment promote economic growth? *Review of Development Economics*, 7(1), 44-57.
- Chowdhary, R., & Kushwaha, V. (2013). Domestic investment, foreign direct investment and Economic growth in India since economic reforms. *Journal of Transformative Entrepreneurship*, 1(2), 74-84.
- Chowdhury, A., & Mavrotas, G. (2006). FDI and Growth: What Causes what? *The World Economy*, 29(1), 9-19.
- Clark, G., Cull, R., Peria, M.S.M., & Sanchez, S.M. (2001). *Foreign bank entry: Experience, implications for developing countries, and agenda for further research*. (Working Paper No 2698). The World Bank.
- Collier, P., & Gunning, J.W. (1999). Explaining African economic performance, *Journal of Economic Literature*, 37(3), 64-111.
- Collier, P., & Patillo, C. (2000). Investment and risk in Africa : In Collier, P. and Patillo, C. (Eds.). *Reducing the Risk of Investment in Africa* (3-30). London: Macmillan.
- Coloberman, S., & Shapiro, D. (1999). The impact of government policies on foreign direct investment: The Canadian experience. *Journal of International Business Studies*, 30(3), 513-532.
- CREFSA-DFI (2000). *Intra-regional private capital flows in Eastern and Southern Africa: Findings from studies in Mozambique, South Africa, Tanzania, Uganda, Zambia and Zimbabwe*, LSE Centre for Research in Economics and Finance in Southern Africa and Development Finance International.
- Retrieved from [http://www,dri.org.uk/pdfs/EngPub7a\\_CREFSA\\_DFI.pdf](http://www,dri.org.uk/pdfs/EngPub7a_CREFSA_DFI.pdf)
- Crespo, N., & Fontura, M.. (2007). Determinant factors of FDI spillovers-What do we really know? *World Development*, 36(3), 410-425.
- Cushman, D.O. (1985). Real exchange rate risk, expectations, and the level of direct investment. *The Review of Economics and Statistics*, 67(2), 297-308.

- De Mello, L. R., (1997). Foreign direct investment in developing countries and growth: A selective survey, *The Journal of Development Studies*, 34(1), 1-34.
- De Mello, L.R. (1999). Foreign direct investment-led growth: Evidence from time series and panel data, *Oxford Economic Papers*, 51,133-151.
- Delaunay, C., & Torrasi, C.R. (2012). FDI in Vietnam: An empirical study of an economy in transition. *Journal of Emerging Knowledge on Emerging Markets*, 4(4), 2-16.
- Dell'Erba, S., & Reinhardt, D. (2011): *Surfing the capital waves: A sector-level examination of surges in FDI inflows* (Working Paper No 11/07). Study Centre Gerzensee.
- Denscombe, M.(2010).*The good research guide for small – scale social research projects*.(4<sup>th</sup> Ed.).Philadelphia: Open University Press,.
- Desai, M.A., Foley, C.F., & Hines, J.R. (2005).*Foreign direct investment and domestic capital stock*.(NBER Working paper 117/17).Massachusetts : National Bureau of Economic Research.
- Dhakal, A., Rahman, S., Upadhyaya, K.P., 2007. Foreign direct investment and economic growth in Asia. *Indian Journal of Economics and Business* ,6(1), 15-26
- Dollar, D., Hallwards-Driemeier, M., and Mengistae, T. (2006).Investment climate and international integration. *World Development*, 39(9), 1498 – 1516.
- Dumludag, D. and Sukruoglu, D. (2007).The impact of macroeconomic and institutional variables on FDI inflows in emerging markets. *Marmara Universitesi*,13(2), 134-162.
- Dunning, J.H. (1981): The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies*, 19(1), 1-31.
- Edwards, S. (1990). *Capital flows, foreign direct investment and debt-swaps in developing countries*(NBER Working Paper, No. 3497). Massachusetts: National Bureau of Economic Research.
- Ekpo, A.M. (1995). Foreign direct investment in Nigeria: Evidence from time series data. *CBN Economic and Financial Review*, 35(1), 59-78.
- Engle, R, F., &Granger, C.W. (1987). Cointegration and error correction: representation, estimation, and testing.*Econometrica*,55(2),251-276.
- Engle, R.F., &Yoo, B. S., (1987). Forecasting and testing in co-integrated systems. *Journal of Econometrics*, 35(1), 143-159.
- Eregha, P.B. (2012): The dynamic linkages between foreign direct investment and domestic investment in ECOWAS countries: A panel cointegration analysis. *African Development Review*, 24(3), 208-220.
- Ericsson, J., & M, Irandoust (2005). Foreign aid, domestic savings and growth in LDCs: An application of likelihood-based panel cointegration. *Economic Modeling*, 22, 616-627.
- Estache, A., &Fay, M. (2007).*Current debate on infrastructure policy*.(Policy Research Working Paper 4410).Washington, D.C:The World Bank.

- Ezeoha, A.E., & Cattaneo, N.S. (2012). FDI flows to Sub-Saharan Africa: The impact of finance, institutions and natural resource endowment. *Comparative Economic Studies*, 54(3), 597-632.
- Faeth, I. (2009). Determinants of foreign direct investment – A tale of nine theoretical models. *Journal of Economic Survey*, 23(1), 165-196.
- Fakhreddin, F., Nezakati, H., & Mahmoudi, V.B. (2011). The determinants of FDI inflow on manufacturing sector of Malaysia. *Journal of International Business and Entrepreneurship Development*, 5(4), 299-314.
- Feng, Y. (2011). Foreign direct investment in China's service industry: Effects and determinants. *China: An International Journal*, 9(1), 144-163.
- Filmer, D., & Pritchett, L. (1999). The impact of public spending on health: does money matter?. *Social science and medicine*, 49(10), 1309-1323.
- Fiodendji, K. & Evlo, K. (2015). Do institutions quality affect FDI inflows in Sub-Saharan African countries? *Journal of Applied Finance and Banking*, 5(1), 117-141.
- Focarelli, D., & Pozzolo, A. F. (2001). The patterns of cross-border banks mergers and shareholdings in OECD countries. *Journal of Banking and Finance*, 25(12), 2305-2337.
- Fosu, A, Bates, R., & Hoeffler, A. (2006). Institutions, Governance and Economic Development in Africa: An Overview, *Journal of African Economies*, 15(1), 1-9.
- Frenkel, M., Funke, K., & Stadman, G. (2004). A panel analysis of bilateral FDI flows to emerging economies, *Economic Systems*, 28(3), 281-300.
- Fowowe, B. (2011). Financial sector reforms and private investment in sub –saharan African countries. *Journal of Economic Development*, 36(3), 79-94.
- Fry, M.J. (1993). *Foreign direct investment in a macroeconomic framework: Finance, efficiency, incentives and distortions*. (Policy Research Working Paper 1143). Washington, D.C: The World Bank,.
- Gardiner, R. (2000). *Foreign direct investment: A lead driver for sustainable development?* (Economic Briefing Series No1.). Retrieved from <http://www.earthsummit2002.org/es/issues/fdi.pdf>.
- Gastanaga, V.J., Nugent, B., & Pashanova, B. (1998). Host country reforms and FDI inflows: How much difference do they make? *World Development*, 26(7), 1299-1314.
- Gerdtham, U. G., & Löthgren, M. (2002). New panel results on cointegration of international health expenditure and GDP, *Applied Economics*, 34 (13), 1679-1686.
- Globerman, S, and Shapiro, D. (1999). The impact of government policies on foreign direct investment: The Canadian Experience, *Journal of International Business Studies*, 30 (3), 513-533.
- Golub, S.S. (2003). *Measures of restrictions on inward foreign direct investment for OECD countries* (Working papers, 357). Paris: Organization for Economic Cooperation and Development (OECD).

- Golub, S.S. (2009). Openness to foreign direct investment in services: An international comparative analysis. *The World Economy*, 32(8), 1245-1268
- Gottret, P.E., & Schieber, G. (2006). *Health financing revisited: A practitioner's guide*. Washington, D.C: The World Bank.
- Granger, C. W. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica* 37(3) , 424-438.
- Granger, C. W. (1980) Long memory relationships and the aggregation of dynamic models. *Journal of Econometrics*, 14, 227-38
- Granger, C.W. (1981). Some properties of time series data and their use in econometric model specification. *Journal of Econometrics*, 16(1), 121-130
- Granger, C.W.J. and Newbold, P. (1974). Spurious regressions in econometrics, *Journal of Econometrics*, 2, 111-120.
- Gries, T., Kraft, M., & Meierrieks, D. (2009). Linkages between financial Deepening, Trade Openness and Economic Development: Causality evidence from Sub-Saharan Africa. *World Development*, 37(12)
- Grosse, R., & Trevino, L.J. (1996). Foreign direct investment in the United States; An analysis by country of origin. *Journal of International Business Studies*, 27, 139-155.
- Gujarati, D. N. (2003). *Basic Econometrics*. (4<sup>th</sup> Ed.). New York : McGraw-Hill .
- Gylfason, T. (2004). *Natural resources and economic growth: From dependence to diversification*. (CEPR Discussion Paper No. 4804). Retrieved from: <http://www.cepr.org/pubs/dps/DP4804.asppdf>
- Hadri, K., (2000). Testing for Stationarity in Heterogeneous Panel Data. *Econometric Journal*(3), 148-61
- Hall, J. (1999). Why do some countries produce so much more output per worker than others?, *Journal of Economics*, 114 (1), 83 – 116.
- Hamilton, J.D. (1994). *Time Series Analysis*, Princeton, NJ: Princeton University Press.
- Hansen, G., & Rand, J. (2006). On the causal links between FDI and growth in developing countries. *The World Economy*, 29, 21-41.
- Harrison, A., & Ravenga, A (1995). *The effect of trade policy reform: what do we really know?* (NBER Working paper No. 5225). Cambridge, MA: National Bureau of Economic Research.
- Harvey, S. K., & Abor, J. (2009). Determinants of inward foreign direct investment in the Ghanaian manufacturing sector. *Global Business and Economic Review*, 2(11), 80-197.

- Head, C. K., Ries, J.C., & Swenson, D.L. (1995). Agglomeration benefits and location choice; evidence from Japanese manufacturing investment in the United States. *Journal of International Economics* 38, 223-248.
- Hanson, G.H. (2001). Should countries promote foreign direct investment? (G-24 discussion paper No.9), New York,. Retrieved from <http://dspace.cigilibrary.org/jspui/bitstream/123456789/21535/1/pdf>.
- Hermes, N., & Lensink, R. (2003). Foreign direct investment, financial development and Economic growth. *The Journal of Development Studies*, 40(1), 142-163.
- Herzer, D., Klasen, S., & Lehmann, F.N. (2008). In search of FDI-led growth in developing countries: The way forward. *Economic Modelling*, 25, 793-810.
- Hess, R. (2000). Constraints on foreign direct investment. In Leape, J., Jenkins, C., and Thomas, L. (Eds.). *Gaining from Trade in Southern Africa: Complementary Policies to Underpin the SADC Free Trade Area*. New York: St. Martin's Press.
- Hisarciklilar, M., Kayam, S.S., & Kayalica, O. (2006). *Locational drivers of FDI in MENA Countries: A spatial attempt*. (MPRA Research Paper No. 2085). Retrieved from: <http://mpra.ub.uni.muenchen.de/pdf>.
- Ho, O.C. H. (2005). *Determinants of foreign direct investment in China: A sectoral analysis*. Paper presented at 16th Annual Conference of the Association for Chinese Economic Studies, Australia.
- Retrieved from <http://www.uq.edu.au/economics/acesa2004/pro/Ho.pdf>
- Hooi, L. H., & Wah, T.B. (2010). Linkages between foreign direct investment, domestic investment and economic growth in Malaysia. *Prosiding PERKEM V, JILID 2*, 48-57.
- Houdou, N., & Moussa, N. (2010). Foreign aid, foreign direct investment and economic growth in Sub-Saharan Africa: Evidence from pooled mean group estimator. *International Journal of Economics and Finance*, 2(3), 1-10.
- Hsiao, C., & Shen, Y. (2003). Foreign direct investment and economic growth: The importance of institutions and urbanization. *Economic development and cultural change*, 51, 883-896.
- Hymer, S.H. (1976). *The international operations of national firms: A study of direct foreign investment*. Cambridge, Mass: MIT Press.
- Ikiara, M. M. (2003). Foreign direct investment, technological transfer, and poverty alleviation : Africa's hopes and dilemma (ATPS Paper Series No. 16). [http://www.atpsnet.org/Files/special\\_paper\\_series\\_16.pdf](http://www.atpsnet.org/Files/special_paper_series_16.pdf)
- Im, K.S, Pesaran, M.H, and Shin, Y. (2003). Testing for Unit Roots in Heterogeneous Panels. *Journal of Econometrics* 115, 53-74.
- International Monetary Fund (IMF)(1977). *Balance of Payment Manual*(4<sup>th</sup> Edition). Washington, D.C

- Isaksson, A. (2001). Financial liberalization, foreign aid and equity mobility: Evidence from 90 developing countries, *Journal of International Financial Markets, Institutions and Money*, 11, 309-338.
- Issa, H., & Ouattara, B. (2005). *The effect of private and public health expenditure on infant mortality rates: does the level of development matters?* Retrieved from :<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.63.9133&rep=rep1&type=pdf>.
- Jadhav, P. (2012). Determinants of foreign direct investment in BRICS economies: Analysis of economic, institutional and political factors. *Procedia social and Behavioural Sciences* 37, 5-14.
- Janicki, W. (2004). Determinants of foreign direct investment: Empirical evidence from EU accession candidates. *Applied Economics*, 36(5), 505-509.
- Jansen, K. (1995). FDI, information technology and economic growth in the MENA region, *World Development*, 23(2), 193-210.
- Jaspersen, F., Aylward, A., & Knox, A. (2000). The effects of risks on private investment in Africa compared with other developing countries: In Collier, P. & Pattillo, C. (Eds.). *Investment and risk in Africa* (71-95). New York: St. Martins Press;
- Johansen, S. (1995). *Likelihood-based inference in cointegrated vector autoregressive models*. Oxford: Oxford University Press.
- Jun, K.W., & Singh, H. (1996). The determinants of foreign direct investment in developing economies. *Transnational Corporations*, 5(2), 67-105.
- Kamaly, A. (2003). Behind the Surge of FDI to Developing Countries in the 1990s: An Empirical Investigation. *Mimeo*, Department of Economics. The University of Cairo, September.
- Kamaly, A. (2014). Does FDI crowd in or out domestic investment? New Evidence from emerging economies. *Modern Economy*, 5, 391\_400. Retrieved from :<http://www.scirp.org/journal/me>
- Kang, Y., & Du, J. (2005). *Foreign direct investment and growth: Empirical analysis on twenty OECD countries*. Retrieved from: <http://www.ssc.uwo.ca/economcis/undergraduate/400E-001/draftpapers/Dugang.pdf>.
- Kariuki, C. (2015). The determinants of foreign direct investment in the African Union. *Journal of Economics, Business and Management*, 3(3), 346-350.
- Karpaty, P., & Poldahl, A. (2007). *The determinants of fdi flows evidence from Swedish manufacturing and service sector* (SNEE Discussion Paper No.339). The Swedish Network for European Studies in Economics and Business. Retrieved from <http://www.snee.org/filer/papers/339.pdf>.
- Karris, G. (2006). Foreign aid and long-run economic growth: Empirical evidence for a panel of developing countries. *Journal of International Development*, 18, 15-28.

- Kasuga, H. (2007). Evaluating the impacts of foreign direct investment, aid and saving in developing countries, *Journal of International Money and Finance*, 26, 213-228.
- Kathryn, L.D. (1995). Do exchange rate changes drive FDI? *Journal of Business*, 68(3) 21-43.
- Kerlinger, F. N. (1964). *Foundation of Behavioural Research*. New York: Holt, Rinehart and Winston.
- Kim, D., & Seo, J. (2003). Does FDI inflow crowd out domestic investment in Korea? *Journal of Economic Studies*, 30, 605-622.
- Kinda, T. (2009). Investment climate and FDI in developing countries: Firm-level evidence. *World Development*, 38(4), 498 – 513.
- Kojima, K. (1982). Macroeconomic versus international business approach to direct foreign investment. *Hitotsubashi Journal of Economics*, 80, 1-19.
- Kojima, K., & Ozawa, T. (1984). Micro and macroeconomic models of direct foreign investment: Towards a synthesis. *Hitotsubashi Journal of Economics*, 25(2), 1-20.
- Kolstad, I., & Villanger, E. (2008). Determinants of foreign direct investments in services. *European Journal of Political Economy*, 24(2), 518-533.
- Konings, J. (2001). The effects of foreign direct investment on domestic firms: Evidence from firm-level data in emerging economies. *Economics of Transition*, 9(3), 619-633.
- Kostevc, C., Redek, T., & Susjan, A. (2007). Foreign direct investment and institutional environment in transition economies. *Transition studies Review*, 14(1), 40-54.
- Kothari, C.R. (2004). *Research Methodology: Methods and Techniques* (2nd ed.). New Delhi: New Age.
- Kravis, I., & Lipsey, R. (1982). The location of overseas production and production for exports by US multinational firm. *Journal of International Economics*, 12, 201-223.
- Kudaisi, B.V. (2014). An empirical determination of foreign direct investment in West Africa countries: A panel data analysis. *International Journal of Development and Economic Sustainability*, 2(2), 19-36.
- Kumar, N., & Pradhan, J.P. (2002). *FDI, externalities and economic growth in developing countries: Some empirical explorations and implications for WTO negotiations on investment*. (RIS Discussion Paper No. 27). Retrieved from: [http://www.ris.org.in/images/RIS\\_images/pdf/dp27\\_pap.pdf](http://www.ris.org.in/images/RIS_images/pdf/dp27_pap.pdf)
- Kumar, R. (2005). *Research methodology: A step-by-step guide for beginners* (3rd ed.). New York, NY: Sage
- Kurronen, S. (2012). Financial sector in resource-dependent economies. *Emerging Market Review*, 23 :208-229.
- La Porta, R, Lopez-de-Silanes, F., Shleifer, E., & Vishny R. (1999). The quality of Government. *The Journal of Law, Economics and Organization*, 15(1), 222-276.

- Larsson, R., Lyhagen, J., & Löthgren, M. (2001). Likelihood-based cointegration tests in heterogeneous panels, *Econometrics Journal*, 4 (1), 109-142.
- Lautier, M., & Moveaub, F. (2012). Domestic investment and FDI in developing countries: The missing link. *Journal of Economic Development* 37(3), 1-20.
- Lensink, R., & Morrissey, O. (2006). Foreign direct investment: flows, volatility, and the impact on growth. *Review of International Economics*, 14(3), 478-493.
- Levin, A., Lin C.F., & Chu C.S. J. (2002), Unit Root Test in Panel Data: Asymptotic and Finite-Sample Properties, *Journal of Econometrics*, 108: 1-24
- Li, X., & Liu, X. (2005). Foreign Direct Investment and Economic Growth: An Increasingly Endogenous Relationship. *World Development*, 33(3), 393-407.
- Lipsey, R.E. (2000) *Interpreting developed countries' foreign direct investment*. (NBER Working paper no. 7810). Cambridge, MA: National Bureau of Economic Research.
- Liu, K., Daly, K., & Varua, M.E. (2012). Regional determinants of foreign direct investments in manufacturing industry. *International Business Research*, 5, 119-126. Retrieved from <http://journal.ccsenet.org/index.php/ibr/article/view/22162>.
- Loree D.W., & Guisinger, S.E. (1995). Policy and non-policy determinants of U.S. equity foreign direct investment. *Journal of International Business Studies*, 26, 281-299.
- Maddala, G. S., & Wu, S. (1999). A comparative study of unit root tests with panel data and a new simple test. *Oxford Bulletin of Economics and Statistics*, 61(SI), 631-652. Retrieved from: <http://onlinelibrary.wiley.com/doi/10.1111/1468-0084.0610s1631/pdf>.
- Makki, S.S., & Somaru, A. (2004). Impact of foreign investment and trade on economic growth: Evidence from developing countries, *American Journal of Agricultural Economics*, 86, 795-801.
- Makola, M. (2003). *The attraction of the foreign direct investment (FDI) by African countries*. Paper presented at the Bi-annual ESSA Conference; Somerset West: Cape Town, 17-19 September.
- Markusen, J.R. (1995). The Boundaries of multinational enterprises and the theory of international trade. *The Journal of Economic Perspectives*, 9(2), 169-189.
- Masuku, M. B., & Dlamini, T.S. (2009). Determinants of foreign direct investment inflows in Swaziland. *Journal of Development and Agricultural Economics* 1(5), 77-184.
- Mateev, M. (2008). Determinants of foreign direct investment in Central and South-Eastern Europe: New empirical tests. *Oxford Journal*, 8(1) :133-149.
- Mathiyazhagam, M.K. (2005). *Impact of foreign direct investment on Indian economy: A sectoral level analysis* (ISAS Working Paper No.6). Singapore: Institute of South Asian Studies

- Mauro, P. (1996). *The effect of corruption on growth, private investment in sub-saharan African countries* (IMF Working Paper No. 96/98) Washington, DC: International Monetary Fund (IMF).
- Mhlanga, N., Blalock, G., & Ralph, C. (2009). Understanding foreign direct investment in the Southern African development community: An analysis based on project-level data. *Agricultural Economics*, 41(3/4) : 337-347..
- Mills, G., & Oppenheimer, J. (2002). Making Africa succeed. In Gibb, R., Hughes, T., Mills, G. and Vaahtoranta, T. (Eds.). *Charting a new course, globalisation, African recovery and the new Africa initiative*, Johannesburg: The South African Institute of International Affairs, 91-105.
- Misun, J., & Tomsik, V. (2002). Does foreign direct investment crowd in or crowd out domestic investment? *Eastern European Economics*, 40, 38-56.
- Mondal, W. I. (2003). Foreign direct investment: An analysis of prospective investors. *Studies in Economics and Finance*, 21(1), 105-115.
- Moon, H. R., & Perron, B. (2006). Seemingly unrelated regressions. *The New Palgrave Dictionary of Economics*, 1-9. Retrieved from: [www.mapageweb.umontreal.ca/perrob/palgrave.pdf](http://www.mapageweb.umontreal.ca/perrob/palgrave.pdf).
- Moosa, I.A. (2002). *Foreign direct investment theory: Evidence and practice*. New York: Palgrave Macmillan.
- Moran, T.H. (1998). *Foreign direct investment and development: The New policy agenda for developing countries and economies in transition*, Washington, DC: Institute of International Economics.
- Morisset, J. (2000). Foreign direct investment to Africa: Policies matter. *Transnational Corporations*, 9(2), 107-125.
- Morrissey, O., & Rai, Y. (1995). The GATT agreement on trade-related investment and their relationship with transnational corporations. *Journal of Development Studies*, 31, 702-724.
- Mowalt, R., & Zulu, T. (1999). *Intra-regional private capital flows in Eastern and Southern Africa: A study of South African investment in the region*. Paper presented at a CREFSA/DFI Workshop on Intra-Regional Private Capital. Retrieved from: [http://www.dri.org.uk/pdfs/EngPub7a\\_CREFSA\\_DFI.pdf](http://www.dri.org.uk/pdfs/EngPub7a_CREFSA_DFI.pdf).
- Mwega, F.M. (1997). Saving in sub-Saharan Africa: A comparative analysis. *Journal of African Economies*, 6(3): 199-228.
- Nabende, A.B. (2005). Foreign direct investment determinants in Sub-Saharan Africa. A cointegration analysis. *Economics Bulletin*, 6 : 1-19.
- Naude, W. A., & Krugell, W.F. (2007). Investigating geography and institutions as determinants of foreign direct investment in Africa using panel data. *Applied Economics*, 39(10) :1223-1233.

- Nauwelaerts, Y., & Beveren, I.V. (2005). *Sectoral concentration of FDI in OECD countries*. Paper presented at the International Conference on International Trade and Logistics, Corporate Strategies and the Global Economy, Le Havre, France, 28-29, September.
- Ndikumana, L., & Verick, S. (2007). *The linkages between FDI and domestic investments: Unraveling the developmental impact of foreign investment*. (Working Paper No. 25). University of Massachusetts-Amherst, Economics Department. Retrieved from: [http://scholarworks.umass.edu/econ\\_workingpaper/25](http://scholarworks.umass.edu/econ_workingpaper/25).
- Nelson, C. R., & Plosser, C.I. (1982). Trends and random walks in macroeconomic time series: Some evidence and implications. *Journal of Monetary Economics*, 10, 139-162.
- Ngouhouo, I. (2013). Multi-dimensional determinants of FDI in Central Africa: A modified gravity GMM panel approach. *Mediterranean Journal of Social Sciences*, 4(1), 575-585.
- Nickell, S. (1981). Biases in dynamic models with fixed effects. *Econometrica*, 49, 1417-1426.
- Nonnemberg, M. B., & Mendonca, M.J.C.D. (2004). The determinants of foreign direct investment in developing countries. Proceedings of the 32<sup>nd</sup> Brazilian Economics Meeting No. 061.
- Noorbakhsh, F., Paloni, A., & Youssef, A. (1999). Low wages or skilled labour? Prospects for foreign direct investment in developing countries. Retrieved from: [http://www.gla.ac.uk/media/media\\_219080\\_en.pdf](http://www.gla.ac.uk/media/media_219080_en.pdf).
- Noorbakhsh, F., Palonimid, A., & Youssef, A. (2001). Human capital and FDI inflows to developing countries: New empirical evidence, *World Development*, 26(7), 1593-1610.
- North, D. (1990). *Institutions, Institutional Change and Economic Performance*. New York: Cambridge University Press.
- Nunnenkamp P., & Spaltz, J. (2002). Determinants of FDI in developing countries: Has globalization changed the rules of the game? *Transnational Corporations*, 11(2), 1-34.
- Nwoke, C.N. (2005). Nigeria and ECOWAS. In Ogwu, J.U (Eds.). *New horizons for Nigeria in World affairs*. Lagos :The Nigerian Institute of International Affairs : 111-148.
- Obi, C.I.(2000). *Regional integration in West Africa and the challenges of globalization*. Paper presented at workshop on regional integration in West Africa, organized by Legion Centre of International Affairs and the Friedrich Ebert Foundation, Ghana, November, 6-9.
- Obwona, M.B, (2004). Foreign direct investment in Africa. In *Financing Pro-Poor Growth: AERC Policy (Papers) Seminar VI, Kampala, Uganda; 2-4 March 2004*. Nairobi: African Economic Research Consortium (AERC).
- Obwona, M.D. (2001). Determinants of FDI and their impacts on economic growth in Uganda, *Africa Development Review*, 13(1), 46-80..

- ODI (1997). *Foreign direct investment flows to low-income countries. A review of the evidence.* (ODI Briefing Paper No, 3). Overseas Development Institute (ODI). Retrieved from :<http://www.odi.org.uk/publications/briefing/3-97.html>
- OECD (2002). *Foreign direct investment for development - Maximizing benefits, minimizing costs.* Paris: Organization for Economic Co-operation and Development (OECD).
- OECD (2006). *Policy framework for investment.* Paris: Organization for Economic Co-operation and Development (OECD).
- Olaniyi, O. (1988). An Econometric analysis of domestic savings and investment financing in Nigeria. *Journal of Teacher Education*, 4(1), 133-142.
- Olofsdotter, K. (1998). Foreign direct investment, country capabilities and economic growth. *Weltwirtschaftliches Archive*, 134(3), 534-47.
- Omorogiwa, O. K. (2006). *Research and Applied Statistics for the Behavioural Sciences: An Introduction.* Benin: Mindex.
- Omran, M., & Bolbol, A., (2003). Foreign direct investment, financial development and economic growth: Evidence from Arab Countries. *Review of Middle East Economics and Finance*, 1, 231-249.
- Onyeiwu, S., & Shrestha, H. (2004). Determinants of foreign direct investment in Africa. *Journal of developing societies*, 20(2), 89-106.
- Opolot, J., Mutenyio, J., & Kalio, A. (2008). *Determinants of foreign direct investment: Evidence from Sub-Saharan African using a generalized method of moments dynamics panel estimator.* Research Department, Bank of Uganda, 7-13.
- Orji, A. & Mba, P. N. (2008). Foreign private investment, capital formation and economic growth in Nigeria: A two-stage least square approach. *Journal of Economics and Sustainable Development*. 2(2) Retrieved from: <http://www.iiste.org/Journals/index.php/JEDS/article/view/131/11>.
- Oxera (2013). *Recommendations on Cost Assessment Approaches for RIIO-EDI*, Oxford: UK, 1-30.
- Ozturk, I. (2007). Foreign direct investment-growth nexus: A review of the recent literature. *International Journal of Applied Econometrics and Quantitative Studies*, 4(2), 79-98.
- Persyn, D., & Westerlund, J. (2008). Error Correction Based cointegration Tests for Panel Data. *Stata Journal*, 8(2), 232-241.
- Petrochillas, G.A. (1989). *Foreign direct investment and development process.* Aldershol: Avebury.
- Pfefferman .C., & Madarassy (1992). *Determinants of foreign direct investment*, (Trinity Economic Papers 02/06). Dublin: Trinity College.
- Polit, D. F., Hungler, B.P., & Beck, C.T. (2001). *Essentials of nursing research: methods, appraisal and utilization.* Philadelphia: Lippincott

- Prasanna, N. (2010). Direct and Indirect of foreign direct investment (FDI) on domestic Investment in India. *Kamla Raj Journal of Economics*,1(2), 77-83.
- Pravin, J. (2012). Determinants of foreign direct investment in BRICS economies: Analysis of economic, institutional and political factor. *Procedia-Social and Behavioural Sciences*, 37, 5-14.
- Quazi, R.M. (2004). Foreign aid and capital flight: A case study of Bangladesh. *Journal of the Asia Pacific Economy*,9(3), 370-393.
- Ralhan, M. (2006). *Determinants of capital flows: A cross-country analysis*. (Econometrics Working Paper No. 0601).Victoria :University of Victoria, Canada.
- Rama, M. (1993). *Empirical Investment Equations for Developing Countries' in Striving for Growth after Adjustment*. Washington DC: World Bank, 107-146.
- Ramirez, M. (2011). Is foreign direct investment productive in the Latin America Case? A Panel Co-integration analysis. *The International Trade Journal*, 25(1), 35-73.
- Razin, A. (2004). *The contribution of FDI flows to domestic investment in capacity, and vice versa*. (NBER Working Paper No. 10747).Massachusetts : National Bureau of Economic Research.
- Richaud, C., Sekkat, K., & Varoudakis, A (1999). *Infrastructure and growth spillovers: A case for a regional infrastructure policy in Africa*, Mimeo, University of Brussels.
- Rodrik, D. (2007). *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*. Princeton: Princeton University Press.
- Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institutions Rule: the Primacy of Institutions over Geography and Integration in Economic Development. *Journal of Economic Growth*,9(2).131-165.
- Rogmans, T., & Ebbers, H. (2013).The determinants of foreign direct investment in the Middle East and North African region. *International Journal of Emerging Markets*, 8(3).240-257.
- Romer, P. (1993). Idea gaps and object gaps in economic development. *Journal of Monetary Economics*,3, 259-270.
- Roodman, D. (2009). A note on the theme of too many instruments. *Oxford Bulletin of Economics and Statistics*71(1), 135-158.
- Root, F.R., & Ahmed, A.A. (1979). Empirical determinants of manufacturing direct foreign investment in developing countries. *Journal of Economic Development and Cultural Change*, 27, 751-767.
- Saltz, I. (1992). The negative correlation between foreign direct investment and economic growth in the third world: Theory and evidence. *RivistaInternazionale di ScienzeEconomicheCommerciali*39, 617-633.
- Salvatore, D. (2006). *International Economics*.(8th Edition). New York: John Wiley and Sons.

- Sannasse, R. V; Seetanah, B.& Diksha, H. *Determinants of Foreign Direct Investment in SADC: An Empirical Analysis*. Paper presented at International Conference on Business and Economic Development (ICBED) New York, USA, 24th - 25th March .
- Schmitz, A., & Bieri, J. (1972). EEC tariff and US direct investment. *European Economic Review*, 3, 259-270.
- Schneider, F., & Frey, B.S. (1985). Economic and political determinants of foreign direct investment, *World Development*, 13(2), 161-175.
- Sekkat, K., & Varoudakis, M.A.V. (2007). Openness, investment climate, and FDI in developing countries. *Review of Developing Economies*, 11(4), 607-620.
- Serieux, J. (2009). *Aid and savings in Sub-Saharan Africa: Should we worry about rising aid levels?* (Working Paper No. 50 ). Basilia : International Policy Centre for Inclusive Growth.
- Sichei, M. M., & Kinyondo, G. (2012). Determinants of foreign direct investment in Africa: A panel data analysis. *Global Journal of Management and Business Research*, 12(8), 85-97.
- Sims, C.A.(1972). Money, income and causality. *The American Economic Review* 62(4), 540-552
- Singh, H., & Jim, K.W. (1995). *Some new evidence on determinants of foreign direct investment in developing countries.* ( Working Paper No. 1531). Washington, D.C.: The World Bank.
- Sjohm, F. (1999). Technology gap, competition and spillover from foreign direct investment: Evidence from establishment data. *Journal of Development Studies*, 36(1), 53-73.
- Solow, R. M. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics*. 70, 65-94.
- Sridharan, P., Vijayakumar, N.,& Chandra, S.R.K. (2009). Causal Relationship between foreign direct investment and growth: evidence from BRICS countries. *International Business Research*, 2(4), 198-201.
- Stevens, G. (1998). Exchange rates and foreign direct investment: A note. *Journal of policy modeling*, 20(3), 393-340.
- Suliman, A.H., & Mollick, V.A. (2009). Human capital development, war and foreign direct investment in Sub-Saharan Africa, *Oxford Development Studies*, 37 (1), 47-61.
- Sun, X. (2002). *Foreign direct investment and economic development: What do the states need to do?* Paper presented at the Capacity Development Workshop and Global Forum on Re-inventing Government on Globalization: Role of the state and enabling environment, Morocco, December 10-13.

- Tang, S., Selvanathan, E.A., & Selvanathan, S. (2008). *Foreign direct investment, domestic investment, and economic growth in China: A time series analysis*. (UNU-WIDER Research Paper No. 2008/19).Helsinki: United Nations University/World Institute of Development Economics Research
- Tarzi, S. (2005). Foreign direct investment flows into developing countries: Impact of location and government policy. *The Journal of Social, Political and Economic Studies*, 30(4), 497.
- Taylor, M.P., & Sarno, L. (1999). Capital flows to developing countries: long and short-term determinants. *World Bank Economic Review*, 11, 451-470.
- Thirwall, A.P. (1994). *Growth and Development*.(5<sup>th</sup> Ed). London: Macmillan.
- Titarenko, D. (2006). The influence of foreign direct investment processes in Latvia. *Transport and Telecommunication*, 7(1), 76-83.
- Todaro, M. P., &Smith, S.C. (2003).*Economic development*.(8<sup>th</sup>ed.).Boston, M.A.: Addison Wesley.
- Torrisi, C.R. (1985). The determinants of direct investment in a small LDC, *Journal of Economic Development*, 10, 29–45.
- Torsten, W. (2004). Foreign bank entry into emerging economies: An empirical assessment of the determinants and risk predicated on German FDI data.(Discussion Paper No.WO1/2004). Studies of the Economic Research Centre,
- Transparency International (2014): Corruption Perceptions Index (2014). Retrieved from; [http://issuu.com/transparencyinternational/docs/2014\\_cpibrochure\\_en?e=2496456/10375881](http://issuu.com/transparencyinternational/docs/2014_cpibrochure_en?e=2496456/10375881).
- Trevino, J. J., Daniels, D., & Upadhyaya, K.P. (2002). Market reforms and foreign direct investment in Latin America: Evidence from an Error Correction model. *International Trade Journal*, 16(4), 367-392.
- Tsai, P. (1994). Determinants of foreign direct investment and its impact on economic growth, *Journal of Economic Development*, 19, 137-163.
- Tuckman, B. W. (1972). *Conducting Educational Research*. New York: Harcourt, Brace, Jovanovich.
- Udomkerdmongkol, M., &Morrissey, O. (2008).Political regime, private investment in developing countries.(UNU-WIDER Research Paper 2008/109).Helsinki : United Nations University/World Institute of Development Economics Research (UNU/WIDER).
- UNCTAD (1998).*World Investment Report: Trends and determinants*. New York and Geneva: United Nations Conference on Trade and Development.
- UNCTAD (1999a).*Foreign direct investment in Africa: Performance and Potential*. New York and Geneva: United Nations Conference on Trade and Development.

- UNCTAD (1999b). *World Investment Report 1999: Foreign direct investment and the challenge of development*. New York and Geneva: United Nations Conference on Trade and Development.
- UNCTAD (2001). *World Investment Report, 2001*. New York and Geneva: United Nations Conference on Trade and Development.
- UNCTAD (2003). *World Investment Report*. New York and Geneva: United Nations Conference on Trade and Development.
- UNCTAD (2006). *World Investment Report*. New York and Geneva: United Nations Conference on Trade and Development.
- UNCTAD (2008). *World Investment Report 2008*, New York and Geneva: United Nations Conference on Trade and Development.
- UNCTAD (2010). *World Investment Report 2010*. New York and Geneva: United Nations Conference on Trade and Development.
- UNCTAD (2012). *World Investment Report: Towards a new generation of investment policies*, New York and Geneva: United Nations Conference on Trade and Development.
- UNCTAD (2014). *Global Investment Trend Monitor*. New York and Geneva: United Nations Conference on Trade and Development.
- United States International Trade Commission (2014). *AGOA: Trade and investment performance. Overview*. April.. Retrieved from: [www.usitc.gov/publications/332/pub4461.pdf](http://www.usitc.gov/publications/332/pub4461.pdf)
- Urata, S. & Kawai, H. (2005). The determinants of the location of foreign direct investment by Japanese small and medium-sized enterprises. *Small Business Economics*, 15(2), 79-103
- Uremadu S.O (2011), Foreign Direct Investment, Liquidity and Real Country Growth, Evidence from Nigeria. *International Review of Business Research Papers*, 7( 3), 170-193.
- Venables, A.J. (1996). Equilibrium locations of vertically linked industries. *International Economic Review*, 37, 341-359.
- Vernon, R. (1966). International investment and international trade in product cycle. *Quarterly Journal of Economics*, 80, 190-207.
- Vijayakumar, N. Sridharan, and Rao, K.C.S. (2010). Determinants of FDI in BRICS countries: A panel analysis. *International Journal of Business Science and Applied Management*, 5(3), 2-12
- Viner, J. (1950). *The customs union issue*. New York: Carnegie Endowment for International Peace.
- Waheed, A. (2004). Foreign capital inflows and economic growth of developing countries. *Journal of Economic Cooperation*, 25, 1-36.

- Walsh, J. P., & Yu, J. (2010). *Determinants of foreign direct investment: A sectoral and institutional approach*. (IMF Working Paper 10/187). Washington, D.C: International Monetary Fund.
- Wang, W. (2010). Foreign direct investment and domestic investment in the host country: Evidence from panel study. *Applied Economics*, 42, 3711-3721.
- Wang, Z., & Li, Z. (2004). Re-examination of the crowd-in or crowd-out effects of FDI on domestic investment. *Statistical Research* July, 37-43.
- Wei, S. (1997). *How taxing is corruption on international investor*. (NBER Working paper No.6255). Massachusetts : National Bureau of Economics Research.
- Wei, S.J. (2000). How Taxing is corruption on International Investors? *Review of Economics and Statistics*, 82(1), 1-11.
- Wernick, D.A., & Haar, J. (2010). Do governing institutions affect FDI inflows? New evidence from emerging economies. *International Journal of Economics and Business Research*, 10(10), 1-16.
- Westerlund, J., & Edgerton, D.L. (2008). A simple test for cointegration in dependent panels with structural breaks. *Oxford Bulletin of Economics and Statistics*, 70(5), 665 – 704.
- Wheeler, D., & Mody, A. (1992). International investment location decisions: The case of U.S. firms. *Journal of International Economics*, 33, 57-76.
- Windmeijer, F. (2005). A finite sample correction for the variance of linear efficient two-step GMM Estimator. *Journal of Econometrics*, 126(1), 25-51
- World Bank (1999). *Foreign direct investment in Bangladesh: Issues of long-run sustainability*. World Bank, Bangladesh Country Office, Dhaka. Bangladesh.
- World Bank (2005). *World Development Report 2005: A better investment climate for everyone*. Washington, D.C: The World Bank.
- World Bank (2014). *World Development Indicators 2014*. Washington, D.C: The World Bank.
- World Economic Forum (1998). *Africa competitiveness report*. Harvard Institute for International Development. Geneva : Harvard University, Switzerland.
- Yanikkaya, H. (2003). Trade Openness and Economic Growth: A cross country empirical investigation. *Journal of Development Economics*, 72, 57-89
- Zenasni, S. and Benhabib, A. (2013). The determinants of foreign direct investment and their impact on growth: Panel data analysis for AMU Countries. *International Journal of Innovation and Applied Studies*, 2(3), 300-313.
- Zhang, K.H. (2001). Does foreign direct investment promote economic growth? Evidence from East Asia and Latin America. *Contemporary Economic Policy*, 19; 175-185.
- Zhang, K.H. and Ram, R. (2002). Foreign direct investment and economic growth: Evidence from cross-country data for the 1990s. *Economic Development Cultural Change*. 51(1), 205-215.

## APPENDIX 1

**Table 1: FDI inflows, by Region and Economy, 1990 – 2013**

Year	Latin America and Carribeans	Asia	Africa	*Developing Economies (% Share of World FDI)
1990	26	65	8	17
1991	29	61	9	26
1992	30	62	7	32
1993	20	73	7	34
1994	28	66	6	40
1995	25	69	5	34
1996	31	65	4	38
1997	38	56	6	39
1998	45	49	8	27
1999	45	50	5	21
2000	37	59	4	19
2001	36	55	9	27
2002	34	57	8	27
2003	24	66	9	33
2004	34	60	6	39
2005	25	63	10	34
2006	22	65	14	29
2007	24	63	13	30
2008	24	63	15	38
2009	29	67	10	44
2010	30	62	7	46
2011	32	62	6	43
2012	34	57	7	55
2013	38	53	7	54

Source: Author, UNCTAD (WIR) 2014.

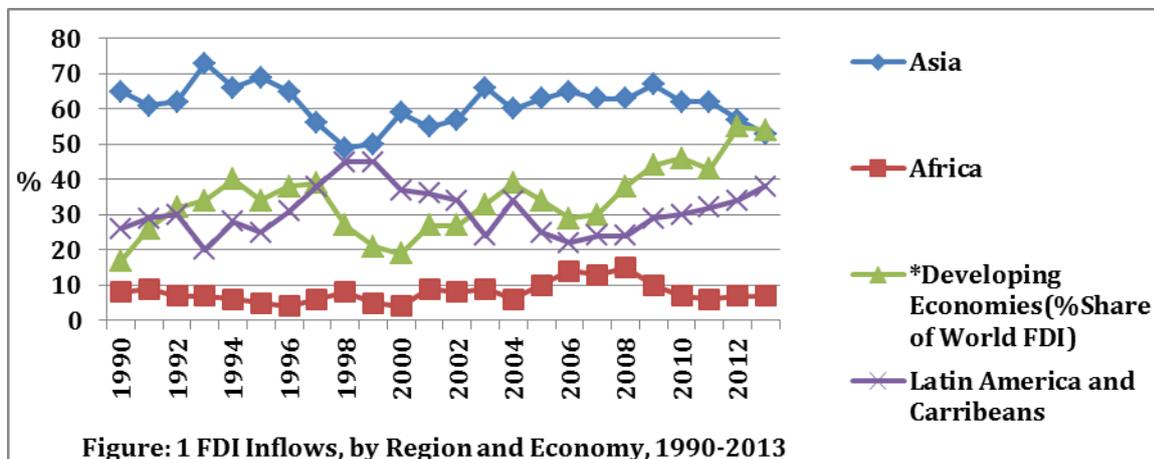


Figure: 1 FDI Inflows, by Region and Economy, 1990-2013

**Table 2: FDI flows to developing countries, 1970-2013 (%)**

Region/Economy	1970-1979	1980-1989	1990-1999	2000-2009	2013
Africa	19	11	6	8	7
Latin America and Caribbean	48	32	35	31	39
Asia and Oceanic	33	57	59	61	54
Developing Economies	100	100	100	100	100

Source: UNITAD, FDI/TNC database ([www.unitad.org/fdistatistics](http://www.unitad.org/fdistatistics))

**Table 3: Summary of Major FDI Theories, 1960-1994**

Theory	Authors	Unit of Analysis	Functional base/Discipline	Key Issues
TNCs and Market Imperfections	Hymer(1960) and Kindleberger (1969)	American TNCs	Economics and International business	Reasons for TNCs competitiveness and Internationalization
Oligopolies and FDI	Krickerboeker (1973), Vernon (1974), Graham (1978)	American and European TNCs	Economics and International Business	Oligopolies market structures and FDI strategies
Bargaining Power	Gilpin (1975) Rothgeb (1989, 1991).	TNCs and Government	Political Sciences	Government – TNCs interactions, investment dependence and political conflict
Internationalization	Buckley and Casson (1976, 1981), Rugman (1985)	TNCs	International business	Transnational, vertical and horizontal integration
Flying Greese	Kojima (1978), Ozawa (1995)	Japanese TNCs	International Economics	Economic Development through inbound FDI
Eclectic Paradigm	Dunning (1981)	TNCs in Industrialized Countries	International Economics	Company and Country-specific determinants for FDI
Investment Development Path	Dunning (1981, 1986, 1983), and Narula (1994)	Industrialized and emerging economies	International Economics	Classification of countries according to their net outward investment position.
Competitive advantage of nations	Porter (1990)	TNCs in industrialized countries	International Business, Economics	Competitiveness of countries and industries
International Product Cycle	Vernon (1996)	American TNCs	Economics, Marketing	FDI and trade flows, impact of technology and product life cycle of International business development

Source: Fischer Paul, (2000).

**APPENDIX 2A: Income-Effect Analysis: Panel Estimation Result on Low Income Countries**

<i>Variables</i>	<i>Fixed Effect Model</i>			<i>Random Effect Model</i>			<i>Dynamic Panel Model</i>		
	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>
C	11.198	2.353	0.019**	17.262	4.670	0.000***	13.005	3.427	0.001***
INWFDI(-1)	N/A	N/A	N/A	N/A	N/A	N/A	0.256	4.791	0.000***
RGDP	-0.153	-5.015	0.000***	-0.124	-4.272	0.000***	-0.101	-3.428	0.001***
RGDP(-1)	0.204	5.017	0.000***	0.166	3.931	0.000***	0.172	4.075	0.000***
RGDP(-2)	-0.088	-3.322	0.001***	-0.070	-2.544	0.012**	-0.092	-3.306	0.001**
GFCF	0.000	2.471	0.014**	0.000	0.982	0.327	0.000	1.133	0.258
GFCF(-1)	0.000	0.128	0.899	0.000	0.129	0.897	0.000	1.481	0.140
GFCF(-2)	0.000	1.722	0.086*	0.000	1.316	0.189	0.000	2.316	0.019**
CPI	0.012	0.276	0.783				0.031	0.176	0.423
EXCHR	-0.001	-0.537	0.592				-0.0014	-0.273	0.572
INFRA	1.597	0.858	0.392				2.017	0.128	0.894
INSTFAC	0.850	1.065	0.288	-0.379	-0.462	0.644	-0.317	-0.386	0.700
LABOUR	0.000	1.521	0.129	0.000	2.571	0.011**	0.000	2.010	0.045**
NATRES	-0.686	-5.828	0.000***	0.081	1.172	0.242	0.064	0.922	0.358
OPEN	0.112	2.360	0.019**	0.254	3.012	0.000***	0.322	2.850	0.027**
<i>No. of Observations</i>		320			288			320	
<i>R-Square</i>		0.361			0.262			0.307	
<i>Adjusted R-Square</i>		0.314			0.156			0.207	
<i>F-Statistics (prob)</i>		7.624 (0.000***)			2.475 (0.00***)			3.085 (0.000***)	
<i>Hausman Test</i>				Chi <sup>2</sup> (13) = 80.754907 (0.0000***)					
<i>Sargan Test</i>							Chi <sup>2</sup> (26) = 42.574 (0.821)		
<i>Test for Second Order Autocorrelation</i>							Z = -5.63 (0.704)		

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

**APPENDIX2B: Income-Effect Analysis: Panel Estimation Result on Lower-Middle Income Countries**

<i>Variables</i>	<i>Fixed Effect Model</i>			<i>Random Effect Model</i>			<i>Dynamic Panel Model</i>		
	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>
C	-2.556	-1.796	0.0752*	-3.472	-2.368	0.0452*	-2.151	-1.651	0.1017
INWFDI(-1)							0.3973	4.7933	0.000***
RGDP	-0.000981	-0.19994	0.8419	-0.124	-1.672	0.107	-0.001213	-0.27055	0.7872
RGDP(-1)	0.004844	0.712683	0.4775	0.166	0.931	0.500	0.004504	0.725104	0.4699
RGDP(-2)	-0.000314	-0.069	0.9451	-0.070	-2.544	0.012**	-0.001013	-0.24322	0.8083
GFCF	-1.79E-14	-0.0548	0.9564	-0.026	-1.282	0.218	-3.06E-14	-0.1027	0.9184
GFCF(-1)	1.50E-13	0.391258	0.6964	0.110	0.129	0.897	9.82E-14	0.279932	0.7801
GFCF(-2)	-6.05E-13	-2.20268	0.0297**	-1.05E-12	-2.587	0.017**	-3.05E-13	-1.1788	0.241
CPI	0.049061	3.428396	0.0009***				0.023941	1.699662	0.092*
EXCHR	0.002187	1.141512	0.2561				0.001788	1.020309	0.3098
INFRA	-0.379405	-1.03307	0.3038				-0.228768	-0.67881	0.4987
INSTFAC	-0.08032	-0.40502	0.6862	-0.379	-0.462	0.644	0.004919	0.027021	0.9785
LABOUR	-1.46E-07	-2.00132	0.0478**	-1.03E-05	-2.571	0.011**	-5.93E-08	-0.86018	0.3916
NATRES	0.145001	4.670827	0.000***	0.0815	3.172	0.040**	0.117539	4.062035	0.0001***
OPEN	0.001525	0.164808	0.8694	0.002172	1.012	0.3510	-0.002139	-0.25198	0.8015
<i>No. of Observation</i>	320			288			320		
<i>R-Square</i>	0.626134			0.6087			0.69073		
<i>Adjusted R-Square</i>	0.572243			0.5604			0.642934		
<i>F-Statistics (prob)</i>	11.61 (0.000***)			12.47 (0.000***)			14.45156 (0.000***)		
<i>Hausman Test</i>	Chi <sup>2</sup> (13) = 32.9707 (0.0000***)								
<i>Sargan Test</i>									
<i>Test for Second Order</i>	Chi <sup>2</sup> (26) = 59.04 (0.756)								
<i>Autocorrelation</i>	Z = -8.25 (0.534)								

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.*Source: Author's Computation*

**APPENDIX 3A: Legal Origin Effect Analysis: Panel Estimation Result on Anglophone Countries**

<i>Variables</i>	<i>Fixed Effect Model</i>			<i>Random Effect Model</i>			<i>Dynamic Panel Model</i>		
	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>
C	28.511	3.498985	0.0006***	13.12787	3.261126	0.0014***	27.96921	3.32958	0.0011***
INWFDI(-1)							0.020192	0.240796	0.8101
RGDP	-0.175943	-3.86166	0.0002***	-0.083495	-2.219902	0.0278**	-0.173094	-3.665684	0.0003***
RGDP(-1)	0.248746	3.848763	0.0002***	0.067227	1.714355	0.0884*	0.248401	3.829703	0.0002***
RGDP(-2)	-0.106853	-2.52979	0.0125**	2.62E-12	0.992391	0.3225	-0.10881	-2.521618	0.0128**
GFCF	2.78E-12	0.879389	0.3807	-2.16E-12	-0.847974	0.3977	2.82E-12	0.886858	0.3767
GFCF(-1)	-4.55E-13	-0.12061	0.9042	-4.07E-12	-0.191103	0.6516	-5.04E-13	-0.132765	0.8946
GFCF(-2)	-2.50E-12	-0.93045	0.3537	-3.85E-12	-0.58136	0.4512	-2.42E-12	-0.888097	0.376
CPI	0.185956	1.639486	0.1033				0.17977	1.540904	0.1256
EXCHR	0.000361	0.167022	0.8676				0.000326	0.149786	0.8811
INFRA	-1.668538	-0.58236	0.5612				-1.570038	-0.540712	0.5896
INSTFAC	1.026084	0.518572	0.6049				1.023872	0.515729	0.6069
LABOUR	-8.50E-07	-1.41869	0.1582				-8.46E-07	-1.406681	0.1617
NATRES	-0.62	-3.74557	0.0003***				-0.606132	-3.548754	0.0005***
OPEN	0.060053	0.985676	0.326				0.06084	0.993866	0.322
<i>No. of Observation</i>	320			256			320		
<i>R-Square</i>	0.350241			0.047688			0.350508		
<i>Adjusted R-Square</i>	0.272452			0.02388			0.267594		
<i>F-Statistics (prob)</i>	4.502494 (0.000***)			2.003021 (0.09659*)			4.227367 (0.0000***)		
<i>Hausman Test</i>	Chi <sup>2</sup> (13) = 38.4724 (0.0000***)								
<i>Sargan Test</i>	Chi <sup>2</sup> (26) = 37.04 (0.7458)								
<i>Test for Second Order</i>	Z = -7.57 (0.458)								
<i>Autocorrelation</i>									

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

**APPENDIX 3B: Legal Origin Effect Analysis: Panel Estimation Result on *Francophone Countries***

<i>Variables</i>	<i>Fixed Effect Model</i>			<i>Random Effect Model</i>			<i>Dynamic Panel Model</i>		
	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>	<i>Coefficient</i>	<i>t-stats</i>	<i>Prob.</i>
C	-7.189302	-5.926787	0.000***	0.937032	1.489089	0.1377	-3.324815	-2.95544	0.0034***
INWFDI(-1)							0.49569	9.160885	0.000***
RGDP	0.001179	0.177213	0.8595	0.011703	1.625184	0.1054	0.002302	0.402323	0.6878
RGDP(-1)	0.000787	0.085961	0.9316	-0.002581	-0.23333	0.8157	-0.002322	-0.2947	0.7685
RGDP(-2)	0.001429	0.234186	0.815	-0.009578	-1.35388	0.177	0.002695	0.513642	0.608
GFCF	1.00E-12	0.940187	0.3481	4.26E-12	3.884309	0.0001***	1.51E-12	1.638077	0.1027
GFCF(-1)	4.14E-12	3.506546	0.0005***	4.50E-12	3.191103	0.0016***	3.50E-12	3.441643	0.0007***
GFCF(-2)	-6.79E-12	-6.175149	0.000***	-7.76E-12	-6.58136	0.000***	-7.04E-12	-7.44346	0.000***
CPI	0.017041	1.228156	0.2206				0.003286	0.273329	0.7848
EXCHR	0.000488	2.208492	0.0282**				0.000146	0.752569	0.4525
INFRA	-0.536953	-1.309831	0.1915				-0.192237	-0.54235	0.5881
INSTFAC	-0.758109	-5.285271	0.000***				-0.462127	-3.625	0.0004***
LABOUR	1.09E-06	4.757041	0.000***				7.66E-07	3.830193	0.0002***
NATRES	0.049793	1.146843	0.2526				0.049992	1.339254	0.1818
OPEN	0.05747	4.124747	0.0001***				0.022006	1.748069	0.0818*
<i>No. of Observation</i>	320			256			320		
<i>R-Square</i>	0.556224			0.251172			0.673367		
<i>Adjusted R-Square</i>	0.518456			0.233128			0.644054		
<i>F-Statistics (prob)</i>	14.72731 (0.0000***)			13.91997 (0.0000**)			22.97149 (0.0000***)		
<i>Hausman Test</i>	Chi^2 (6) = 13.097297 (0.0415**)								
<i>Sargan Test</i>	Chi^2 (26) = 54.01 (0.8824)								
<i>Test for Second Order Autocorrelation</i>	Z = -8.23 (0.7401)								

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

## APPENDIX 4:Country-Specific Granger Causality Test Results

### BENIN

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI	32	0.616	0.547	No Causality
	INWFDI does not Granger Cause RGDP		2.191	0.131	
4-Period	RGDP does not Granger Cause INWFDI	30	2.268	0.096*	RGDP → FDI
	INWFDI does not Granger Cause RGDP		1.138	0.366	
6-Period	RGDP does not Granger Cause INWFDI	28	7.524	0.000***	RGDP → FDI
	INWFDI does not Granger Cause RGDP		1.899	0.146	

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### BURKINA FASO

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI	32	3.505	0.044**	RGDP → FDI
	INWFDI does not Granger Cause RGDP		1.083	0.352	
4-Period	RGDP does not Granger Cause INWFDI	30	2.805	0.052*	RGDP → FDI
	INWFDI does not Granger Cause RGDP		0.913	0.475	
6-Period	RGDP does not Granger Cause INWFDI	28	1.247	0.337	No Causality
	INWFDI does not Granger Cause RGDP		0.992	0.465	

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### COTE D'IVOIRE

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI	32	1.553	0.229	No Causality
	INWFDI does not Granger Cause RGDP		0.135	0.874	
4-Period	RGDP does not Granger Cause INWFDI	30	1.312	0.297	No Causality
	INWFDI does not Granger Cause RGDP		1.886	0.150	
6-Period	RGDP does not Granger Cause INWFDI	28	1.139	0.386	No Causality
	INWFDI does not Granger Cause RGDP		0.845	0.554	

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### GAMBIA

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI	32	0.111	0.894	No Causality
	INWFDI does not Granger Cause RGDP		1.313	0.285	
4-Period	RGDP does not Granger Cause INWFDI	30	0.421	0.791	No Causality
	INWFDI does not Granger Cause RGDP		0.872	0.496	
6-Period	RGDP does not Granger Cause INWFDI	28	0.44	0.841	No Causality
	INWFDI does not Granger Cause RGDP		0.779	0.598	

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### GHANA

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI	32	2.656	0.088	RGDP → FDI
	INWFDI does not Granger Cause RGDP		3.247	0.054	FDI → RGDP
4-Period	RGDP does not Granger Cause INWFDI	30	2.135	0.112	No Causality
	INWFDI does not Granger Cause RGDP		1.921	0.144	
6-Period	RGDP does not Granger Cause INWFDI	28	1.981	0.132	No Causality
	INWFDI does not Granger Cause RGDP		1.486	0.248	

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### GUINEA

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI	32	5.094	0.013	RGDP → FDI
	INWFDI does not Granger Cause RGDP		0.685	0.512	
4-Period	RGDP does not Granger Cause INWFDI	30	3.485	0.025	RGDP → FDI
	INWFDI does not Granger Cause RGDP		1.061	0.399	
6-Period	RGDP does not Granger Cause INWFDI	28	2.755	0.052	RGDP → FDI
	INWFDI does not Granger Cause RGDP		1.241	0.340	

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### GUINEA BISSAU

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	32	0.802 6.246	0.458 0.005	FDI → RGDP
4-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	30	1.016 4.149	0.422 0.012	FDI → RGDP
6-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	28	1.199 5.786	0.358 0.002	FDI → RGDP

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### LIBERIA

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	32	1.338 0.559	0.279 0.578	No Causality
4-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	30	1.177 0.465	0.349 0.760	No Causality
6-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	28	0.777 0.335	0.600 0.907	No Causality

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### MALI

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	32	3.946 1.141	0.031 0.334	RGDP → FDI
4-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	30	2.784 1.689	0.050 0.190	RGDP → FDI
6-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	28	0.895 3.162	0.523 0.033	FDI → RGDP

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### NIGER

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	32	1.300 0.395	0.289 0.678	No Causality
4-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	30	0.653 0.175	0.631 0.948	No Causality
6-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	28	2.529 0.072	0.068 0.998	No Causality

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### NIGERIA

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	32	1.414 0.453	0.261 0.640	No Causality
4-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	30	0.875 0.878	0.496 0.494	No Causality
6-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	28	0.847 1.744	0.884 0.179	No Causality

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

### SENEGAL

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	32	0.224 2.385	0.801 0.111	No Causality
4-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	30	0.916 0.861	0.473 0.504	No Causality
6-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	28	0.54 3.183	0.769 0.030	FDI → RGDP

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

**SIERRIA LEONE**

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	32	1.097 1.889	0.348 0.171	No Causality
4-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	30	0.931 0.621	0.465 0.652	No Causality
6-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	28	0.483 2.379	0.810 0.081	FDI → RGDP

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

Source: Author's Computation

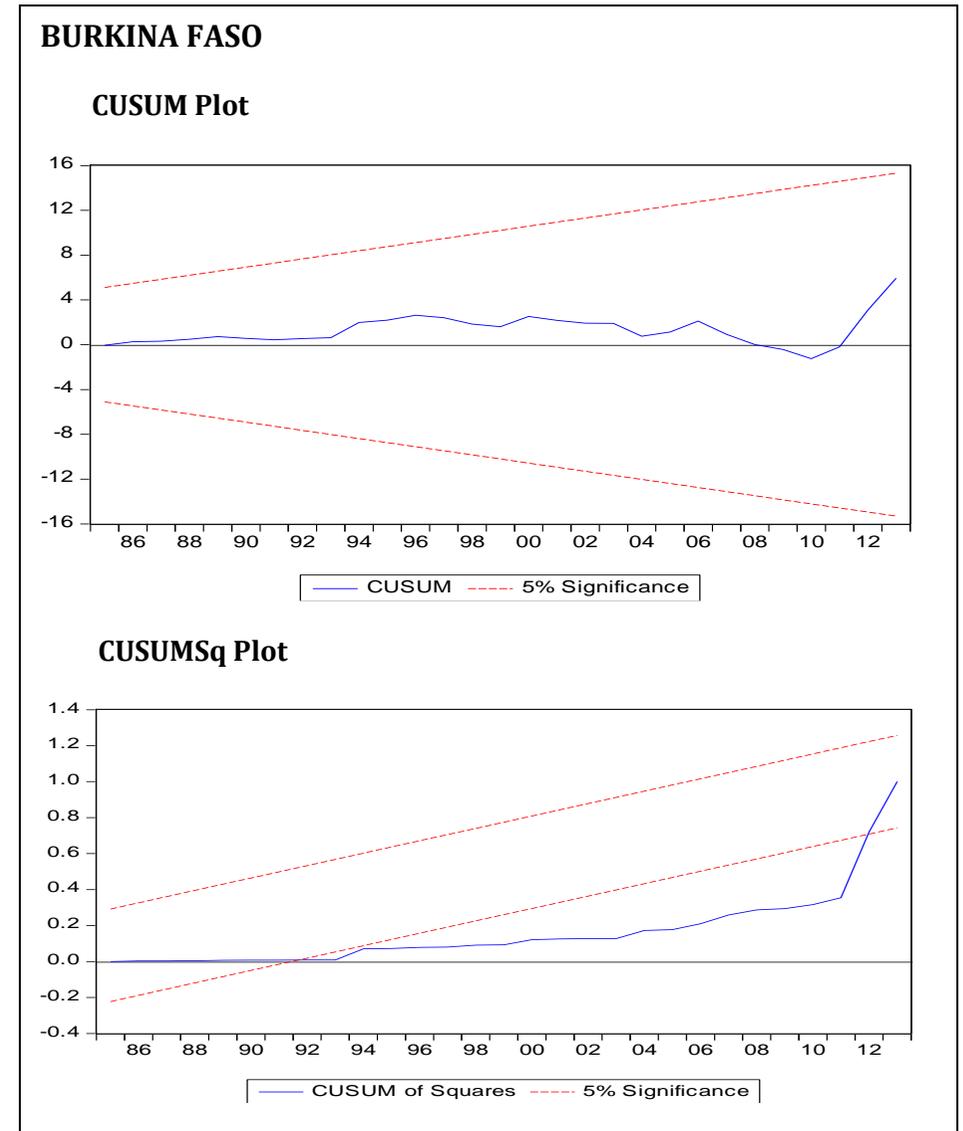
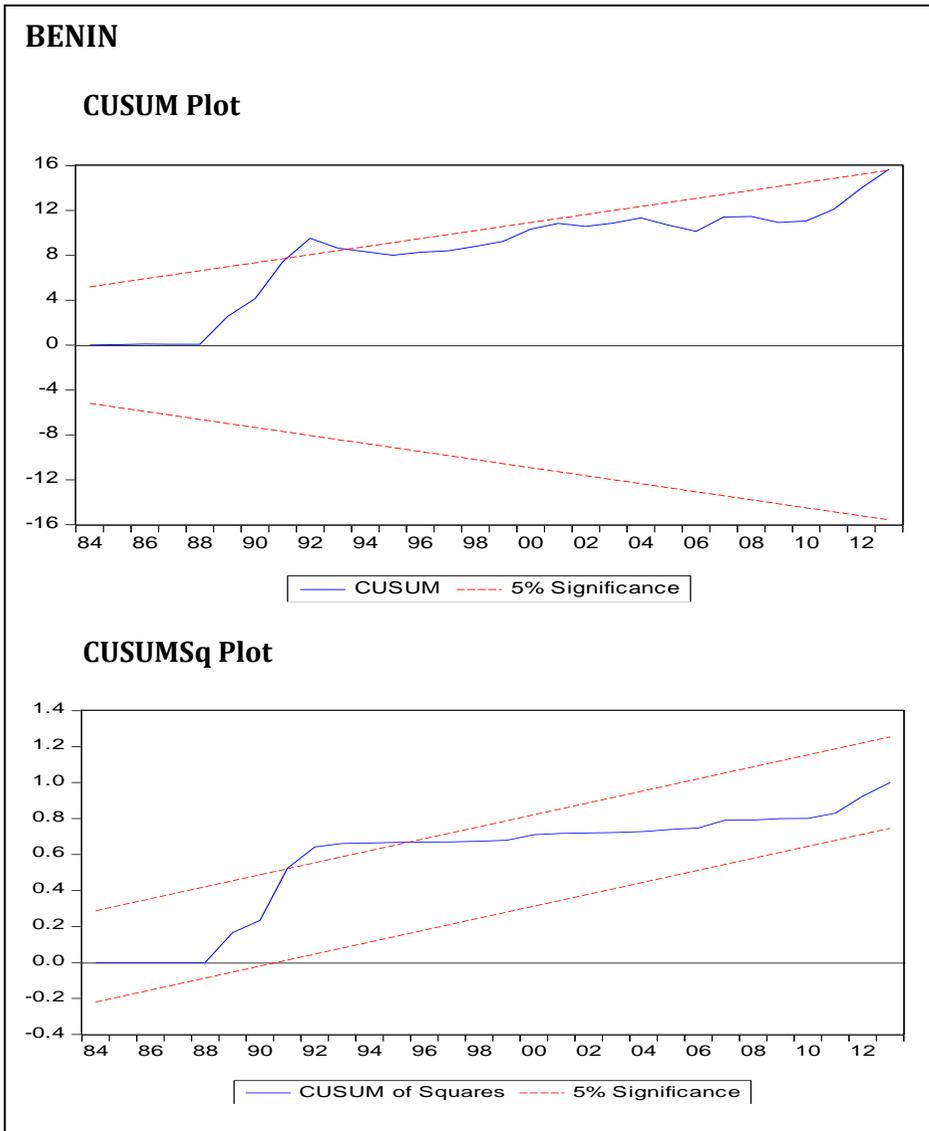
**TOGO**

No. of Lag	Null Hypothesis	Observations	F-Statistic	Prob.	Causation
2-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	32	0.638 0.107	0.535 0.899	No Causality
4-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	30	0.364 0.157	0.831 0.957	No Causality
6-Period	RGDP does not Granger Cause INWFDI INWFDI does not Granger Cause RGDP	28	0.529 0.382	0.778 0.879	No Causality

NB: \*Significant at 10%, \*\*Significant at 5%, and \*\*\*Significant at 1%.

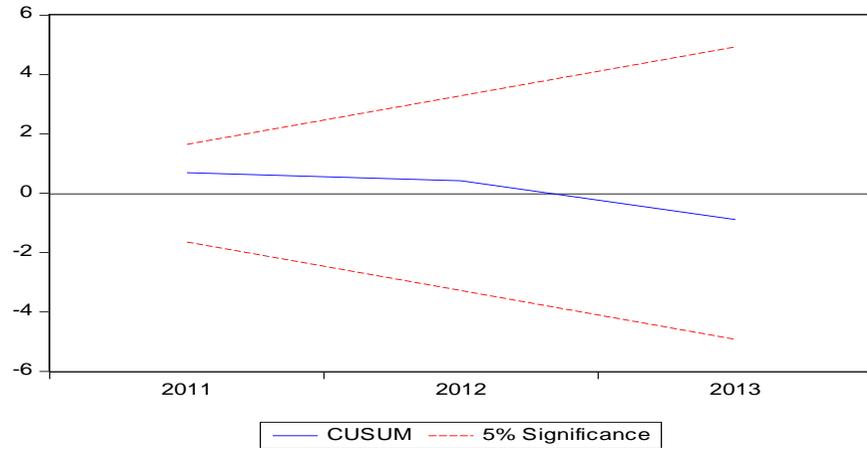
Source: Author's Computation

**APPENDIX5: Plot of Cumulative Sum of Recursive Residual (CUSUM) and Cumulative Sum of Squares of Recursive Residual (CUSUMSq).**

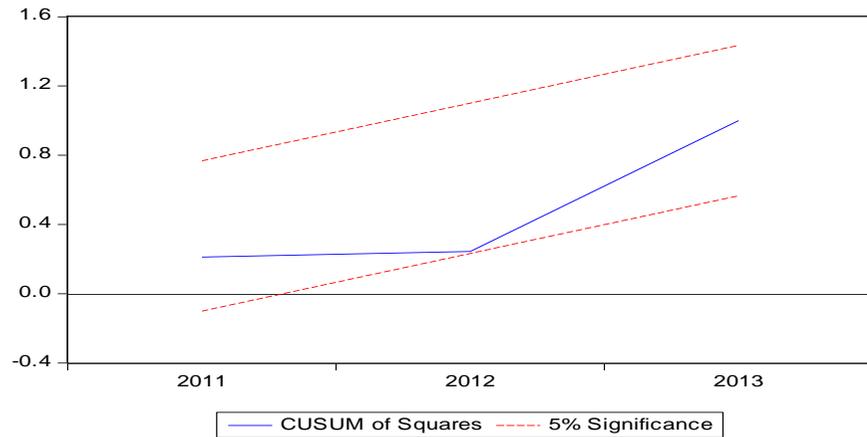


## COTE D'IVOIRE

### CUSUM Plot

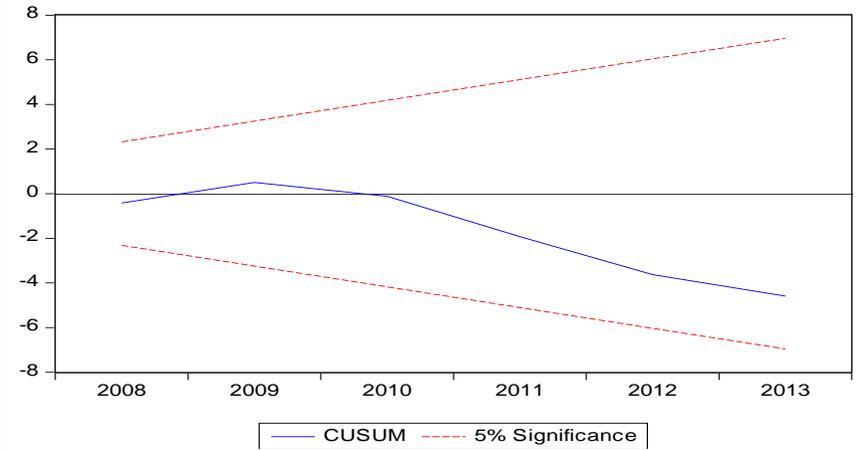


### CUSUMSq Plot

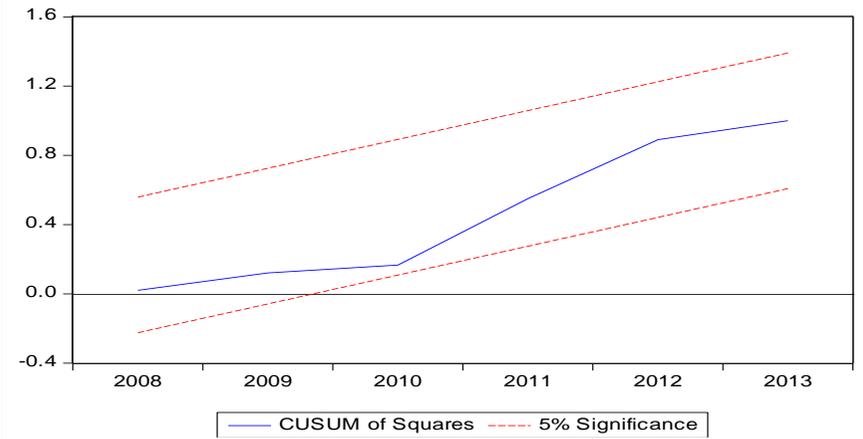


## GHANA

### CUSUM Plot

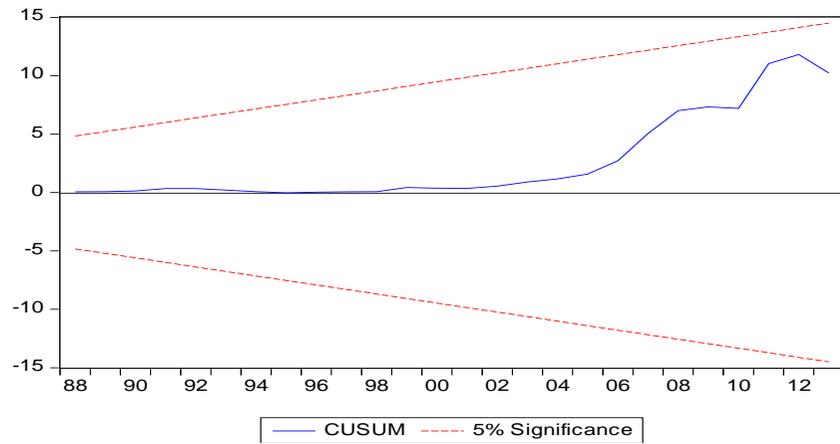


### CUSUMSq Plot

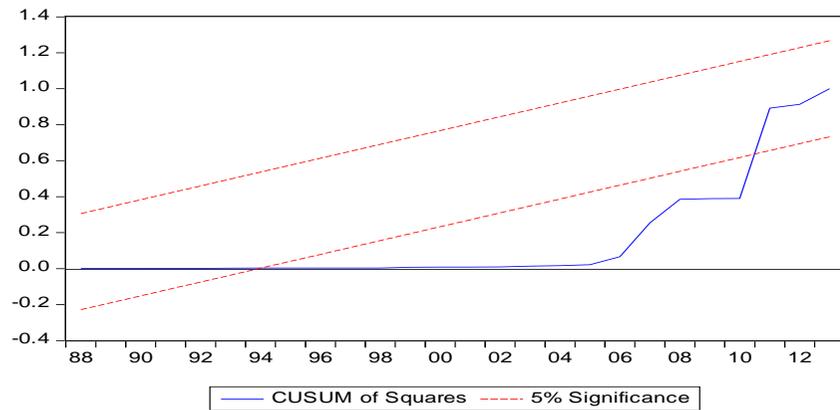


# GUINEA

## CUSUM Plot

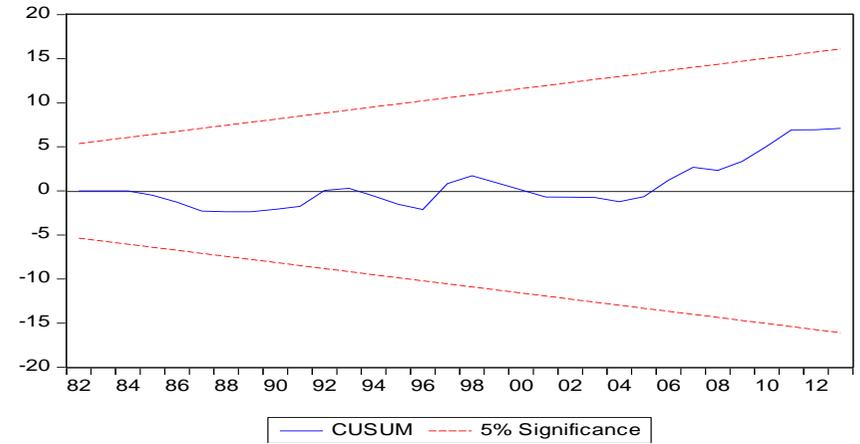


## CUSUMSq Plot

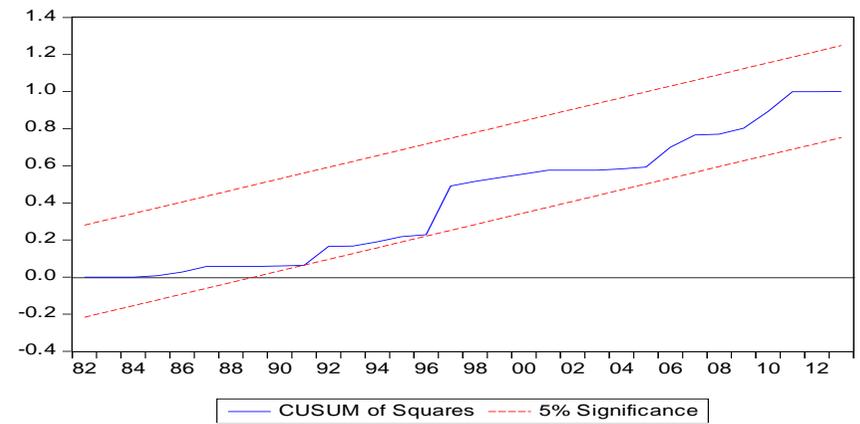


# GUINEA-BISSAU

## CUSUM Plot

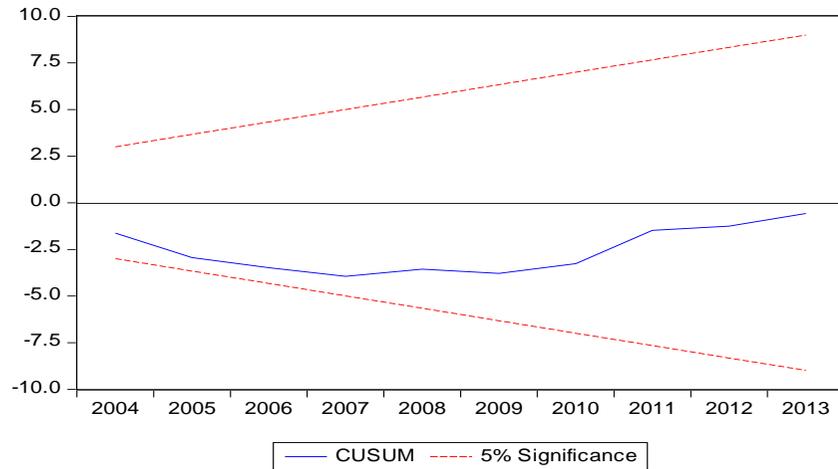


## CUSUMSq Plot

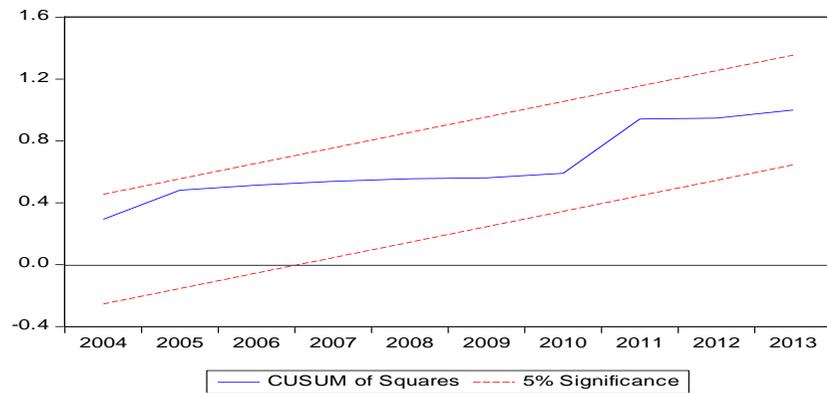


## LIBERIA

### CUSUM Plot

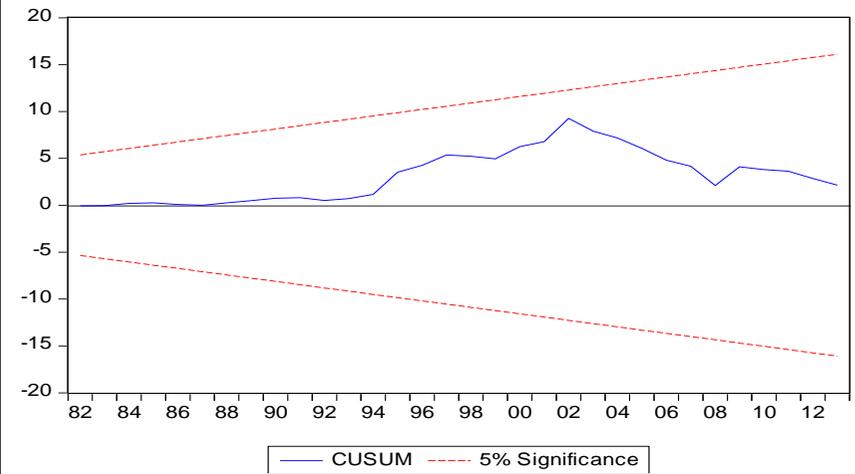


### CUSUMSq Plot

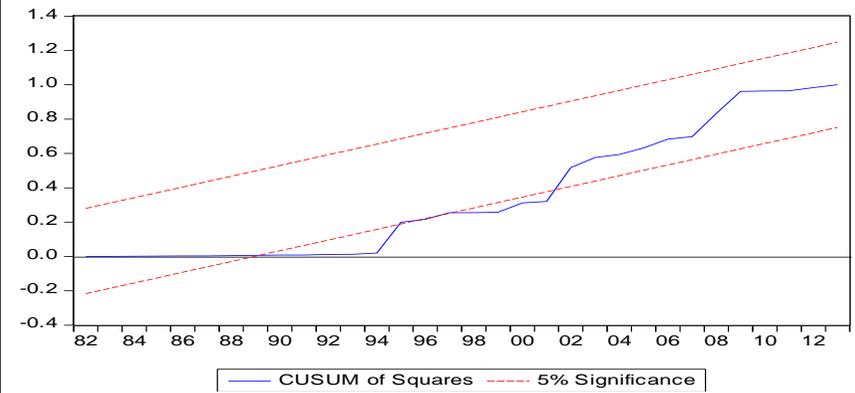


## MALI

### CUSUM Plot

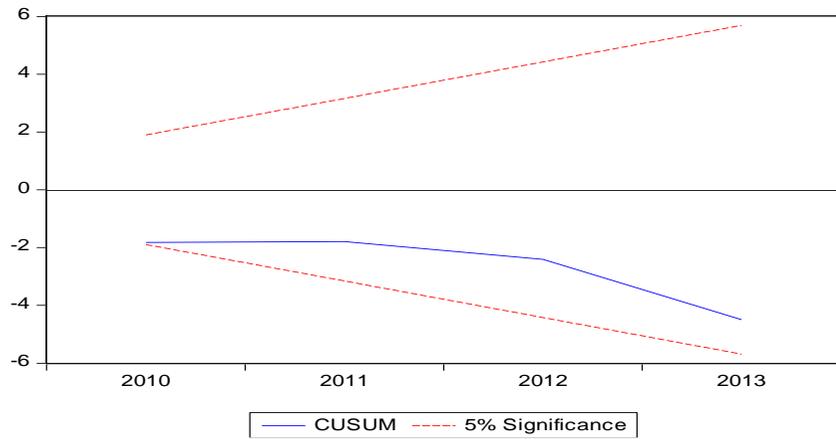


### CUSUMSq Plot

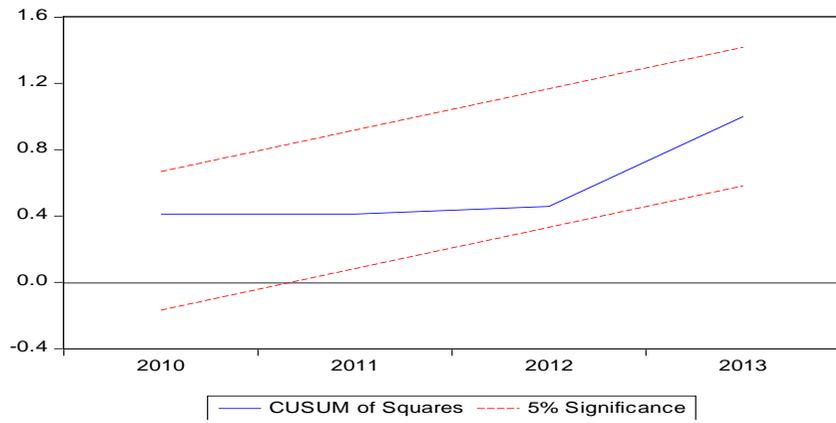


# NIGER

## CUSUM Plot

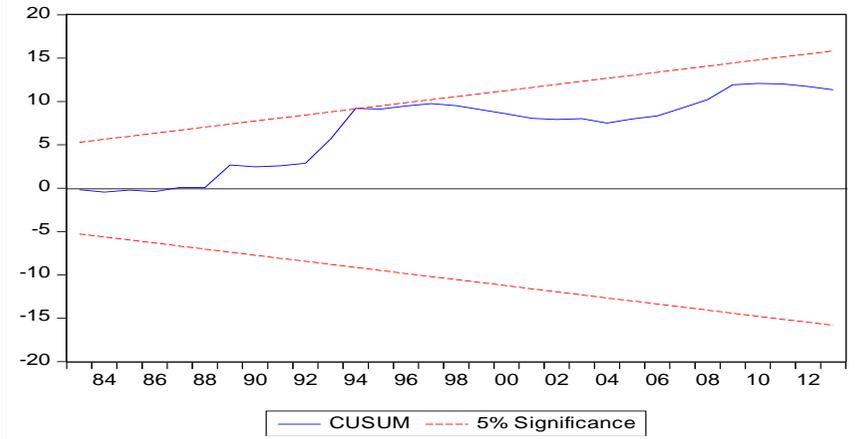


## CUSUMSq Plot

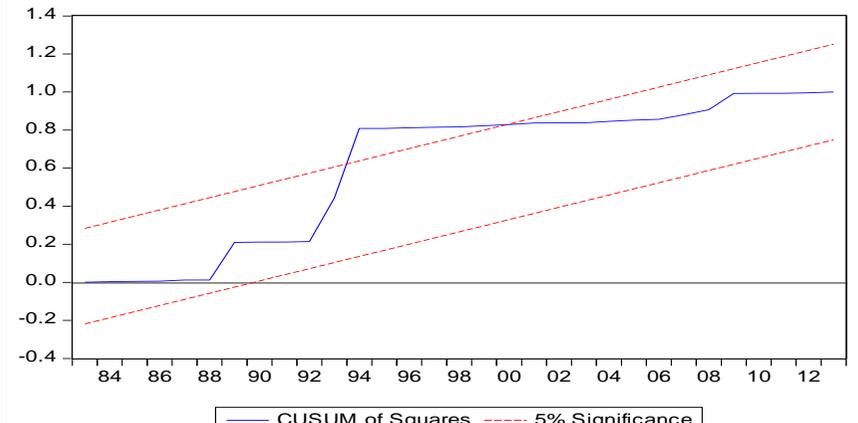


# NIGERIA

## CUSUM Plot

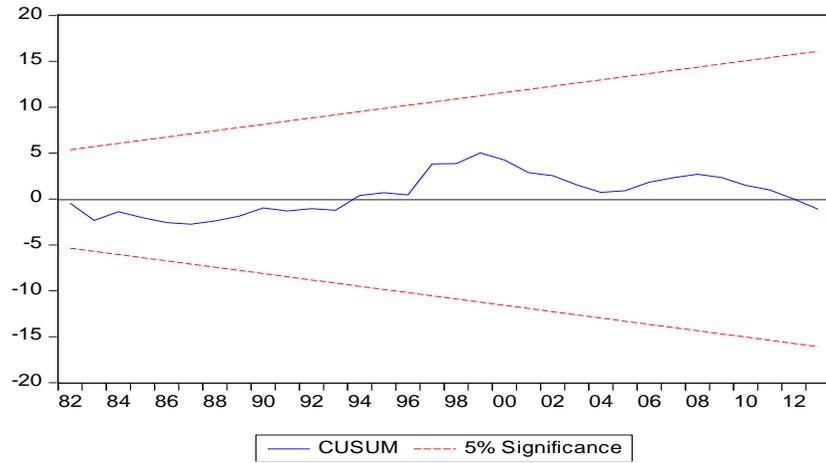


## CUSUMSq Plot

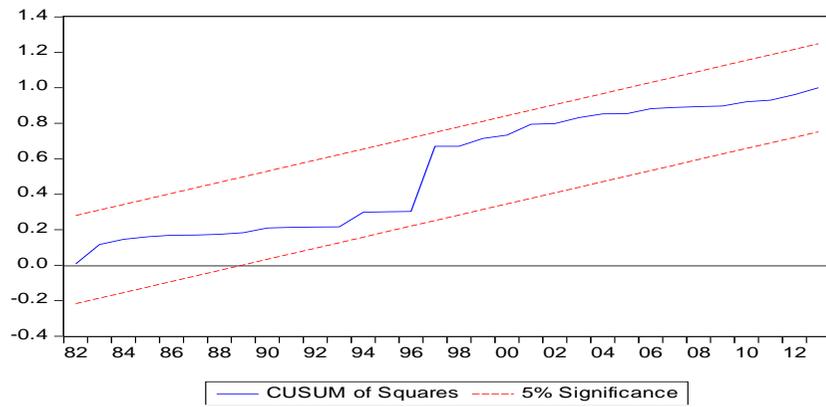


# SENEGAL

## CUSUM Plot

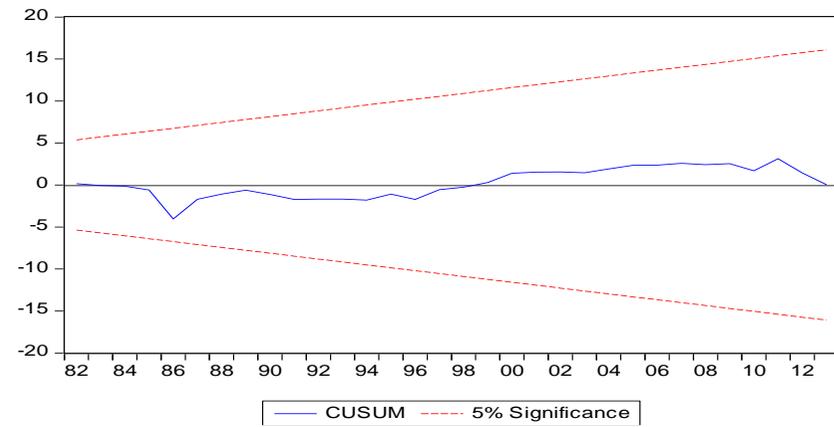


## CUSUMSq Plot

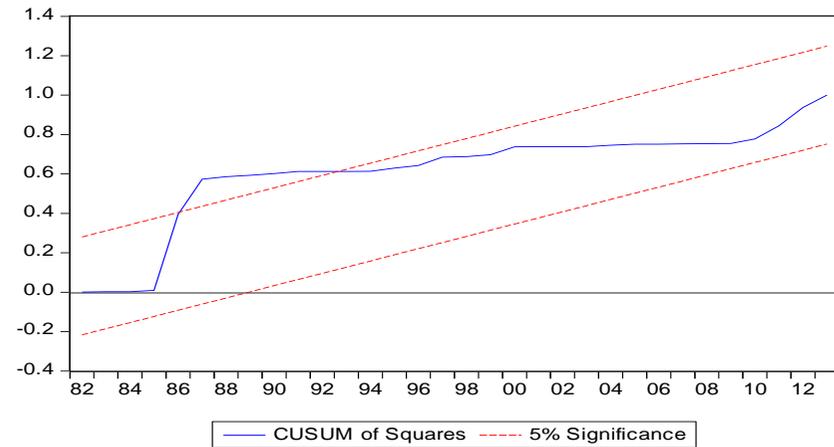


# SIERRA LEONE

## CUSUM Plot

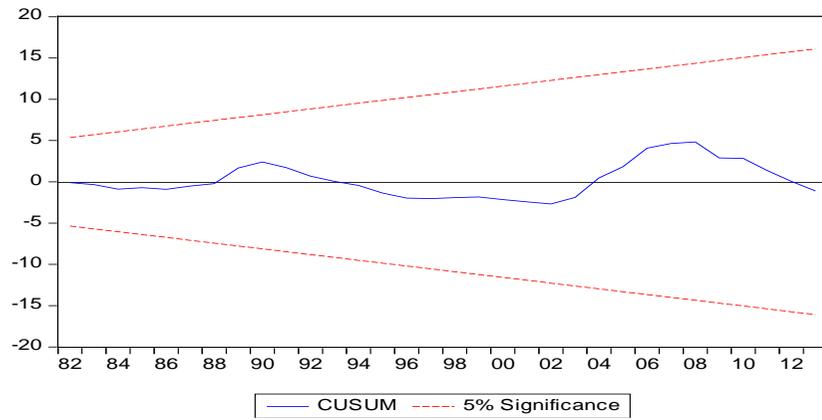


## CUSUMSq Plot

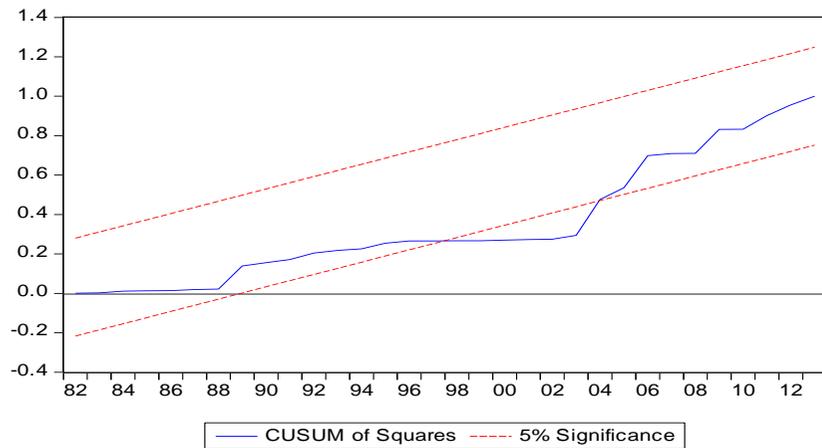


## THE GAMBIA

### CUSUM Plot

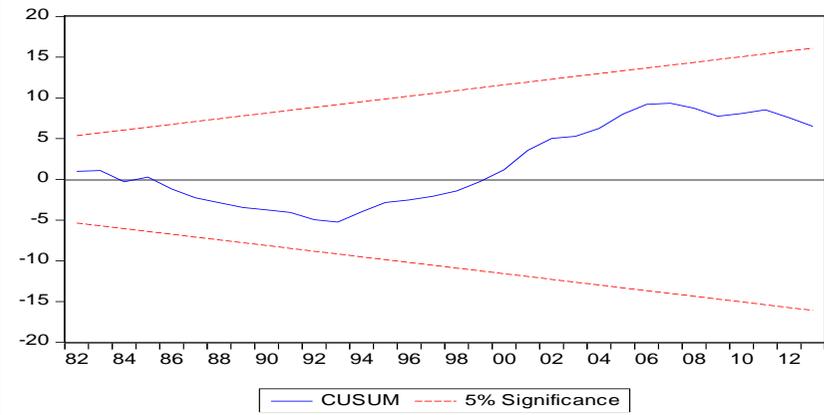


### CUSUMSq Plot



## TOGO

### CUSUM Plot



### CUSUMSq Plot

