

**EFFECT OF FOREIGN DIRECT INVESTMENT (FDI) AND
INSTITUTION ON ECONOMIC GROWTH IN ECONOMIC
COMMUNITY OF WEST AFRICAN STATES (ECOWAS)**

BY

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TITLE

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APPROVAL PAGE

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DEDICATION

This research work is dedicated to God Almighty, my parents and to the loving memory of my Father; Late Chief Unigwe Lawrence Okorie. May your gentle soul rest in peace. Amen.

ACKNOWLEDGMENTS

My profound gratitude goes to Almighty God for his infinite mercies. Indeed, His goodness made it possible for me to embark on this research work. I know it's for His purpose that I am here today. I will never forget that.

Of utmost importance, an unadulterated appreciation to my mentors for their great inspiration, motivation and support. They include Prof.(Mrs.) Gladys Aneke (My thesis advisor) and Dr. Emmanuel Nwosu (an erudite scholar and humble of heart). Gracias...!

They call them "The Guardians". I place them second to God Almighty. Late Mr. Unigwe Lawrence (My DAD) and Mrs. Unigwe Mary (My MUM); who set the foundation for my spiritual, academic, social and all other ramifications of my life. God could not have made a better choice of parents for me. All my academic and career pursuits are offshoots of their faith and love for me. There is no better way to express my gratitude than to say; thank you, Daddy and Mummy. I hope I met your expectations.

I would also like to acknowledge my colleagues who in one way or the other contributed to the success of this thesis. Thank you.

UNIGWE COMFORT OGONNA

(SEPTEMBER, 2019)

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ABSTRACT

This study investigated the impact of foreign direct investment and institutional quality on economic growth in ECOWAS. The countries selected for the study include Benin Republic, Burkina Faso, Cape Verde, Cote d'Ivoire, Gambia, Guinea, Guinea-Bissau, Ghana, Liberia, Mali, Niger, Nigeria, Sierra-Leone, Senegal and Togo. The annual data is spanned from 1970 to 2017. Fixed effect model was used to model the two objectives. Pre-estimation test and post-estimation test were conducted to ascertain the nature of the data and to also examine the robustness of the regression results. The result indicated that foreign direct investment has a positive impact on the real economic growth in ECOWAS countries. sourced from world development indicators (WDI, 2018) and worldwide governance indicators (WGI, 2018), scoped 2000-2017. Again the estimator provides support for the proposition that foreign direct investment, control of corruption and the political stability have an insignificant impact on economic growth of ECOWAS. However, the regulatory quality was found to have a potent significant positive impact on economic growth of ECOWAS.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Policymakers around the world affirm to the fact that foreign direct investment (FDI) boosts the productivity of host nations and promote economic growth and development. FDI provides more than just capital financing but also brings about positive externalities through the embracing of foreign technology and technical know-how (Alfaro, Chanda, Kalemli-Ozcan and Sayek, 2006).As revealed by Asian Development Outlook (ADB, 2004),over the years, FDI has significantly increased as a result of numerous factors, like rapid technological progress, emergence of globally integrated production and marketing networks, presence of bilateral investment treaties, approvals from multilateral development banks and positive indication from developing nations that have welcomed FDI.

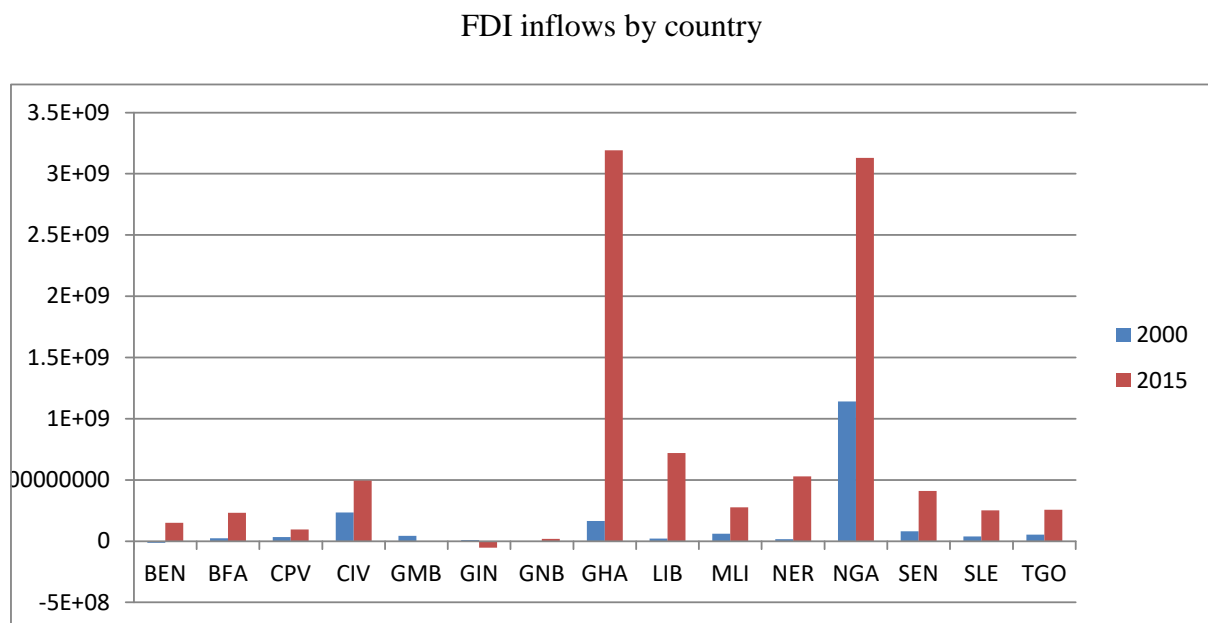
FDI is a form of controlling ownership of a business in a country by an entity which is based in another country. FDI comprises mergers in addition to ownership, building facilities, reinvesting profits earned from foreign operations and intra-company loans. FDI is typically made in an open economy that provides a skilled workforce and advances prospects to investors, as opposed by economies that are highly regulated. FDI involves not just capital investment; rather it includes provisions of management and technology as well. According to International monetary fund (IMF, 1993) and Organisation for Economic Cooperation and Development (1996), direct investment means the aim of procuring a long lasting interest by a resident entity in an economy (a direct investor) or an enterprise that is resident in another economy (the direct enterprise). The investment is direct when the investor, who could either be a foreigner, company or group of entities, wants to manage, control, or have substantial influence over the foreign enterprise. For the past two decades, FDI has turned out to be progressively significant in the developing nation given the increasing number of developing nations who are succeeding in attracting extensive amounts of FDI inflow. Most economic theories on foreign direct investment have identified numerous networks through which FDI inflows may be advantageous to the economy.

The foreign direct investment represents an investment which is not likely reversed at the first sign of global or local financial crisis (Loungani&Razin, 2001). FDI has been noted to make up a large part of foreign capital inflows and even increase the world trade inflows. According to Dupasquier and Osakwe (2003), in Anyawu and Yameogo (2015) FDI is

savings and generates employment and growth, integration into the universal economy, transfer of modern technologies, enhancement of efficiency, increasing skills of local manpower and development of local suppliers. Ever since the end of Bretton Woods system, researchers in their different studies have investigated the contribution of inward FDI to the development of the developing countries such as West African countries or the Sub-Saharan African countries, where FDI now serves as an important means of private external finance.

Foreign direct investment inflows change not just across sub-regions in a continent but have shown substantial and rapid improvement in some West African states. During the period 2007 to 2013, foreign direct investment in West Africa rose at a compound annual growth rate (CAGR) of 27.7%, which was the largest growth in the Africa continent at that period. Exactly in 2013 and for the first time, West African countries exceeded North Africa in FDI project and became the second most attractive sub-region in Africa. It is well known that West Africa’s oil reserve, gas and other natural resources are huge, which make the African share of global production and export of these natural resources to be important. Inflows of FDI to West Africa grew by 12 percent which amounts to \$11.4 billion 2017, propelled by Nigerian’s 45 percent increase which amounted to \$4.4 billion, Ghana’s 9 percent amounted to \$3.5 billion (UNCTAD, 2017).

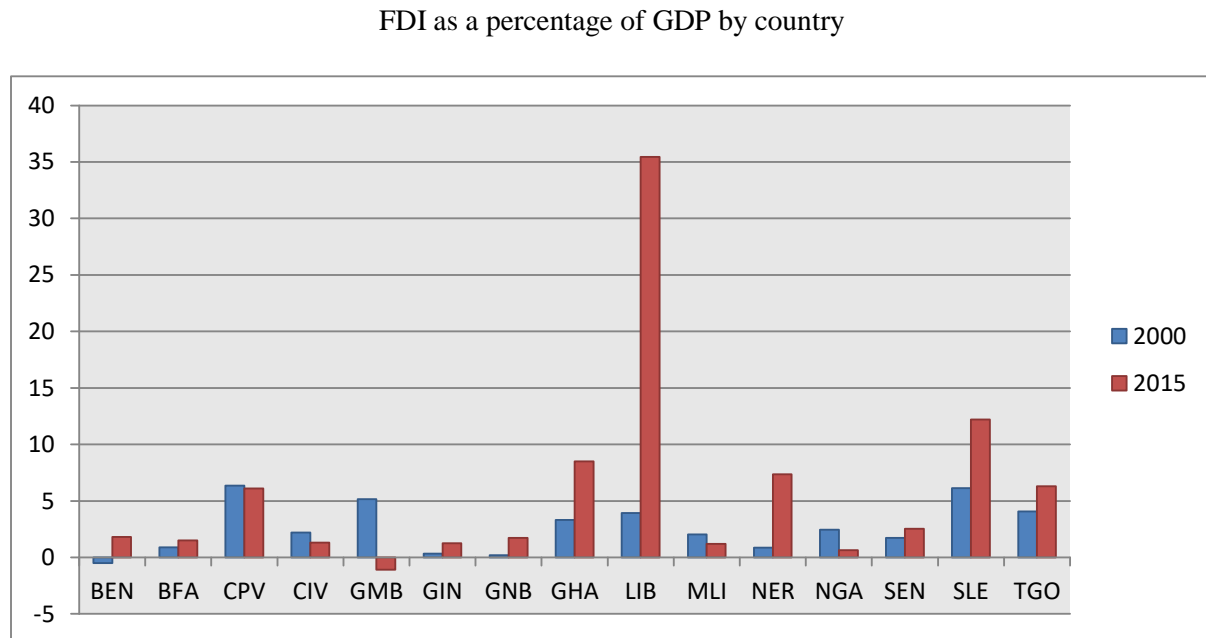
Fig 1 ECOWAS FDI Inflows by country (2000-2015)



Source: Author, using World Bank data set 2016

In fig 2, Nigeria took the lead, having the highest inflow of FDI in the region followed by Ghana and Liberia.

Fig 2: West Africa: FDI inflows as a Share of GDP by country. 2000-2015



Source: Author, using World Bank data set 2016

In fig 2 above, Liberia has the highest share of FDI inflows to GDP, followed by Sierra Leone, Ghana, Nigeria, Cape Verde, Togo, etc.

The Economic Community of West Africa state is considered for a significant share of FDI in sub-Saharan Africa (SSA), attracting an average of 35 percent inflow of FDI into sub-Saharan Africa between 2004 and 2013. Nigeria represents approximately this fraction and currently the third largest recipient of FDI in Sub-Saharan Africa. FDI grew more than six-fold within 2004-2011 from \$3 billion to \$19 billion. It fell sharply from 37 percent in 2011 to \$13 billion from \$19 billion and to \$12 billion. The sharp decline was due to fall Nigeria’s FDI inflow, although the FDI in almost all states in the region fell between 2011 and 2013 apart from Benin, Burkina Faso, Cote d’Ivoire and Ghana. (Willy-Tozoke and Hou, 2018). Also between 1970 and 2013, the five top countries in West Africa that receive FDI were Nigeria (57.5%), Cote, d’Ivoire (48%), Ghana (12.4%), Liberia (4.7%) and Mauritania (3.4%), which was as a result of fossil fuel and metal producers and exporters and their collective inflows representing over 80% of the entire inflows. Except for Nigeria who is known as the largest producer in the sub-region, Ghana and Cote d’Ivoire oil production attracted substantial investment from the foreign transnational corporation (ITNc) Royal

Dutch Shell (United Kingdom), ExxonMobile (United State), China National Offshore Oil Company (CNOOC) and China National Petroleum Corporation (CNPC). In the year 2013, FDI projects augmented by 20.5% in West Africa which is the 9th highest amongst the five sub-regions contrary to East Africa (7.4%) increase, North Africa (28.7%) decrease and Central Africa (21.7%) decrease.

Control for corruption shows perceptions of the degree to which public power is applied for personal benefit, involving both minor and grand forms of corruption, as well as "capture" of the state by leaders and personal interests. Control for corruption is a measure of checking institutional quality.

Table 1

Control of Corruption and Corruption Perceptions Index in ECOWAS 2017

Country	Governance index	Score	CC Rank	CPI Rank
Benin	-0.55	13.00	33.65	39
Burkina-Faso	-0.11	14.00	53.37	42
Cape Verde	0.84	10.00	80.29	55
Cote d'Ivoire	-0.52	14.00	36.54	36
Gambia	-0.66	9.00	27.40	30
Guinea	-1.01	14.00	14.42	27
Guinea Bissau	-1.56	7.00	2.88	17
Ghana	-0.23	15.00	49.04	40
Liberia	-0.69	14.00	26.44	31
Mali	-0.63	14.00	29.81	31
Niger	-0.65	13.00	28.85	33
Nigeria	-1.07	15.00	12.50	27
Senegal	-0.09	15.00	54.81	45
Sierra Leone	-0.59	14.00	31.25	30
Togo	-0.71	13.00	25.96	32

Source: Author's computation from WGI 2017 and corruption perception index 2017

From Table 1 above, the first column titled country is the list of countries in ECOWAS. The second column titled estimate, shows the estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance) and looking at the rows of estimate carefully, Guinea Bissau with the estimate of -1.56 has the weakest governance performance on control of corruption compared to Senegal and Cape Verde with the estimate of -0.09 and 0.84 respectively showing the strongest governance performance on control for corruption in ECOWAS.

Quality of institutional structure guarantees that transactions between different economic units are carried out more cheaply and easily. It increases efficiency and quality also contributes to industrial growth and advancement as well as the revival of trade.(Ozpolat, Guven, Ozsoy and Bahar, 2016).

Table 2

The Regulatory Quality index 2017.

Countries	Regulatory index	Score	Rank
Benin	-0.47	9	33.17
Burkina-Faso	-0.44	10	34.62
Cape Verde	-0.20	7	46.15
Cote d'Ivoire	-0.36	10	37.98
Gambia	-0.45	8	34.13
Guinea	-0.84	10	17.79
Guinea Bissau	-1.18	6	11.06
Ghana	-0.14	11	49.52
Liberia	-0.95	10	15.38
Mali	-0.57	10	30.29
Niger	-0.68	9	26.92
Nigeria	-0.89	11	16.83
Senegal	-0.15	11	49.04
Sierra Leone	-0.92	10	15.87
Togo	-0.79	9	21.63

Source: Authors Computation from WGI 2017

From Table 2 above, Guinea Bissau has the weakest governance performance on the regulatory quality with an estimate of -1.18 compared to Ghana and Senegal who has the strongest governance performance on the regulatory quality with an estimate of -0.14 and -0.15 respectively in ECOWAS. Guinea Bissau ranking 11.06 which is the lowest in the rule of law compared to Ghana and Senegal with the highest rank in the regulatory quality with the rank of 49.52 and 49.04 respectively in ECOWAS.

1.2 STATEMENT OF THE PROBLEM

Foreign Direct Investment is widely known to be one of the major determinants of economic growth and development as seen in most developed countries like the United States of America and China, but this is hardly seen in Africa especially in ECOWAS countries (Mwilima, 2003). West African external financing has worsened due to financial crises of 2008; during which developed nations reduced the level of financial assistance they grant developing nations. Political instability is a problem facing the West African countries inflow of foreign direct investment; the region is politically unstable as a result of high incidence of wars, frequent military interventions in politics, and religious conflict. West Africa also faces the problem of macroeconomic instability, high incidence of currency crashes, double-digit inflation, and budget deficits. Countries with a high rate of inflation tend to attract less FDI (Onyeiwu and Shrestha, 2004). Lack of policy transparency in ECOWAS makes it difficult to tell the exact aspect of government policies adopted. The problem of economic policy inconsistency is of great concern due to increases in the cost of the transaction and thereby reducing the incentives for foreign investment.

Studies have been carried out by various researchers on the impact of foreign direct investment on growth in a specific country, sub-Saharan African countries and West African countries like Almfraji and Almsafir (2014), Anwar and Nguyen (2010), Alfaro, Chanda, Ozcan and Seyek (2010), Alfaro and Johnson (2013), Azman-Saini, Baharumshah and Law (2010). Most of them found a positive correlation of foreign direct investment on economic growth while few studies found a negative correlation of FDI on economic growth. Also researchers have investigated the institutional quality and economic growth on a specific country and sub-Saharan African countries like Bruinshoofd (2016), Valeriani and Peluso (2011), Ouedraogo (2015) and Albert and Wouter (2011) etc. Some of these studies found a positive relationship while others found a negative relationship of institutional quality on economic growth.

This study will go ahead to research on the multiplier effect of FDI and institution on economic growth in ECOWAS using a panel data analysis with the help of the following research questions and objectives.

1.3 RESEARCH QUESTIONS

The following research questions will serve as a guide to this research work. The general questions include the following:

- 1 What is the effect of foreign direct investment on economic growth in ECOWAS?
- 2 What is the effect of institutions on economic growth in ECOWAS?

1.4 RESEARCH OBJECTIVES

The broad objective of this research is to ascertain the effect of foreign direct investment and institutions on economic growth in ECOWAS while the specific objectives are:

- 1 To ascertain the effect of foreign direct investment on economic growth in ECOWAS.
- 2 To ascertain the effect of institutions on economic growth in ECOWAS.

1.5 RESEARCH HYPOTHESIS

H₀₁: Foreign direct investment has no significant effect on economic growth in ECOWAS

H₀₂: Institutions in ECOWAS have no significant effect on economic growth

1.6 SIGNIFICANCE OF THE STUDY

Findings from this study will unveil a useful guidance both the policy makers and future researchers in so many ways. Policy relevance of this study will come from the relationship between institutional quality and economic growth in one hand, and between institution and FDI in the other. While most extant literature is of the view that quality institutions promote economic growth through attraction of foreign capital and predictability of macroeconomic economic and policy environment, the outcomes of this study in the context of ECOWAS

will give further insights into this argument. It is expected that the relationship between an institution and economic growth will help inform policy makers on the need to develop quality institutions that will ensure that property rights are well defined, policy making institutions are insulated from political exigencies, widespread corruption is reduced in the system and the rule of law of preserved.

Finally, investors, researchers, and economic growth analysts will be interested in the results of this study especially in order to update their knowledge of the functioning of ECOWAS and understanding the literature on economic growth in the states. Researchers could explore the approaches used in this work and value additions and thus use them to find areas they will expand the literature on FDI, institutions and growth.

1.7 SCOPE OF THE STUDY

The research, effect of FDI and institutions on economic growth in ECOWAS (Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, Gambia, Guinea, Guinea-Bissau, Ghana, Liberia, Mali, Niger, Nigeria, Sierra-Leone, Senegal and Togo) will covers a period of 17 years, from the year 2000 to 2017. This study is a cross sectional study and an annual data based on all variables is sourced from World Bank Development Indicator (2016) and Worldwide Governance Indicators (WGI) (2018). STATA 15.1 statistical software would be used for the analysis. The principal variables for this research include Real Gross Domestic Product (RGDP), Foreign Direct Investment (FDI), Literacy Rate (LTR), Inflation (INF), Gross Capital Formation (GCF), Labour Force (LBF), Control for Corruption (COP), Regulatory Quality (RQ), Political Stability (PS) and Secondary School Enrolment (SSE).

CHAPTER TWO

LITERATURE REVIEW

The chapter is organised into conceptual literature, theoretical literature, empirical literature, limitation of the study and value added to the research.

2.1 CONCEPTUAL LITERATURE

The conceptual framework provides the specific or real meaning of the key concepts of study in the context of the research, which is distinguishable from its general use or application in other instances (Madueme: 2010). In this research work, the key concepts of interest are Foreign Direct Investment (FDI), Institutions and Economic Growth.

2.1.1 Economic Growth

Economic growth is seen to be the quantity of goods and services produced by an economy for a very long period of time. Economic growth is defined as an increase in the capacity of a nation to produce goods and services, from one period of time to another which can be measured in real or normal terms; it is also measured in terms of gross national product (GNP) or gross domestic product (GDP). Economic growth is also seen as an increment on the inflation-adjusted market value of goods and services made in an economy over a period of time. Increase in economic growth is triggered by effective use inputs such as physical capital, labour productivity, energy and material. Economic growth is also an increase in the production of goods and services over a specific period time and to measure economic growth accurately, there must be a removal of the effects of inflation. It is also seen as a process at which the wealth a nation increases over time and the process of transformation. The growth of an economy is the annual or yearly rise in real per capita income of an economy over a long period. According to Lewis (1954), economic growth means the growth of output per head of population.

2.1.2 Foreign Direct Investment

Foreign Direct Investment is an investment made in a commercial enterprise by an investor from another country for which the foreigner has control over the company acquired. According to Economic Cooperation and Development (OECD), FDI means owing 10% or

more of a business in another country. FDI is an investment made by an investor in a specific nation into a business situated in another. It happens when speculators begin working organizations abroad, just as picking up proprietorship and controlling outside organization's interests. FDI requires more than capital venture; it incorporates supplies of the management and innovation as well. One essential characteristic for FDI is that it communicates substantial impact in the decision making in foreign business undertakings. World Bank (1996) considers FDI to be a speculation made to acquire an enduring administration (for the most part 10% of casting a voting stock) in business working in a state than different financial specialists, the speculator's objective is to preside over management of earning either long term capital or short-term capital as uncovered in the state's balance of payment account statement.

2.1.3 Institutions

According to North (1981, 1990), an institution is seen as humanly devised constraints that shape relationship amongst people and the rule of the game in a society. Ndulu, O'Connell, Bates, Collier, and Soludo (2008), in research embraced by the African Economic Research Consortium (AERC) demonstrates that, institutions are given extensive consideration in clarifying African economies development. Institutional quality advances with the confinements forced on official power which may either be formal principles or casual impediments and their solid point are shaped by the attributes of upholding them. This confinement of official power by the improvement of institutional quality lessens the de jure position of a nation's official to put itself exempt from the rules that everyone else follows. Various authors have looked at the institution in various ways and how it has affected on economic growth. Skill and Keefer (1995) considered procedures of property rights requirement as aggregated by universal business associations, Mauro (1995) saw at proportions of defilement, and Djankov, LaPorta, Lopez-de-Silanes and Shleifer (2002) compiled measures of entry barriers across countries

Institutions can be structured into economic and political institutions. Economic institutions are seen to be very necessary because it influences the economic structure motivations in society. If there are no property rights, entities will not be encouraged to invest in physical and human capital or adopt modern technology. This institution looks so important because they help share resources to their most appropriate uses; the economic institution determines who get the profits, revenues, and control of residual right. When the market in a particular

society is missing or ignored, resources are misused or misallocated and gains from trade go unemployed. Societies with these economic institutions enable and motivate factor accumulation, innovation, efficient and effective allocation of resources. Economic institutions are endogenous in nature, they are determined as collective choices of society and different economic institutions leads to a different distribution of resources.

Political institutions or appropriation of political power in the general public are endogenous in nature. The political power can be a de jure (institutional) and de facto political power. The de jure political power is viewed as a power that starts from the political foundation in the public eye. In contrast to the economic institutions, political establishments manage the limitations on and the motivating forces that incorporate the type of government, e.g., tyranny or despotism versus democracy, and the level of legislator's imperatives and political elites. The de facto power of a society or group relies upon its economic resources, which control both the capacity to utilize or abuse. Political institutions and the portion of assets are the state's factors in the evolving framework; this is because of their change being moderately moderate and all the more significantly they control economic institutions and performance both directly and indirectly.

2.2 THEORETICAL LITERATURE

This section discusses briefly on some basic theories on Economic growth, Foreign Direct Investment and Institutions.

2.2.1 Theories on Economic Growth

Here, theories of economic growth will be discussed: neoclassical theory of economic growth, the Solow growth model, the Mahalanobis model, the Leontief input-output model, and the endogenous growth theory.

2.2.2 The Neoclassical Theory of Economic Growth.

The theory was developed in the late 1950s and 1960s; the two American Economist Robert Solow and J.E. Meade were the well-known contributors to neoclassical growth theory. The theory laid more emphasis on capital accumulation and its related decision on savings as an

important basis of economic growth. The neoclassical growth model considered a two-factor production function with capital and labour as a determinant of output and added an exogenously determined factor as technology, to the production function. Just like the fixed proportion function of Harrod-Domer model of economic growth, the neoclassical growth model makes use of the variable proportion production function that considers unlimited possibilities of substitution between capital and labour in the process of production.

The neoclassical growth model assumes the following production function

$$Y = AF(K, L)$$

Given that Y represents Gross Domestic Product (GDP), K represents the stock of capital, L is a measure of incompetent or unskilled work and A is an exogenously decided dimension of technology. The adjustment in this exogenous variable will cause a move in the production function. The Technology Parameter A is incorporated into the production capacity to expect that technology is labour enlarged and the production function is changed as.

$$Y = F(K, AL)$$

2.2.3 Solow Growth Model

Solow growth model was presented by Robert Solow in 1956. The significant determinants of growth as indicated by Solow are Savings which mean speculation and population growth rates. Higher investment funds prompt the amassing of extra capital per labourer. High populace, then again negatively affects economic growth basically in light of the fact that a more prominent extent of sparing in economies is utilized to keep the capital ratio constant. Without advancement and specialized change, an expansion in capital for every labourer can't be likened with a relative increase in output per worker because of diminishing returns. In this manner, capital deepening would bring down the rate of capital returns. The Solow development model thought about four factors of intrigue: yield (Y), capital (K), Labour (L) and Knowledge which is the effectiveness of labour(A). Anytime, the economy as an extent of capital, work and information are utilized to deliver yield.

2.2.4 The Mahalanobis Model

This is a four sector model developed by Mahalanobis (1955), which is an allocation model. It considers four-sector economy consisting of the investment goods sector; the factory

produced consumer goods sector; the small household producing (including agricultural products) consumer's goods sector and; services (health, education etc.) producing sectors.

The model concludes that at a given time period, in order to achieve a certain growth rate in an economy, the total investable amount has to be divided in such a way that it leads to the required growth rate. But since required growth rate will be reasonably high, it can be achieved by expanding the investment sector and thereby producing larger quantities of investment goods. However, the investment sector is bound to generate increased purchasing power and hence, demand for consumer goods which require comparatively less capital but employ more labour. In this way, a balance is sought to be established between the investment goods sector and the consumer goods sector.

2.2.5 The Leontief Input-Output Model

The input-output model or technique is used to analyse the inter-industrial relationship in order to comprehend interdependencies and complexities of an economy and also conditions for maintaining equilibrium between supply and demand. According to Ghatak (1995), the technique usually delineates the general equilibrium analysis and empirical side of an economic system of production in any country. It's also known as "inter-industry analysis."

As a finest variant of general equilibrium analysis, Jhingan (2005) enumerates three main features of input-output analysis to be: concentrating on an economy who is in equilibrium as not applicable to partial equilibrium analysis; which does not concern itself with the demand analysis because it deals exclusively with technical problems in production, which is based on empirical investigation. The assumptions upon which the technique operates, according to Ghatak (1995), are that no substitution takes place between the inputs to produce a given unit of output and the input coefficient are constant – the linear input functions imply that the marginal input coefficients are equal to the average; joint products are ruled out, that is, each industry produces only one commodity and each product is produced by only one industry; and external economies are ruled out and production is subject to the operation of constant returns to scale.

2.2.6 The Endogenous Growth Theory

The endogenous growth theory was founded by Romer (1986) and Lucas (1988). The theory states that economic growth is mainly an outcome of endogenous and not external forces. It assumes that investment in human capital, innovation, and knowledge are a very important

contributor to economic growth, it emphasizes positive externalities and spillover effects of the knowledge-based economy which results in economic development. The theory holds that the long-run growth rate of an economy depends on policy measures. Typically, technological progress results in economic growth which, is the capacity of any economic organization to utilize its productive resources efficiently over time. Majority of these capabilities comes from learning process like how to operate modern technology in production facilities which is a more productive way or generally, industrial progress which is a way of learning to manage fast changes in the structure of production (Verbeck: 2000).

The theory is new theory and it explains the long-run growth rate of an economy on the endogenous factors as against exogenous factors of the neoclassical growth theory. The model lays emphasis on technical progress which results from the rate of investment, size of capital stock, and stock of human capital.

2.3 EMPIRICAL LITERATURE

2.3.1 Foreign Direct Investment and Economic Growth

Foreign direct investment (FDI) is seen as an investment in the form of a controlling ownership in a business in a particular country by an entity based in another country. In many extents, scholars have investigated the impact of foreign direct investment on economic growth. Nonetheless, evidence of foreign direct investment on economic growth mostly have been carried out on country-specific studies and very few have studied the foreign direct investment on economic growth in selected sub-Saharan African and more few researchers have carried out the study under West Africa countries. Some of these studies found a positive relationship while others said that there is a negative impact of FDI on economic growth. The empirical findings that reported positive relationship impact on economic growth are Solomon and Eka (2013), Alejandro (2010), Obwona (2011), Eww-Ghee and Lim (2001), Otepola (2002), Bende-Nabenda (2002), Nwankwo, Ademola, and Kehinde (2013), Li and Liu (2005), Bengos and Sanchez-Robles (2003), Marwah and Tavakoli (2004), Vu et al (2006), Bachtiar (2003), Ndambendia and Njoupougribni (2010), Adams (2009), Seetanah and Khadaroo (2007), Almfraji and Almsafir (2014), Anwar and Nguyen (2010), Azman-Saini, Baharumshah, Law (2010), Chanda, Kalemli-Ozcan, Sayek (2010), Chanda, Kalemli-Ozcan and Sayek (2010), Choong (2012), Vadlamannati and Tamazian (2009), Tiwari and Murascu (2011), Kinuthia and Murshed (2014), Samargandi, Fidrmue and Ghosh (2015) and Miernik (2016)

Those studies that reported negative relationships impact on economic growth are Alfaro et al (2003), Adelagan (2000), Ogiogio (1995), Oyinlola (1995), Chenery and (1996), Carkovic and Levine (2005), Ocaya, Ruranga and Kaberuka (2013), Mencinger (2003)

With the use of annual data with a simple regression method, Solomon and Eka (2013) and Obwona (2001) ascertain the relationship between FDI and growth in Nigeria. The result reveals that FDI has a positive and insignificant impact on the economy of Nigeria and Uganda. The work of Alejandro (2010) and Ewe-Ghee Lim (2001) reveals that FDI plays a very significant role in the economy and also provide firm with a new market and marketing channels, new technologies and other positive externalities and spillover that can provide a strong motivation to economic growth. Otepola (2002) examined foreign direct investment in Nigeria economy and found that FDI contributes significantly to growth especially through export. Bende-Nabendeet al (2002) examine foreign direct investment on growth. They found that direct long-term impact on FDI on output is significant and positive for a less advanced economy like the Philippines, Thailand and negative in the more advanced economy like Japan and Taiwan. Using secondary data and purely descriptive and narrative methodology, Nwankwo et al (2013) found that foreign direct investment has been of great benefit to Nigeria in the area of employment, transfer of technology, and encouragement of local enterprises.

With the use of Panel data for 84 countries, Li and Liu (2005) used both single equation and simultaneous equation system techniques to investigate FDI on economic growth. The result shows that FDI has a positive effect on economic growth through its interaction with human capital in developing countries. In the same vain Bengoa et al (2003) estimated the relationship between foreign direct investment and growth. The study use panel data approach for eighteen (18) Latin American countries. They reveal that FDI has a positive and significant impact on economic growth in the host countries. Along these lines, Marwah and Tavakoli (2004) test the impact of the foreign direct investment on Indonesia, Malaysia, Philippines and Thailand economy growth. With the utilization of time series annual data, they found that FDI has a positive relationship with financial development for each of the four nations. Vu et al (2006) analysed FDI inflows in China from 1985-2002 and Vietnam from 1990-2002, with an expanded production function specification and regression methodology. They uncover that FDI has a positive and direct effect on economic growth just as a circuitous impact through its effect on labour profitability. Correspondingly, Bachtiar

(2003) analysed the effect of FDI in Indonesia economy. The investigation utilized a simple equation model; the outcome gives a positive hint for the coefficient on FDI inflows with GDP as the reliant variable. Ndambendia and Njoupounigni (2010) inspected FDI on economic growth in 36 sub – Saharan African nations while Seetanah and Khadaroo (2007) additionally analysed FDI on economic growth in 39 sub-Saharan African nations. The two investigations utilized the board information strategy and found that FDI has a positive and huge impact on the dimension of economic growth. Similarly, Adams (2009) dissected the effect of FDI on economic growth in sub-Saharan Africa from 1990-2003 with the utilization of ordinary least squares estimation. The outcome demonstrates that FDI is emphatically and fundamentally corresponded with economic growth.

Almfraji and Almsafir (2014) uncovered various types of writing on FDI and Economic development structure 1994-2012, and inferred that the majority of the discoveries of foreign direct investment and economic growth connection are essentially positive, yet negative at times or even invalid. With the use of a panel data set that covers 61 provinces of Vietnam, Anwar, and Nguyen (2010) analysed the association in the midst of foreign direct investment and economic growth. Their discoveries dependent on simultaneous equation model uncovers that a commonly fortifying two-way linkage among FDI and economic growth exists in Vietnam. A comparative report by Azman-Saini, Bagarumshah and Law (2010) in a panel of 85 nations, explore the connection between economic freedom, FDI and economic growth. In view of GMM, the examination arrived at the resolution that FDI without anyone else's input has no immediate (positive) impact on development. In a similar light, Alfaro, Chanda, Kalemli-Ozcan and Sayek (2010) with the utilization of practical parameter esteems, uncovers that an expansion in the offer of FDI prompts high extra development in monetarily created economies in respect to monetarily immature ones. Like Alfaro et al (2010), Choong (2012) touched base at the end that linkages exist in the midst of the improvement of the host economy's financial system and the positive impact of FDI on economic growth.

Vadlamannati and Tamazian (2009) received General moment method (GMM) to think about the effect of FDI on monetary development. The investigation saw that FDI adds to economic growth decidedly. With the use of pooled OLS Tiwari and Murascu (2011) investigated explored the effect of FDI on economic development in 23 Asian nations. They uncover that both FDI and export added to development. Along these lines, Kinuthia and Murshed (2014) received VAR and VECM to explore the determinant components of FDI on Kenya and

Malaysia from 1960-2009. They arrived at the resolution that FDI added to economic growth just in Malaysia because of the nation's macroeconomic steadiness, exchange receptiveness, foundation offices, and institutional improvement. Embracing the PCA and ARDL, Samargandi et al (2015) contemplate the association among FDI and Economic development in 52 nations. The scientist came in resolution that FDI adds to economic growth since profitability and technology move is improved and there is the appropriation of new procedures and aptitudes. Miernik (2016) analysed the impact of FDI on GDP per capita development and arrived at the resolution that FDI affected on economic growth emphatically.

Studies that reacted negatively include the following: Alfaro et al (2003) confirmed that FDI inflow to the main sectors, tend to have a negative effect on economic growth. Adelegan (2000) with the use of seemingly unrelated regression (SUR) examined FDI on the growth of Nigeria. The result shows that FDI is pro-consumption and pro-import and negatively related to economic growth. Similarly, Oyinlola (1995) and Ogiogio (1995) reported a negative contribution of FDI on economic growth; with the use of GMM to examine the relationship between FDI on economic growth, they found that FDI inflow does not exert influence on economic growth. In recent work, Ocaya, Ruranga, and Kaberuka (2013) with the use of Granger causality tests, test for the relationship between inflows of FDI into the growth of Rwanda. They reveal that they are independent of each other. Also in the work of Mencinger (2003) examined eight Central and East European countries, the study found that FDI has a negative relationship with economic growth.

2.3.2 Institutions and Growth

Researchers have also investigated the impact of institutions on economic growth. From the findings of this study, some institutions are found to impact positively on economic growth while few others like corruption are found to have a negative impact on economic growth. This studies includes: Gwartney, Lawson and Block (1996), Adkins and Savvides (2002) and Dawson (2003), Acemogle et al (2003), Osman, Alexiou and Tsaliki (2012), Rodrik, Subramanian and Trebbi (2002) and Easterly, Levine and Roodma (2004), Nawaz, Iqbal& Khan (2014), Nawaz (2014), Valeriani and Peluso (2011), Yildirm&Gokalp (2016), Zouhaier and Kefi (2007), Kormendi and Maguira (1985), Scully (1987) and Tullock (1987), Feld and

Kirchgassner (2008), Siddiqui and Ahmed (2009), Ondo (2017) Mallik and Saha (2016), Lutz and Ndikumana (2008), Mahyudin (2011), Barro (1996), Rodrik (1997), Haydaroglu (2016), Mauro (1995), Meon and Sekkat (2005) Indonesian, Ozler, Rononi and Swagel (1996)

Studies by Gwartney, Lawson, and Block (1996), Adkins and Savvides (2002) and Dawson (2003) showed that institutions that promote economic freedom have a positive effect on economic performance. The work of Acemogle et al (2003), Osman, Alexiou, and Tsaliki (2012), Rodrik, Subramanian and Trebbi (2002) and Easterly, Levine and Roodma (2004) suggested that the positive correlation between economic policies and development is as a result of good institutions. In the work of Nawaz, Iqbal & Khan (2014), they employed both the static and dynamic panel system of GMM techniques with fixed effects to qualify the impact of institutions on economic growth in selected Asian countries. Their result reveals that institutions really are important in determining the long run economic growth in the Asian economy. In the same vein, the study of Nawaz (2014), Valeriani and Peluso (2011) have uncovered that the effect of institutions on economic growth is different across nations; they found that institutions perform better in developed countries when compared with developing countries. Looking at the work of Yildirm&Gokalp (2016) utilized the panel data analysis in 38 developing countries and 23 institutional structure variables, break down the connection among institutions and macroeconomic performance as far as developing nations. The outcomes uncover that institutional structure pointers like integrity of the law, regulations on trade barriers, offer of the private division in the banking system and restriction of foreign investment positively affect macroeconomic performance while factors, for example, legal executive autonomous, government consumption, transfer and subsidies and civil freedom political stability have a negative effect.

With the use of the Panel data model, Zouhaier and Kefi (2007) examined the effect of an institutional factor on economic growth in 37 developed and developing countries. The study reveals a dominant effect exerted by economic institutions on economic growth. Kormendi and Maguira (1985) examined the effect of civil and political liberties on economic growth and investment in 47 countries. They concluded by saying that countries with a high level of civil liberties impact economic growth positively. In a similar manner, Scully (1987) and Tullock (1987) revealed a positive correlation between civil liberties and economic growth in an enormous number of countries. In a different way, Feld and Kirchgassner (2008) examine institutions on economic growth with respect to economic and political institutions. The study

found no indication that these institutions hamper economic growth. Siddiqui and Ahmed (2009) looked at the role of state institutions in promoting growth using GMM econometric model, the result of the study reveals a strong causal link between institutional quality and economic performance. Ondo (2017) analysed the relationship between corruption and economic growth in EMCCA countries with the use of panel data. The result shows that corruption has favoured economic growth. Similarly, Mallik and Saha (2016) study the relationship between growth and corruption in 146 (developed and developing countries), adopting a polynomial regression, the result shows that corruption does not systematically have a negative effect on economic growth. Also, the work of Lutz and Ndikumana (2008) in a panel study in 33 African countries in Saharan south reveals that corruption influences economic growth through investment.

Mahyidin (2011) looked at institutions on economic growth in developing countries. The study found that good institutions in a country lead to economic improvement in that country and generate effects on the neighbouring countries. Barro (1996) used the maintenance of law index as an institution from ICRG and found out that it has a positive and vital effect on growth. Rodrik (1997) examine democracy as an institution to economic growth, found a positive link between democracy and growth. Haydaroglu (2016) looked at the relationships between corruption, economic freedom and growth in sub-Saharan African countries. The result shows that shock on corruption has a negative impact on economic growth. In a seminal work by Mauro (1995) between corruption and rate of Growth in 67 countries, the result found that corruption contains growth by reducing private investment. Meon and Sekkat (2005) examined the impact of corruption on growth taking into consideration the interactions between institutional quality and corruption. From the result of the study, a weak rule of law, political violence, and government ineffectiveness would heighten the negative impact of corruption on investment and slow growth at the end. Alesian, Ozler, Rononi, and Swagel (1996) found a negative effect of political instability on growth

2.4 LIMITATIONS OF PREVIOUS STUDIES AND VALUE ADDED

The reviewed literature show that empirical works have been carried out by various authors in assessing the effects of FDI on growth in specific countries, sub-Saharan countries and West African countries like Salvador, Halger and Eric (2005), Almfraji and Almsafir (2014), Basu and Guariglia (2007), Anwar and Nguyen (2010), Alfaro, Chanda, Ozcan and Seyek (2010), Alfaro, Chanda, Ozcan and Seyek (2006), Alfaro and Johnson (2013), Nuzhat

(2009), Azman-Saini, Baharumshah and Law (2010) etc. Most of them found a positive effect of foreign direct investment on economic growth while few studies found a negative effect. Also researchers have also investigated institutional quality and economic growth on specific country and sub-Saharan countries like Bruinshoofd (2016), Valeriani and Peluso (2011), Ouedraogo (2015), Doucoliagos and Ulubasoglu (2008), Dorward et al (2004), Acemoglu, Johnson and Robinson (2005) and Albert and Wouter (2011). Most of the studies found that good institutions impacted positively on economic growth while others are found to impact negatively on economic growth.

From my research, only a few studies have been carried out on foreign direct investment and institutions in a single or specific country. This study will now add to the literature by examining the multiplier effect of FDI and institutions on economic growth in ECOWAS, which is made up of fifteen (15) countries to have policy effect on these countries with the use of panel data analysis.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 THEORETICAL FRAMEWORK

Theoretical framework in this study is guided by the popular Dual Gap Model of Aid and New Institutional Economic model. The Harrods (1939) and Domer (1946) growth model is a well-known formulation of the gap theory. According to Harrod and Domer, the model assumed that there is an excess in the supply of labour and growth is constrained only by availability and productivity of capital. Observing the poor state of savings in underdeveloped nations; to achieve a target growth rate, foreign capital is needed to supplement savings so as to increase the investment and growth in the country. In the articles of Hollis, Chenery & Strout (1996) Foreign Assistance and Economic Development, they developed a well-known two-gap model of foreign aid. According to them, savings gap and foreign exchange gap are separate and independent constraints on the attainment of target growth rate in the developing nations and they see foreign aid as a way of bridging this gap in order to achieve the target growth rate in the economy. According to Bacha and Taylor (1990), revenue raising capacity is not enough to cover the desired level of investment, the appropriate use of foreign aid will help bridge the gap.

In the New Institutional Economics (NIE) framework, its basic role play is seen by the behavioural assumptions as they are different from the neoclassical approach. Utility maximization of an individual is the fundamental assumption in the NIE in which the origin lies in the concept that the individual actor, as a result of resources scarcity is constantly pushed to choose between opposing possibilities of resource investment. i.e., the individual chooses the possibility that maximizes his or her own utility, thus bringing down the opportunity costs of the possibilities not chosen.

The study will also hinge on the endogenous growth theory formulated by Romer (1986) and Lucas (1988). The theory holds that economic growth is mainly an effect of endogenous and not external forces. That investments in human capital and innovation contribute a vital level of economic growth and it also holds that long-run growth rate of an economy depends on policy measures. The endogenous model explains how differences in wealth across developed and underdeveloped nations could persist if investment in the physical capital like infrastructure is subjected to diminishing returns. The model assumes that the basic

determinants of economic growth are population growth with the accumulation of human capital and knowledge. In a knowledge-based economy, supported by robust intellectual property rights, there are no diminishing returns to capital accumulation which is as a result of positive spill over effects from investment on technology and people.

$$Y = AK \dots\dots\dots 3.1$$

Where

Y = Output/income

A is the positive constant that reflects the level of the technology

K is the capital (Human and Physical capital).

The main property of AK in the endogenous growth model is the absence of diminishing returns to capital. In lieu of diminishing returns of capital implied by the usual parameterizations of a Cobb-Douglas production function. The model is open to the possibility that an increase in investment rate both human and physical could lead to sustained growth if strong external economies were generated by investment itself.

Nonetheless, the endogenous growth model commonly uses the production function method with constant returns to scale and the use of Cobb-Douglas production function as follows:

$$Y = AK^\alpha L^{1-\alpha} \dots\dots\dots (3.2)$$

Where α is the output with respect to capital, $1-\alpha$ is the output with respect to labour, and $\alpha + (1-\alpha) = 1$, that is 1 per cent increase in K and L will lead to 1 per cent to scale.

Since this study is on a cross-country basis, this study will adopt the use of the panel method. Panel data analysis has turned out to be popular among social scientist because it permits the insertion of data for N cross-sectional (e.g., countries, household, firms, and individuals) and T time periods (e.g., years, quarters, months, etc.). The joint panel data matrix set consists of a time series for each cross-sectional member in the data set and offers a range of estimation methods. If a panel has the same number of time observations for every variable and every country, it's called a balanced panel but if we have diverse numbers of time observations for some of the countries it is called unbalanced panel. The empirical literature on growth

(Barron, 1996) usually resorts to panel data models using multiple countries to address questions connected to determinants of growth. By implementing panel data, the researcher can control for unobserved features in individual countries and increase modelling capacity because of the power of the statistical tests for estimator significance are advanced than using individual country data in time series format.

The panel data set is formulated by a sample N (countries) that are observed at different time periods. Consider a simple model with an explanatory variable.

$$Y_{it} = a_i + \beta X_{it} + \mu_{it} \dots \dots \dots (3.3)$$

3.2 MODEL SPECIFICATION

3.2.1 Model One: To investigate the effect of foreign direct investment on economic growth in ECOWAS

$$RGDP = F(FDI, LTR, INF, LNGCF, LBF) \text{ -----} 3.4$$

Where RGDP = Real Gross Domestic Product in dollars

FDI = Foreign Direct Investment in dollars

LTR = Literacy rate (proxy for Human Capital)

INF = Inflation rate

GCF = Gross capital formation in dollars

LBF = Labour force Of adult population

Since the variables in the models have different measurement units. We however, suggest a logarithmic form of the models as indicated in equation 3.5 and 3.7 below. We do not take the log of FDI, LTR,INFL,COP,RQ and PS because they are either measured in terms of growth rate or contains zeros or negative values.

The econometric form of the model is given as follow

$$LNRGDP_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 LTR_{it} + \beta_3 INF_{it} + \beta_4 LNGCF_{it} + \beta_5 LNLBF_{it} + \varepsilon_{it} = \lambda_i + \mu_t + \mu_{it} \text{ ---3.5}$$

Where

β_0 is the country-specific intercept, $\beta_1 - \beta_5$ is the parameters, λ_i stands for the unobserved individual fixed effect, μ_t is the unobserved time effect and μ_{it} is the random error.

3.2.1 Model Two: To investigate the effect of institutions on economic growth in ECOWAS

$$RGDP = F(COP, RQ, PS, SSE, LBF) \text{ --- 3.6}$$

Where

COP = Control of Corruption

RQ = Regulatory Quality

PS = Political Stability

SSE = Secondary School Enrolment

All other variables are defined as earlier

The econometric form of the model can be given as follow

$$LNRGDP_{it} = \beta_0 + \beta_1 COP_{it} + \beta_2 RQ_{it} + \beta_3 PS_{it} + \beta_4 SSE_{it} + \beta_5 LNLBF_{it} + \varepsilon_{it} = \lambda_i + \mu_t + \mu_{it} \text{ ---3.7}$$

All variables are described as earlier

3.3 VARIABLE DESCRIPTION

Real Gross Domestic Product: This is the gross domestic product divided by midyear population converted to international dollars using purchasing power parity rates

Foreign Direct Investment: This is the net inflows of investment to acquire a lasting management interest (10 per cent or more of voting stock) in an enterprise operating in an economy other than that of the investor.

Literacy Rate: The adult literacy rate is the percentage of people ages 15 and above who can both read and write with understanding a short simple statement about their everyday life

Inflation Rate: This the yearly percentage changes in the cost to the average consumer of acquiring a basket of goods and services which may be fixed or changed at specified intervals

Gross Capital Formation: This consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories.

Labour Force: Labour force adult population and older who supply labour for the production of goods and services during a specified period

Secondary School Enrolment: This is the ratio of total enrolment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Secondary education completes the provision of basic education that began at the primary level and aims at laying the foundations for lifelong learning and human development, by offering more subject- or skill-oriented instruction using more specialized teachers.

Control of Corruption: A country with strong control of corruption simply means that it's economic success is as a result of effort and competence and not via connections and bribery.

Political Stability: measured as the willingness to invest in a country.

Regulatory Quality: This variable measures the ability of the government to formulate, also implement sound policies and regulations that will give a go ahead and promote sector development i.e., providing rules that are the same for economic engagement.

3.4 ESTIMATION PROCEDURE

Descriptive Statistics: The descriptive statistics were carried out in an effort to provide the summary statistics of all the variables used in the research. It helps to understand the distributive nature of each data used in the models.

Panel Unit Root Test: This test is carried out in order to determine whether the relevant variables are stationary. If the variables are non-stationary, it may cause spurious regressions (Baltagi, 2005). In this study, the Im Pesaran and Shin (IPS) (2003) individual panel unit root test is employed.

Panel Co-Integration Test; since the orders of stationary of the panel series were not at the same level, this study however employed the LM Bootstrap panel cointegration test of Westerlund and David (2007). This panel cointegration test techniques allow the variables in the model to be $Y = I(1)$ and $X = I(1)$ or $I(0)$.

Panel Causality Test: this test is being carried out to ascertain if the independent variable of our interest possesses some substantial information in explaining the variation economic growth. However, here we employed the Dumitrescu & Hurlin (2012) Granger non-causality test technique.

Hausman Specification Test: This test was carried out to decide between fixed and random effects estimators.

Panel fixed/random effects estimation; we employed fixed and random effect estimator for model 1 and two respectively. The decision for their employment was supported by the outcome of the Hausman specification test.

Consistency and Efficiency Check of Result

After the panel fixed/random effects estimation, we carried out the consistency and efficiency check to ascertain the reliability of the result obtained from the estimation. The various test undertaken includes the Normality test, Autocorrelation test and Heteroskedasticity.

3.5 MODEL JUSTIFICATION

The justification behind the selection of fixed/random effect estimator is based on the fact that it produces an unbiased, consistent and efficient estimates when $T > N$. The justification behind the selection of fixed/random effect estimator was also guided by the fact that it is

unaffected in the case of a non-stationary panel, since its technique is based on differencing (Robertson and Symons 1991; and Wooldridge 2013). However, our decision was guided by the hausman specification test result.

3.6 DATA SOURCES AND SOFTWARE PACKAGE

Since this study is a cross sectional study and an annual data based on all variables is sourced from World Bank Development Indicator (2016) and World Bank Government Indicators (WGI) (2018). STATA 15.1 statistical software would be used for the analysis.

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF EMPIRICAL RESULT

4.1 DESCRIPTIVE STATISTICS

Table 4.1.1 below provides the descriptive summary statistics of the variables used for the analysis.

Table 4.1: Summary Statistics of Variables of the Models

Variable	Obs	Mean	Std. Dev.	Min	Max
RGDP	270	2.96	8.43	6.53	4.64
FDI	270	5.20	11.19	-0.900	103.33
COP	270	-0.62	0.52	-1.56	0.94
RQ	270	-0.61	0.40	-1.85	0.12
PS	270	-0.555	0.80	-2.40	1.21
SSE	243	38.77	17.52	6.61	89.35
LTR	270	43.96	16.23	16.52	90.07
INF	254	5.51	6.84	-35.83	34.75
GCF	265	5.46	1.47	6974	8.98
LBF	265	693	1.18	175	6.07

Source: Author's computation using data sourced

Notes: The sample comprises of 15 ECOWAS member countries for the period 2000 to 2017. These summary statistics are based on raw data.

Table 4.1 shows the descriptive statistics for the variables used in the models in terms of the mean, standard deviation, minimum, and maximum.

The summary statistics for the Real Gross Domestic Product (RGDP) show a weighty variation across the countries in the sample. The values range from a minimum of US\$6.53 million to a maximum of US\$4.64 billion. Lower RGDP of less than average (US\$2.96 billion) were predominantly recorded in Benin, Burkina Faso, Cabo Verde, Gambia, Liberia, Mali, Niger Senegal and Togo. While a higher GDP of more than average (US\$2.96 billion) was recorded only in Ghana, Cote d'Ivoire and Nigeria.

Similarly, the Foreign Direct Investment (FDI) varies significantly across the ECOWAS with the minimum and maximum values being US\$-0.90 billion and US\$103.33 billion. Negative

values were at some years recorded in nations such as Benin, Gambia, Guinea and positive values were in all the years under consideration recorded in the rest of ECOWAS.

Institutional variables such as Corruption (COP), Political Stability (PS) and Regulatory Quality (RQ) had a negative mean values indicating the predominant nature of poor institutional quality in the ECOWAS.

4.2 PANEL UNIT ROOT TEST

Table 4.2:Im, Pesaran and Shin (IPS) 2003 panel unit root Test

Variables	P-value	Z-t-tilde-bar	Order of Integration
LNRGDP	-5.8286	0.000	I(1)
FDI	-8.0762	0.000	I(1)
COP	-7.0488	0.000	I(1)
PS	- 8.0598	0.000	I(1)
RQ	-7.2607	0.000	I(1)
LTR	-5.0488	0.000	I(1)
LNLBF	-6.7500	0.000	I(1)
INF	-6.375	0.000	I(0)
LNGCF	-8.0762	0.000	I(1)
SSE	4.4506	0.000	I(1)

From table 4.2 the whole panel of fifteen ECOWAS member countries was tested for the presence of unit-roots. The Im, Pesaran and Shin (IPS) 2003 panel unit root test result indicates that all the variables are stationary at first difference i.e. I(1) meaning that they have a unit-root, except inflation (INF) which is stationary at levels i.e. I(0) meaning that the variable does not have a unit-root.

4.3 PANEL COINTEGRATION TEST

Westerlund, (2007), proposed two panel cointegration tests that can be applied under general conditions, i.e. the LM Bootstrap test of Westerlund and David (2007), and the Durbin-Hausman test of Westerlund (2008). These panel cointegration test techniques allow the variables in the model to be $Y = I(1)$ and $X = I(1)$ or $I(0)$.

Since the orders of stationary of the panel series were not at the same level, thhis study however employed the LM Bootstrap panel cointegration test of Westerlund and David

(2007). These tests give two statistics, one for panel and one for group. The panel statistics infer results for the panel in general, while the group statistics infer results for the individuals that make up the panel.

Table 4.3: Westerlund and David (2007) LM Bootstrap panel co-integration test

Models	Group z-stat	Panel z-stat
Model 1	-3.328 (0.0000)***	-6.727 (0.0000)***
Model 2	6.033 (0.0000)***	-6.257 (0.0000)***

Null Hypothesis: No Co-integration

Note: The test statistics with the robust p-values are presented in parentheses

*** denotes statistically significant at 0.01% level

According to the results of LM Bootstrap panel co-integration test presented in table 4.3., both the group and the panel z-stat are significant at 0.01% level in all the models. Therefore, the null hypothesis of no co-integration is rejected in both the group and the panel for model 1 and 2. These results provide evidence in support of the following: (1) there is a long-run relationship between the Real Gross Domestic Product (RGDP) and at least one of the institutional measures (2) there is a long-run relationship between the Real Gross Domestic Product (RGDP) and the foreign direct investment (FDI). However, in this scenario it becomes appropriate for this study to employ the panel fixed or random effect estimator.

4.4 PANEL CAUSALITY TEST

To test the causality, we consider the Dumitrescu and Hurlin (2012)'s non-causality test. This test is a simple version of the Granger (1969) non-causality test for panel data models. The test is based on the null hypothesis of no causality relationship from x to y exists.

Table 4.4: Dumitrescu& Hurlin (2012) Granger non-causality test

Hypothesis	Z-Bar	P-Value	Conclusion
H₀ : FDI does not Granger-cause LNGDP	3.1580	0.0079** *	FDI Granger-cause LNGDP
H₁ : LNGDP does not Granger-cause FDI	2.6562	0.0079** *	LNGDP Granger-cause FDI
H₀ : COP does not Granger-cause LNGDP	2.3115	0.0208** *	COP Granger-cause LNGDP
H₁ : LNGDP does not Granger-cause COP	4.0819	0.0001** *	LNGDP Granger-cause COP
H₀ : PS does not Granger-cause LNGDP	3.3227	0.0013** *	PS Granger-cause LNGDP
H₁ : LNGDP does not Granger-cause PS	17.862	0.0000** *	LNGDP Granger-cause PS
H₀ : RQ does not Granger-cause LNGDP	6.3262	0.0000** *	RQ Granger-cause LNGDP
H₁ : LNGDP does not Granger-cause RQ	9.3707	0.0000** *	LNGDP Granger-cause RQ

*** denotes statistically significant at 0.01% level

In table 4.4.1 above we carried out the panel granger causality tests to see whether our main independent variables of interest possess some significant information in explaining the variation in the dependent variable and the result indicates a reverse causality in all cases meaning that our main independent variables of interest possess some significant information in explaining the variation in the dependent variable while on the other hand the dependent variables also possess some significant information in explaining the variation in each of the

independent variables of our concern. These findings however imply the following: Each of the independent variables as contained in table--- such as Foreign Direct Investment (FDI), Control of Corruption (COP), Political Stability (PS) and Regulatory Quality (RQ) possess some significant information in explaining the variation in Real Gross Domestic Product (LNRGDP), whereas the Real Gross Domestic Product (LNRGDP) also possess some significant information in explaining the variation in each of the independent variables. According to Wooldridge (2013), a reverse causality does not imply endogeneity of the independent variable in an equation.

4.5 PRESENTATION OF THE ESTIMATED RESULTS

Model One: The effect of foreign direct investment on economic growth in ECOWAS

Table 4.5.1: Hausman test result

Chi2(5)	20.28
Prob>chi2	0.0011***

***denotes statistically significant at 0.01%

From the Hausman test result as shown in table 4.5.1 we rejected the null hypothesis of random effect because the Chi-square value of 29.28 has a probability value of 0.0011 which is less than 0.01% significant levels. However, we concluded that the fixed effect within estimator is appropriate.

Regression Results for Objective 1 (The effect of foreign direct investment on economic growth)

Table 4.5: Fixed-effects (within) regression result

Dependent variable LNGDP			
Variables	Coef.	Robust Std. Err.	P> t
FDI	0.0002414	0.0004706	0.616
LTR	0.0019949	0.0080699	0.808
INF	-0.0008040	0.0008161	0.341
LNGCF	0.1005276	0.0219251	0.000***
LNLBF	1.211029	0.2640363	0.000***
CONS	2.241042	3.449674	0.526

R-square:	F(5,114) = 41.788
within = 0.8689	Prob > F = 0.0000
between = 0.8729	
overall = 0.8710	

Source: Author's compilation from STATA 15

***denotes statistically significant at 0.01% levels

From Table 4.5.1 the robust option in STATA since autocorrelation and heteroscedastic was found to be present in the model (see table 4.6.1 and appendix 5).

The results from the fixed-effects (within) regression shown in Table 4.5.1 above indicates that our main variable of interest which is the Foreign Direct Investment (FDI) has an insignificant impact on the log of Real Gross Domestic Product (LNRGDP). The coefficient is found to be positive as expected, implying that, for a 1 percent rise in Foreign Direct Investment (FDI) the Real Gross Domestic Product (LNRGDP) will increase by approximately 0.024 percent.

However, the coefficient of the log of Gross domestic capital formation (**LNGCF**) and the log of labour force (**LNLBF**) was found to be positive and significant while the literacy rate (LTR) and the inflation rate (INF) were found to be insignificant. The model is strongly fit as indicated by the R-square within of 86%.

Model Two: The effect of institutions on economic growth in ECOWAS countries

Table 4.6: Hausman test result

Chi2(5)	2.12
Prob>chi2	0.8318***

***denotes statistically significant at 0.01%

From the Hausman test result as shown in table 4.6 we do not reject the null hypothesis of random effect because the Chi-square value of 2.12 has a probability value of 0.8318 which is greater than 0.10% significant levels. However, we concluded that the random effect GLS estimator is appropriate.

Regression Results for Objective 2 (the effect of institutions on economic growth in ECOWAS)

Table 4.7: Random-effects GLS regression result

Dependent variable LNGDP			
Variables	Coef.	Robust Std. Err.	P> t
COP	-0.0502244	0.0978227	0,608
RQ	0.2071466	0.0627039	0.001***
PS	0.0102761	0.0263741	0.6970 .000***
SSE	0.0090721	0.0024162	0.000***
LNLBF	1.1469 5.140711	0.1333556	0.008
CONS		1.942582	

R-square: F(5,14) = 176.94
 within = 0.8614 Prob > F = 0.0000
 between = 0.8853
 overall = 0.8698

Source: Author's compilation from STATA 15

***denotes statistically significant at 0.01% levels

Similarly, in Table 4.7 we carried out the robust version of Random-effects GLS regression since autocorrelation and heteroscedastic was found to be present in the model (see table 4.6.1 and appendix 5).

The results from the Random-effects GLS regression as shown in Table 4.5.4 above indicates that the institutional measures included in the model i.e. control of corruption (COP) and political stability (PS) has an insignificant impact on the log of Real Gross Domestic Product (LNRGDP) while the Regulatory Quality (RQ) has a significant impact on the log of Real Gross Domestic Product (LNRGDP). The coefficient of control of corruption (COP) was found to be negative meaning that for a 1 percent rise in the control of corruption (COP) the Real Gross Domestic Product (LNRGDP) will fall by 5 percent. On the other hands the coefficients of political stability (PS) and Regulatory Quality (RQ) was found to be positive implying that for a 1 percent rise in Regulatory Quality (RQ) and political stability (PS) the Real Gross Domestic Product (LNRGDP) will increase by 20.7 and 1 percent respectively.

However, the secondary school enrolment (SSE) and the log of labour force (LNLBF) have a significant positive impact on the log of Real Gross Domestic Product (LNRGDP). However, the model is strongly fit as indicated by the R-square within of 86%.

4.6 CONSISTENCY AND EFFICIENCY CHECK OF RESULT

Table 4.8: Consistency and Efficiency Check of Result

Model One		
Tests	Statistics	P-Values
Wooldridge Autocorrelation test	73.315	0.0000***
White Heteroskedasticity test	195.91	0.0000***
Normality test	3.68	0.1590
Model Two		
Wooldridge Autocorrelation test	176.586	0.0000***
White Heteroskedasticity test	205.97	0.0000***
Normality test	0.23	0.8923

Source: Author's compilation from STATA 15

Null Hypothesis: The residuals are normally distributed

Null Hypothesis: There is homoscedasticity

Null Hypothesis: No autocorrelation in the residual

*** denotes statistically significant at 0.01% level

From the results presented in Table 4.8, as shown by the test statistics and the p-value obtained from the Wooldridge Autocorrelation test in table 4.6.1. The null hypothesis of no autocorrelation in the residuals is rejected in the two panel models, implying that there is autocorrelation in the residuals.

Likewise, the result of the heteroskedasticity presented in Table 4.6.1, indicates a statistically significant at 0.01% level of significance in the two panel models, implying the rejection of the null hypothesis of homoscedasticity and concluding that heteroskedasticity is present in the two panel models.

Lastly, as indicated by the probability value, the normality test statistics are statistically insignificant at in the two panel models. Therefore, we do not reject the null hypothesis and conclude that the residuals are normally distributed.

4.7 EVALUATION OF RESEARCH HYPOTHESES

In respect to the results obtained from the analysis, we evaluate the hypotheses of the study. The study was guided by the following null hypotheses

H₀₁: Foreign direct investment has no significant effect on economic growth in ECOWAS

H₀₂: Institution in ECOWAS has no significant effect on economic growth

Test of H₀₁:Foreign direct investment has no significant effect on economic growth in ECOWAS

From the foregoing results as presented in table 4.5.2 the coefficient of the foreign direct investment was found to be positive and insignificant at 0.05% level. Therefore, we do not reject the null hypothesis that foreign direct investment has no significant effect on economic growth in ECOWAS. In other words, foreign direct investment has an insignificant impact on economic growth in ECOWAS.

Test of H₀₂:Institution in ECOWAS has no significant effect on economic growth

From the foregoing results as presented in table 4.5.4 the coefficient of the control of corruption (COP) and political stability (PS) was found to be negative and positive respectively but insignificant at 0.05% level. Therefore, we do not reject the null hypothesis that the institutional measures (control of corruption and political stability) have no significant effect on economic growth. In other words, control of corruption and political stability has an insignificant impact on economic growth in ECOWAS.

Contrariwise, the coefficient of the Regulatory Quality (RQ) was found to be positive and significant at 0.01% level. We therefore, reject the null hypothesis that the institutional measure (Regulatory Quality) has no significant effect on economic growth in ECOWAS. In other words, Regulatory Quality has a significant impact on economic growth in ECOWAS.

4.8 DISCUSSION OF THE MAIN FINDINGS

Foreign Direct Investments and Real Gross Domestic Product

In summary the empirical result as contained in table 4.5.2 implies that the Foreign Direct Investments are ineffective in determining the Real Gross Domestic Product in ECOWAS. Two economic factors which are the Gross domestic capital formation and the labour force

were found to be an effective means of determining Real Gross Domestic Product in ECOWAS.

Our finding that the Foreign Direct Investments have a statistically insignificant positive relationship with Real Gross Domestic Product in ECOWAS suggests that the Foreign Direct Investments are beneficial to economy of ECOWAS but its impact has not been much felt. This finding is supported by the empirical work of, Obwona (2001), Bachtiar (2003), Li and Liu (2005), Seetanah and Khadaroo (2007), Ndambendia and Njoupougnigni (2010), Chanda, Kalemli-Ozcan and Sayek (2010), and Solomon and Eka (2013). On the theoretical aspect the findings are supported by the theoretical claims of the capital arbitrage theory, the big-push theory and the eclectic paradigm theory among others, which argues that the foreign direct investments promote and increase efficiency thereby enhancing the level of economic growth.

Institutional measures and Real Gross Domestic Product

In summary the empirical result as contained in table 4.5.4 implies that the regulatory quality is an effective apparatus for stimulating the Real Gross Domestic Product in ECOWAS. While the control of corruption and the rules of law were ineffective apparatus for in determining the Real Gross Domestic Product in ECOWAS. Two other economic factors which are the secondary school enrolment and the labour force participations were also found to be an effective means of determining Real Gross Domestic Product in ECOWAS.

The study finding that the regulatory quality has a statistically significant positive relationship with Real Gross Domestic Product in ECOWAS implies that good regulatory quality is one of the pre-requisite for stimulating economic growth in ECOWAS. This result is consistent with the empirical result obtained by Savvides (2002), Dawson (2003) Mahyidin (2011) and Yildirm & Gokalp (2016). On the theatrical aspect the outcome is upheld by the Evolutionary theory of Institutions and The New Institutional Economics theory which stresses that good institutions foster efficient behaviour and hard work and subsequently stimulating economic growth.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 SUMMARY OF THE FINDINGS

This study investigates empirically the impact of foreign direct investment and institutional quality on economic growth of ECOWAS using panel data set obtained from WDI. The institutional quality was proxy by three variables namely; the control of corruption, regulatory quality and the political stability. Using the fixed and random effect estimator the study provides support for the proposition that foreign direct investment, control of corruption and the political stability have an insignificant impact on economic growth of ECOWAS. However, the regulatory quality was found to have a potent significant positive impact on economic growth of ECOWAS.

5.2 CONCLUSION

Poor economic growth, inadequate institutional qualities, and high level of corruption among others are the major economic problems facing the African nations at large. An effective domestic and international policy measures to tackle these problems are of crucial importance to the policymakers in African nations. However, in a bid to accelerate economic growth several efforts such as improving the institution capabilities, increase in foreign direct investment, control of corruption, job creation and so have been put in place in numerous African countries. The question remains are these policy measures a panacea to accelerating economic growth in African nations, particularly in ECOWAS.

In conclusion, the result of the study also portrays that regulatory quality, labour force; secondary school enrolment and gross capital formation are responsible for the growth witnessed in ECOWAS over the period under review.

Furthermore, the insignificant positive relationship between the foreign direct investment and economic growth in ECOWAS could be as a result of insufficient foreign investment inflow into the ECOWAS which has not been sufficient enough to significantly impact their economic growth. Similarly, the insignificant positive relationship between the political stability and economic growth in ECOWAS could as well be that the policy makers in ECOWAS has not being doing enough in order to foster political stability the region. On the contrary the negative and insignificant relationship between the control of corruption and

economic growth in ECOWAS goes in contrary with many of the existing empirical and theoretical literature. However, this is wake up call for policy makers in the ECOWAS.

5.3 POLICY RECOMMENDATIONS

In line with the study outcomes, I however, recommend a set of measures for decision-makers in ECOWAS.

1. Since the foreign direct investment contributes positively to economic growth in ECOWAS. The government and the monetary authorities in this region should design policies and programs that will encourage investors to invest more in ECOWAS.
2. A good macroeconomic policy to improve the institutional frameworks, including regulatory quality and political stability should be prioritized in ECOWAS. It is widely noted that political instability exposes an economy to varying forms of economic deprivation in the form of reduced investment by foreign Multinationals, a situation that would also adversely affect the level of FDI in the country. Moreover, adequate regulatory quality and political stability foster efficient behaviour and hard work and subsequently stimulating economic growth.
3. There is a need to create and improve access to good jobs in ECOWAS as the study has also shown that the labour force participation has a positive impact on the economic growth in the region. When people have good jobs, they have income, and when people have income, their demand for goods and services increases and thereby stimulating economic growth.

5.4 LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FURTHER RESEARCH

This study, however, has some limitations. The first of which is the relatively high number of missing data which may alter the significance of the regressors' coefficients. The second limitation is that the study fails to other measures of institutional quality such as voice and accountability, government effectiveness, rule of law etc. A useful extension of this study

would be to look at the effect of these institutional measures in an economy. Lastly, the study fails to provide a country-specific explanation. Analysis of each country's economy would be needed for further analysis.

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Summary of Empirical Literatures

Foreign Direct Investment and Economic growth

Topic	Year of Publication	Author(s)	Area Studied	Data used	Method used	Key findings
Impact of FDI on Economic growth	2013	Solomon and Eka	Nigeria	Secondary (annual) data	Simple regression method	FDI has positive and insignificant impact on economic growth
The impact of FDI on Economic growth	2001	Obwona	Uganda	Secondary (annual) data	Simple regression method	FDI has positive and insignificant impact on economic growth
Determinants of, and the relation between Foreign direct investment and growth	2001	Ewe-Ghee Lim	IMF working paper	Secondary data	Descriptive statistics	FDI plays a significant role in the economy and also provide firm with a new market, new technology
Bautista conference foreign direct investment	2010	Alejandro	Mexico	Secondary data	Simple regression	FDI plays a significant role in the economy and also provide firm with a new market, new technology and other positive externalities
FDI as factor of	2002	Otepola	Nigeria	Secondary data	Simple regression	FDI contributes significantly to

Economic growth						economic growth through export
Foreign direct investment in East Asia: Trends and Determinants	2002	Bende-Nabende et al	East Asia	Secondary data	Multiple regression	Direct long-term on FDI on output is significant and positive for less developed countries and negative for more advanced countries
Effects of Globalization on FDI in Nigeria	2013	Nwankwo et al	Nigeria	Secondary data	Purely descriptive and narrative	FDI has been great benefit to Nigeria in the area of employment, transfer of technology and encouragement of local enterprises.
Foreign Direct Investment and economic growth	2005	Li and Liu	84 Upper-Middle-income countries	Secondary data	Dynamic Panel difference GMM estimator	FDI has a positive effect on economic growth through its interaction with human capital in developing countries
Foreign direct investment, economic freedom and growth	2003	Bengoa et al	18 Latin American countries	Secondary data	Panel data approach	FDI has a positive and significant impact on economic growth in the host countries
The Effects	2004	Marwah	Indones	Secondary	Panel data	FDI has a positive

of Foreign Capital and Imports on Economic growth		and Tavakoli	ia, Malaysia, Philippines and Thailand	data	approach	correlation with economic growth in all four countries
Foreign Direct Investment Good for Growth	2006	Vu et al	China and Vietnam	Sectoral data	Production function specification and regression methodology	FDI has a positive and direct impact on economic growth
Development Stages and FDI. An Analysis of Indonesia's Recent Experiences	2003	Bachtiar	Indonesia	Secondary data	Simple Equation	Shows a positive sign for the coefficient on FDI on GDP
Foreign Aid, Foreign direct investment and Economic growth	2010	Ndambenda and Njoupougnigni	36 sub-Saharan Africa	Secondary data	Panel data method (Pool mean estimator)	FDI has a positive and significant effect on the level of economic growth
The Impact of FDI on Economic	2007	Seetanaha and Khadaeroo	39 sub-Saharan Africa	Secondary data	Panel data method	FDI has a positive and significant effect on the level

growth						of economic growth
Foreign Direct investment, domestic investment and Economic growth.	2009	Adams	Sub-Saharan African countries	Secondary data	Ordinary least squares estimator and Fixed effect estimation	FDI is positively correlated with economic growth
Foreign Direct Investment and Economic Growth Literature Review	2014	Almfraji and Almsafir				Most findings reveal positive significant of FDI to growth while in some case it shows negative relation to growth
Foreign Direct Investment and Economic Growth	2010	Anwar and Nguyen	Vietnam	Secondary data	Simultaneous equation model	Reveals that a mutually reinforcing two-way linkage between FDI and Economic growth
Link between economic freedom, FDI and Economic growth	2010	Azman-saini, Bagarums hah and Law	85 countries	Secondary data	GMM model	FDI has no direct (positive) effect on growth
Does Foreign	2010	Alfaro et al		Secondary data	Realistic parameter	An increase in the share of FDI leads

Investment Promote Growth? Expoloring the role of Financial Market on Linkages					values	to high additional growth in financially developed economies relative to financially under-developed ones
Does domestic financial developmen t enhance the linkages between foreign direct investment and economic growth	2012	Choong		Secondary data		linkages are found between the development of the host economy's financial system and the positive effects of FDI on economic growth.
Growth effects of FDI. The role of policy reforms and institutional constraints	2009	Vadlaman nati and Tamazian	80 develop ing countri es	Secondary data	General moment method (GMM)	The study observed that FDI contributes to economic growth positively.
The impact of FDI on economic growth	2011	Tiwari and Murascu	23 Asian countri es	Secondary data	Pooled OLS	They reveal thatboth FDI and export contributed to economic

						growth.
FDI determinant s: Kenya and Malaysia compared	2014	Kinuthia and Murshed	Kenya and Malaysia	Secondary data	VAR and VECM	FDI contributed to economic growth only in Malaysia as a result of the country's macroeconomic stability, trade openness, infrastructure facilities, and institutional development.
Is the Relationship Between Financial Development and Economic Growth Monotonic	2015	Samargandi et al	52 Countries	Secondary data	PCA and ARDL	FDI contributes to economic growth since productivity and technology transfer is improved and there is the adoption of new processes and skills
The effects of Foreign Direct Investment on	2016	Miernik	Central Eastern European	Secondary data		FDI impacted on economic growth positively.

economic growth						
Foreign Direct Investment and Growth	2003	Alfaro et al				FDI inflow to the main sectors, tend to have a negative effect on economic growth.
Foreign Direct Investment and Economic Growth in Nigeria:	2000	Adelagun	Nigeria	Secondary data	SUR	The result shows that FDI is pro-consumption and pro-import and negatively related to economic growth.
External capital and economic development in Nigeria	1995	Oyinlola	Nigeria	Secondary	GMM	reported a negative contribution of FDI to economic growth
Planning horizon, government expenditure and economic growth in Nigeria.	1995	Ogiogio	Nigeria	Secondary	GMM	FDI inflow do not exert influence on economic growth
Foreign Direct Investment	2013	Ocaya, Ruranga and	Rwand a	Secondary data	Granger causality test	They reveal that FDI and

and Economic Growth in Rwanda		Kaberuka				Economic growth are independent of each othe
Does Foreign Direct Investment Always Enhance Economic Growth	2003	Mencinger	Eight Central and East Europe an countri es	Secondary data		the study found that FDI has a negative correlation with economic growth

Institutions and Growth

Topic	Year of Publication	Author(s)	Area Studied	Data used	Method used	Key findings
Economic Freedom of the World	1996	Gwartney, Lawson and Block	The world	Secondary (Annual) data		showed that institutions that promote economic freedom have a positive effect on economic performance.
Institutions, Freedom, And Technical Efficiency	2002	Adkins, Moomaw and Savvides	Set of Countries	Secondary data	Maximum-likelihood	results show that institutions that promote greater economic freedom in turn promote efficiency.
Causality in the freedom-growth relationship	2003	Dawson		Secondary data	Panel data method	institutions that promote economic freedom have a positive effect on economic performance
Technology, Hold-Up, And Vertical	2003	Acemogle et al			Panel data method	suggested that the positive correlation

Integration: What Do We Learn From Micro Data						between economic policies and development is the result of good institutions
The Role of Institutions in Economic Development	2012	Osman, Alexious and Tsaliki	27 sub-Saharan countries	Secondary data	Panel data method	suggested that the positive correlation between economic policies and development is the result of good institutions
Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development	2002	Rodrik, Subramanian and Trebbi	The world		Recent developed instruments	suggested that the positive correlation between economic policies and development is the result of good institutions
Aid, Policies, and Growth	2004	Easterly, Levine and Roodman				suggested that the positive correlation between economic policies and development is the result of good institutions
The impact of institutions on economic growth	2014	Nawaz, Iqbal and Khan	Selected Asian countries	Secondary data	Static and dynamic panel system of GMM method	Their result reveals that institutions really are important in determining the long run economic growth in the Asian economy
The Impact of Institutional Quality on	2011	Valeriani and Peluso	Developed and developing	Secondary data	Pooled regression model and	They found that institutions perform better

Economic Growth and Development:			countries		fixed effects model	in developed countries when compared with developing countries.
The relationship between institutions and macroeconomic performance in terms of developing countries	2016	Yildirm&Gokalp	38 developing countries and 23 institutional structure	Secondary data	Panel data analysis	The results reveals that institutional structure indicators like integrity of the law, regulations on trade barriers, share of the private sector in the banking system and restriction of foreign investment have a positive effect on macroeconomic performance while variables such as judiciary independent, government expenditure, transfer and subsidies and civil freedoms political stability have a negative impact.
The effect of an institutional factor on economic growth	2007	Zouhaier and Kefi	37 developed and developing countries	Secondary data	Panel data method	The study reveals a dominant effect exerted by economic institutions on economic growth.

Institutions on economic growth with respect to economic and political institutions	2008	Feld and Kirchgasser				The study found no indication that these institutions hamper economic growth.
The role of state institutions in promoting growth	2009	Siddiqui and Ahmed		Secondary data	GMM	the result of the study reveals a strong causal link between institutional quality and economic performance.
Corruption and Economic Growth	2017	Ondo	EMCCA countries	Secondary	Panel data method	The result shows that corruption has favoured economic growth.
Growth and Corruption: A complex Relationship.	2016	Mallik and Saha	146(developed and developing countries)	Secondary data	Polynomial regression	the result shows that corruption does not systematically have a negative effect on economic growth.
Corruption and Growth: Exploring the Investment channel.	2008	Lutz and Ndikumana	33 African countries in Saharan south	Secondary data	A panel data method	The result reveal that corruption influences economic growth through investment.
Essay on Institutions and	2011	Mahyudin	58 developing countries	Secondary data	A panel data	The study

Economic Growth in Developing Countries.					method	found that good institutions in a country lead to economic improvement in that country and generate effects on the neighbouring countries.
Corruption, Institutions and Economic Growth in Sub-Saharan Africa	2016	Haydaroglu	Sub-Saharan countries	Secondary data	Granger causality test within co-integration and error correction framework.	The result shows that shock on corruption has a negative impact on economic growth.
Corruption and Growth	1995	Mauro	67 countries	Secondary data	Panel data method	The result found that corruption contains growth by reducing private investment.
Does Corruption Grease or Sand the wheels of Growth	2005	Meon and Sekkat	63-71 countries	Secondary data	Panel data method	From the result of the study, weak rule of law, political violence, and the ineffective government would aggravate the negative impact of corruption on investment and slow growth at the end

APPENDICES

APPENDIX 1

SUMMARY STATISTICS

. sum RGDP FDI COP RQ PS SSE LTR INF GCF LBF

Variable	Obs	Mean	Std. Dev.	Min	Max
RGDP	270	2.96e+10	8.43e+10	6.53e+08	4.64e+11
FDI	270	5.204479	11.19478	-.9001926	103.3374
COP	270	-.6259963	.5234577	-1.562251	.9495435
RQ	270	-.6175802	.4040693	-1.857852	.1281278
PS	270	-.5552331	.8030959	-2.400169	1.219244
SSE	243	38.7781	17.52195	6.61913	89.35313
LTR	270	43.96606	16.23591	16.52244	90.07872
INF	254	5.518423	6.849724	-35.83668	34.75423
GCF	265	5.46e+09	1.47e+10	6974332	8.98e+10
LBF	265	6938026	1.18e+07	175796	6.07e+07

APPENDIX 2

COINTEGRATIONTEST

LM Bootstrap panel cointegration test of Westerlund and David (2007)

Model 1

```
. xtwest FDI RGDP, lags(1) leads(1) lrwindow(3) bootstrap(1)
```

Bootstrapping critical values under H0.

Calculating Westerlund ECM panel cointegration tests.....

Results for H0: no cointegration

With 15 series and 1 covariate

Statistic	Value	Z-value	P-value	Robust P-value
Gt	-1.870	-3.328	0.000	0.000
Ga	-3.305	0.424	0.664	0.000
Pt	-9.829	-6.727	0.000	0.000
Pa	-8.521	-10.026	0.000	0.000

Model 2

```
. xtwest RGDP RL, lags(3) leads(2) lrwindow(3) bootstrap(1)
```

Bootstrapping critical values under H0.

Calculating Westerlund ECM panel cointegration tests.....

Results for H0: no cointegration

With 15 series and 1 covariate

Statistic	Value	Z-value	P-value	Robust P-value
Gt	0.644	6.033	1.000	0.000
Ga	0.221	3.426	1.000	0.000
Pt	-9.280	-6.257	0.000	0.000
Pa	-0.077	1.270	0.898	1.000

APPENDIX 3
CAUSALITY TEST

```
. xtgcause FDI LNRGDP,lag(3)
```

```
Dumitrescu & Hurlin (2012) Granger non-causality test results:
```

```
-----  
Lag order: 3
```

```
W-bar =          4.9973  
Z-bar =          3.1580   (p-value = 0.0016)  
Z-bar tilde =    0.7884   (p-value = 0.4305)
```

```
-----  
H0: LNRGDP does not Granger-cause FDI.
```

```
H1: LNRGDP does Granger-cause FDI for at least one panelvar (COUNTRY).
```

```
. xtgcause LNRGDP FDI,lag(2)
```

```
Dumitrescu & Hurlin (2012) Granger non-causality test results:
```

```
-----  
Lag order: 2
```

```
W-bar =          3.3716  
Z-bar =          2.6562   (p-value = 0.0079)  
Z-bar tilde =    1.1719   (p-value = 0.2412)
```

```
-----  
H0: FDI does not Granger-cause LNRGDP.
```

```
H1: FDI does Granger-cause LNRGDP for at least one panelvar (COUNTRY).
```

```
. xtgcause COP LNRGDP
```

```
Dumitrescu & Hurlin (2012) Granger non-causality test results:
```

```
-----  
Lag order: 1
```

```
W-bar =          1.8440  
Z-bar =          2.3115   (p-value = 0.0208)  
Z-bar tilde =    1.3946   (p-value = 0.1631)
```

```
-----  
H0: LNRGDP does not Granger-cause COP.
```

```
H1: LNRGDP does Granger-cause COP for at least one panelvar (COUNTRY).
```

```
. xtgcause LNRGDP COP,lag(2)
```

```
Dumitrescu & Hurlin (2012) Granger non-causality test results:
```

```
-----  
Lag order: 2
```

```
W-bar =          4.0819  
Z-bar =          4.0316   (p-value = 0.0001)  
Z-bar tilde =    2.0696   (p-value = 0.0385)
```

```
-----  
H0: COP does not Granger-cause LNRGDP.
```

```
H1: COP does Granger-cause LNRGDP for at least one panelvar (COUNTRY).
```

```
. xtgcause RQ LNRGDP,lag(3)
```

```
Dumitrescu & Hurlin (2012) Granger non-causality test results:
```

```
-----  
Lag order: 3
```

```
W-bar =          7.0010  
Z-bar =          6.3262   (p-value = 0.0000)  
Z-bar tilde =    2.3725   (p-value = 0.0177)
```

```
-----  
H0: LNRGDP does not Granger-cause RQ.
```

```
H1: LNRGDP does Granger-cause RQ for at least one panelvar (COUNTRY).
```

```
. xtgcause LNRGDP RQ,lag(3)
```

```
Dumitrescu & Hurlin (2012) Granger non-causality test results:
```

```
-----  
Lag order: 3
```

```
W-bar =          8.9266  
Z-bar =          9.3707   (p-value = 0.0000)  
Z-bar tilde =    3.8948   (p-value = 0.0001)
```

```
-----  
H0: RQ does not Granger-cause LNRGDP.
```

```
H1: RQ does Granger-cause LNRGDP for at least one panelvar (COUNTRY).
```

```
. xtgcause PS LNRGDP,lag(3)
```

```
Dumitrescu & Hurlin (2012) Granger non-causality test results:
```

```
-----  
Lag order: 3
```

```
W-bar =          5.0409
```

```
Z-bar =          3.2270   (p-value = 0.0013)
```

```
Z-bar tilde =     0.8229   (p-value = 0.4105)
```

```
-----  
H0: LNRGDP does not Granger-cause PS.
```

```
H1: LNRGDP does Granger-cause PS for at least one panelvar (COUNTRY).
```

```
. xtgcause LNRGDP PS,lag(3)
```

```
Dumitrescu & Hurlin (2012) Granger non-causality test results:
```

```
-----  
Lag order: 3
```

```
W-bar =          14.2970
```

```
Z-bar =          17.8621   (p-value = 0.0000)
```

```
Z-bar tilde =     8.1405   (p-value = 0.0000)
```

```
-----  
H0: PS does not Granger-cause LNRGDP.
```

```
H1: PS does Granger-cause LNRGDP for at least one panelvar (COUNTRY).
```

APPENDIX 4

ESTIMATED RESULT

Model 1

. estimate store re

. hausman re fe

	—— Coefficients ——		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) re	(B) fe		
FDI	.0001686	.0002414	-.0000727	.0002691
LTR	.0066627	.0019949	.0046678	.
INF	-.0007633	-.000804	.0000407	.0004885
LNGCF	.122742	.1005276	.0222144	.
LNLBF	1.002958	1.211029	-.2080704	.

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
 = 20.28
 Prob>chi2 = 0.0011

```
. xtreg LNRGDP FDI LTR INF LNGCF LNLBF,fe vce(robust)
```

```
Fixed-effects (within) regression      Number of obs   =      249
Group variable: COUNTRY                Number of groups =      15

R-sq:                                  Obs per group:
  within = 0.8689                       min =          13
  between = 0.8729                       avg =         16.6
  overall = 0.8710                       max =          18

corr(u_i, Xb) = -0.4156                  F(5,14)         =      41.78
                                          Prob > F        =      0.0000
```

(Std. Err. adjusted for 15 clusters in COUNTRY)

LNRGDP	Robust		t	P> t	[95% Conf. Interval]	
	Coef.	Std. Err.				
FDI	.0002414	.0004706	0.51	0.616	-.000768	.0012508
LTR	.0019949	.0080699	0.25	0.808	-.0153133	.0193032
INF	-.000804	.0008161	-0.99	0.341	-.0025543	.0009463
LNGCF	.1005276	.0219251	4.59	0.000	.0535029	.1475523
LNLBF	1.211029	.2640363	4.59	0.000	.6447272	1.77733
_cons	2.241042	3.449674	0.65	0.526	-5.157771	9.639856
sigma_u	.62301751					
sigma_e	.08955727					
rho	.97975496	(fraction of variance due to u_i)				

APPENDIX 5

Consistency and Efficiency Check of Result

Normality test results

```
. xtsktest FDI LTR INF LNGCF LNLBF
(running _xtsktest_calculations on estimation sample)
```

```
Bootstrap replications (50)
-----|----- 1 -----|----- 2 -----|----- 3 -----|----- 4 -----|----- 5
..... 50
```

```
Tests for skewness and kurtosis          Number of obs    =      249
                                           Replications      =      50
```

(Replications based on 15 clusters in COUNTRY)

	Observed Coef.	Bootstrap Std. Err.	z	P> z	Normal-based [95% Conf. Interval]	
Skewness_e	2452.656	2171.957	1.13	0.259	-1804.301	6709.613
Kurtosis_e	218167.1	140765.4	1.55	0.121	-57727.95	494062.2
Skewness_u	1028.654	494.3705	2.08	0.037	59.70591	1997.603
Kurtosis_u	19280.98	7492.974	2.57	0.010	4595.021	33966.94

```
Joint test for Normality on e:          chi2(2) =    3.68    Prob > chi2 = 0.1590
Joint test for Normality on u:          chi2(2) =   10.95    Prob > chi2 = 0.0042
```

```
. xtsktest LNRGDP COP RQ PS SSE LNLBF
(running _xtsktest_calculations on estimation sample)
```

```
Bootstrap replications (50)
-----|----- 1 -----|----- 2 -----|----- 3 -----|----- 4 -----|----- 5
..... 50
```

```
Tests for skewness and kurtosis          Number of obs    =      239
                                           Replications      =      50
```

(Replications based on 15 clusters in COUNTRY)

	Observed Coef.	Bootstrap Std. Err.	z	P> z	Normal-based [95% Conf. Interval]	
Skewness_e	.0005387	.0022897	0.24	0.814	-.003949	.0050264
Kurtosis_e	-.0004015	.0009664	-0.42	0.678	-.0022957	.0014927
Skewness_u	.0266244	.0099474	2.68	0.007	.0071279	.0461209
Kurtosis_u	-.0223003	.0092659	-2.41	0.016	-.0404611	-.0041395

```
Joint test for Normality on e:          chi2(2) =    0.23    Prob > chi2 = 0.8923
Joint test for Normality on u:          chi2(2) =   12.96    Prob > chi2 = 0.0015
```

Heteroskedastic Test

```
. lrtest hetero . , df(`df')

Likelihood-ratio test                                LR chi2(14) =    195.91
(Assumption: . nested in hetero)                   Prob > chi2 =    0.0000

.

. local df = e(N_g) - 1

.

. lrtest hetero . , df(`df')

Likelihood-ratio test                                LR chi2(14) =    205.97
(Assumption: . nested in hetero)                   Prob > chi2 =    0.0000
```

Autocorrelation

```
. xtserial LNRGDP FDI LTR INF LNGCF LNLBF

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
      F( 1,      14) =    73.315
      Prob > F =    0.0000

. xtserial LNRGDP COP RQ PS SSE LNLBF

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
      F( 1,      14) =   176.586
      Prob > F =    0.0000
```